

THE MAINE ARCHAEOLOGICAL SOCIETY INC.



BULLETIN



VOLUME 37:1

SPRING 1997

Officers for 1997

President: Darrell E. Crawford, RR 2, Box 2320, Eddington, ME 04428
W= 973-7455 H= 989-2547

1st Vice President: Richard Doyle, Jr., 61 Ledge Hill Road,
Raymond, ME 04071 H= 998-2553

2nd Vice President: Stephen Bicknell, Dept of Anthropology,
University of Maine, Orono, ME 04469 W= 581-1890 H= 843-7140

Secretary: Jules Arel, RR2, Box 3090, Bangor, ME 04401 H= 848-2275

Treasurer: Sandy Lagasse, RR1, Box 413, Belgrade, ME 04917 H= 495-2842

Editor: Michael Brigham, P.O. Box 158, Milo, ME 04463 943-7384

Asst. Editor: Arthur Spiess, Maine Historic Preservation Commission,
State House Station 65, Augusta, ME 04333 W= 287-2132 H= 865-3802

Newsletter Editor: Richard Will, Archaeological Research Consultants, Inc.,
71 Oak St., Ellsworth, ME 04605 W= 667-4055

Trustees and term expiration dates:

1997

Ken Wing, P.O. Box 35, Eustis, ME 04936 W= 864-5545 H= 246-2544
Mark Hedden, Box 33, Vienna, ME, 04360 H= 293-2075

1998

Leon Cranmer, Maine Historic Preservation Commission, State House Station 65,
Augusta, ME 04333 W= 287-2132 H= 549-3215
David Putnam, P.O. Box 455, Mapleton, ME 04757 H= 762-6078

1999

John Mosher, 14 Somerset Place, Bath, ME 04530 H= 386-0317
Eric Lahti, RR2, Box 1070, Madison, ME 04950 H= 474-5961

Immediate Past President: Michael Brigham, P.O. Box 158, Milo, ME 04463 943-7384
Volunteer Coordinator: Jules Arel, RR2, Box 3090, Bangor ME 04401 H= 848-2275

Permanent Address:

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

MAINE ARCHAEOLOGICAL SOCIETY BULLETIN

CONTENTS

VOLUME 37 NUMBER 1

SPRING 1997

Prehistoric Occupations On The Purinton House Property
Arthur Spiess.....1

1000 B.P. in West Penobscot Bay 41.68 & 41.68A
Harbour Mitchell, III.....23



Jean and Bob MacKay at lunch at the Hirundo Site in 1973 courtesy of Stephen Bicknell of the Dept. of Anthropology at UMO.

DEDICATION

Jean MacKay

This Spring 1997 issue of the *Maine Archaeological Society Bulletin* is dedicated to the memory of Jean MacKay. The passing of Jean MacKay saddened many society members. Jean was one of those indispensable people who work behind the scenes, quietly getting things done, never in the forefront and, all too often, unappreciated at the time. Together with her husband Bob MacKay, Jean was one of the charter members of the Maine Archaeological Society and a major supporter during its early years. She was the Treasurer from 1969 through 1979 and represented the Society at the Eastern States Meetings on many occasions.

Jean was very involved with the beginnings of archaeology at the University of Maine. She accompanied Bob on many projects conducted by the Anthropology Department and provided valuable assistance in the laboratory at a time when there was funding to hire assistants. While at Hirundo she assisted during several field schools and coached Society members who came out to try their hand with the roots and rocks of that site.

PREHISTORIC OCCUPATIONS ON THE PURINTON HOUSE PROPERTY

Arthur Spiess

INTRODUCTION

This report summarizes the prehistoric archaeological component at site 15.153. Site 15.153 is the prehistoric site designation for the former property of Ormandel Wilson round the Purinton House (historic site number ME 4 35.4). The site lies on the centerline of the northern approach to the new bridge between Topsham and Brunswick. Phase I testing on this site was accomplished in 1988, followed by Phase II testing in 1989 and Phase II data recovery excavation in 1990 and 1991. The latter two seasons were primarily focused on the historic archaeology around the Purinton House (Cranmer 1993), but did contribute substantive data to our understanding of prehistoric use of this property.

There are a minimum of two and perhaps as many as five Native American components represented by material culture items at site 15.153. The late Susquehanna tradition is represented by a soapstone bowl fragment and a broad, corner-notched point from disturbed context. The component localized behind the barn is possibly also of the late Susquehanna tradition (based upon a drill fragment), but is associated with a circa 2800 B.P. radiocarbon date. There are no Vinette I ceramics.

The other major component represents Late Ceramic and/or possibly transitional Late Ceramic to Contact Period occupation. Ten Native American ceramic sherds from 8 vessel lots are all Late Ceramic Period in age (CP-6 or CP-7 of Petersen and Sanger 1991). Diagnostic lithic points include a crudely made triangular point and similarly crude side-notched point, which are

Late Ceramic Period in general outline. There is some evidence that production of poorly made stone points continued into the Early Contact Period in Maine until circa 1675 A.D. (Will and Cole-Will 1989; Spiess 1984). Two clay tobacco pipes apparently document pre-1760 A.D. Native American use of the site as well. One is a 7/64" bore pipe stem fragment (circa 1650-1680 A.D.) and one is a 5/64" diameter stem (likely 1710 to 1750 A.D., could be 1690 to 1800 A.D.). The 5/64" diameter stem fragment, however, was broken and remade into a bead. It was impossible to differentiate any other certain 17th century or early 18th century material from the mass of iron fragments, nails, Euroamerican ceramic and glass fragments recovered from the plowzone. Many of these data categories, such as hand-forged nails, are non-diagnostic of age roughly pre-1800 A.D. At least the diagnostic ceramic fragments from the plowzone across site 15.153 all dated to the late 18th century or later and seemed to have originated as trash scatter from the Euroamerican occupation.

In sum, there is evidence for at least one late Susquehanna tradition occupation and evidence for an occupation or series of occupations beginning during the late Late Ceramic Period and extending through the Early Contact Period (1500-1676 A.D.).

CULTURE HISTORY AND PREVIOUS WORK

The Brunswick area, and Topsham in particular, has been the location of much prehistoric archaeological investigation in recent years, most of it focused on the tidal portion of the Androscoggin River below the falls at Bruns-

wick and on the smaller tidal tributaries of Merrymeeting Bay. Collections from the Ormsby property (15.51) and Simpson Farm (15.53) on the Brunswick side of the river document occupation during the Early and Middle Archaic, the Susquehanna Tradition, and the early Ceramic Period along fossil river terraces of the Androscoggin (Bourque notes: Spiess notes: collections at the Maine State Museum). Also on the Brunswick side of the river near Cook's Corner, the Indian Spring site (15.272, Bourque and Wilson 1992) is a single-component early Susquehanna tradition site located well away from the Androscoggin River. In 1996 the Maine Historic Preservation Commission excavated portions of site 15.135 and 15.368 adjacent to Route 1 near Cook's Corner in advance of bike-way and walkway construction. Ceramics of CP-I age were recovered from 15.135 and Laurentian tradition material (circa 5000 B.P.) has been recovered from both sites (Hedden, report in preparation).

On old river terraces on the Topsham side of the river, about 2.5 km downstream from the Purinton House property, work at the Hunter Farm site (site 15.110, Spiess 1984, and unpublished) found extensive evidence of Small-Stemmed Point tradition occupation (dating between 4700 and 4200 B.P.). The Rosie (15.231) and Mugford (15.233) sites are located next to the Hunter Farm site but in stratified river alluvium rather than on erosional terraces (Cox and Wilson 1991, Cox 1992). A Small-Stemmed Point tradition occupation dated 4385 ± 250 is stratified at the base of the Rosie site sequence, which also contains stratigraphically well separated, sequential Early Ceramic Period (2800-2500 B.P.) and Middle Ceramic Period occupations. The Mugford site stratigraphic sequence begins with a terminal Archaic (late Susquehanna tradition?) occupation at circa 3000 B.P. with well-separated, sequential Ceramic Period

occupations above it. About 2.5 km further down river, the Old Stone Bridge site (15.111) contains an incredible concentration of ceramic fragments and fewer Ceramic Period stone tools in poorly stratified deposits up to 2 meters deep (Spiess, unpublished field notes). All subperiods of the Ceramic Period are represented from the earliest (Vinette I) to latest (Iroquoian-mimic or Iroquoian-like) styles.

Spatially extensive occupation by early Susquehanna Tradition people along about 1 km of the Muddy River has been documented at Cary's Garden and other sites (sites 15.57, 15.1-18, 15.124, and 15.132, Wilson et al. 1989). Apparently this early Susquehanna Tradition use of the Muddy River was not concentrated in one repeatedly utilized village location. A small site on the north side of the Muddy River (Vogel Point, 15.238, Cox 1992) has yielded more early Susquehanna Tradition material and a Late Ceramic Period (cord-wrapped-stick decorated vessel) occupation.

The Holocene geology of the area is complex. At the Ormsby site and Hunter Farm Archaic occupations are located on a series of erosional river terraces which formed when the Androscoggin was cutting downward through soft sediment. These terraces were well drained, near river topographic features at the time of occupation which may have been formed a few thousand years earlier. The presence of a Small-Stemmed Point Tradition occupation at the base of the Rosie site sedimentary sequence, at an elevation about 5 meters lower than the contemporary Hunter Farm occupation, proves that use of the Hunter Farm terrace was not contemporary with a higher river level and active erosion of the river terrace (contrary to an hypothesis proposed by Spiess [1984]). The details of early or mid-Holocene channel structure of the Androscoggin River as it enters Merrymeeting Bay are also in question because there is a fossil

river channel that cuts northeastward from the Androscoggin to the Muddy River past the Cary's Garden complex. Quaternary geologists have expressed contrasting opinions on the direction of flow in this channel (appendices in Wilson et al 1984). In any case, at least by 4300 B.P., the Androscoggin River had begun to deposit fine sand and silt alluvium sequences along then-active lowest river terraces which attracted human occupation. More or less well-preserved stratified sequences resulted at some sites (Rosie-Mugford, Old Stone Bridge). At other places (Cary's Garden Complex) early Susquehanna Tradition and, perhaps, Moorehead Phase people inhabited a flood plain surface which has not been subjected to much subsequent deposition. At least for the last few thousand years, perhaps the last 5000, relative sea level rise has progressively flooded more and more of Merrymeeting Bay and the tidal Androscoggin channel at high tide. The interplay of this factor with sedimentation rates, bank erosion rates and biological factors such as the availability of anadromous fish and their attractiveness to human habitation is poorly understood at present.

This pattern of river terrace or river bank focused settlement contrasts strongly with the location of the Indian Spring site (Bourque and Wilson 1992), located along a small stream approximately 400 meters from the river on a level, well-drained sandy surface. Thus, it appears that river banks, fossil river terraces near a river and sandy, well-drained surfaces along streams up to several hundred meters from a river could contain evidence of prehistoric occupation. We shall see that site 15.153 exemplifies both multi-component use of fossil river terraces near a river and prehistoric activity along a stream well away from a river.

Most of the sites reviewed above appear to be habitation sites. Where bone and charcoal

evidence has been preserved and analyzed, subsistence is focused upon hunting and procuring anadromous fish. Sturgeon and striped bass were particularly important species. Evidence for horticulture is absent. One site, the Indian Spring site, may be a small habitation or workshop associated with some sort of ceremonial cache of stone tools.

Despite all this archaeological testing, Contact Period Native American occupation in the area was only known from documentary sources. An account dating from circa 1605 A.D. (Purchas 1625: 404) names the first Native American town on the "Northwest Branch" of Merrymeeting Bay as "Amereangan". This town, which must have been located somewhere around the falls in Brunswick-Topsham, was inhabited by 90 households including 260 men (plus unnumbered women and children) and led by two sagamores: Sasuao and Scawas. This town of 90 households must have been the principle place of residence for somewhere between 800 and 1000 persons (extrapolating from an expected ratio of men to women and children).

Native Americans were living in small groups in the Merrymeeting Bay area as late as March 3, 1707 when a force of Massachusetts militia surprised "two wigwams" (full of Native Americans" at Cox's Head (Phippsburg), killing 18 and "taking a boy" (Pike nd.).

Thus, we could expect to find just about any period of Maine prehistory represented in occupations along the river terrace portion of site 15.153. Judging from nearby site, it was most likely that we would find Late Archaic and Ceramic Period occupations but we might also detect some evidence of activity of the 1000 or so people inhabiting the area during the Early Contact Period (circa 1500 to 1676 A.D.). We anticipated that we might find prehistoric occupation, particularly Susquehanna Tradition occupation, further back from the river (north)

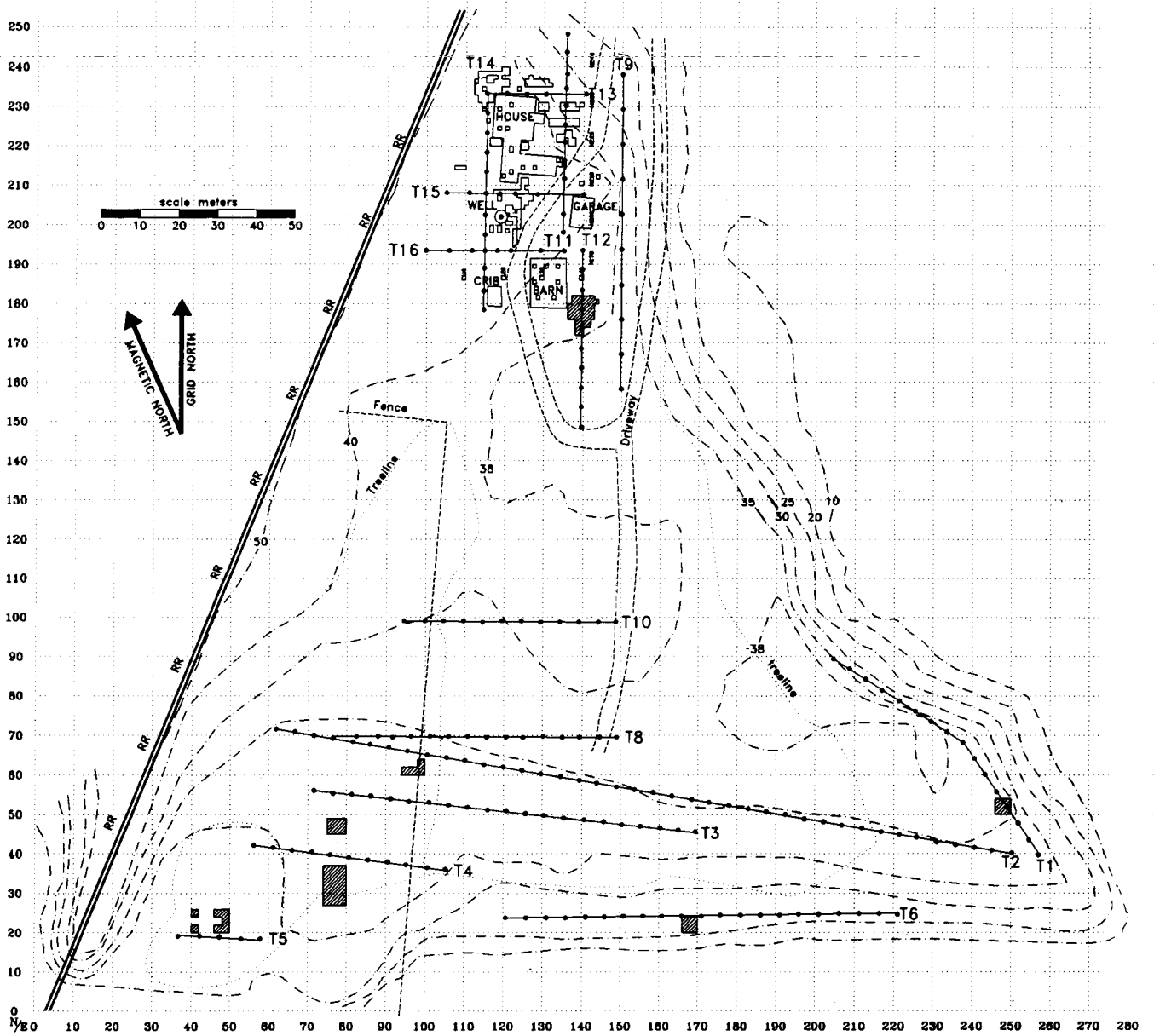


Figure 1. Location of Phase I and Phase II testpit transects and block excavations on the Purinton House property, prehistoric site 15.153.

on the property.

SITE DESCRIPTION

This description refers to the site before construction of the new Brunswick-Topsham bridge. The site is now destroyed (following a determination of part of the site as significant and data recovery). Site 15.153 is located on the north shore of the Androscoggin River about one km downstream from the falls in Brunswick-Topsham. Site 15.153 occupies a triangular parcel of land with a truncated inland (northern) tip (Figure 1). The southern boundary of the parcel is formed by the Androscoggin River. The western and eastern sides of the triangle are formed, respectively, by a railroad track and embankment and an erosional gully for a small stream. The northern tip of the triangle is truncated by Route 24. Approximately one-third of the northern portion of the triangle has been extensively disturbed by Euroamerican house and farm building construction, beginning about 1760. The historic archaeology of the property is the subject of a separate report (Cranmer 1993).

The site occupies a landform that once constituted a small delta emplaced by glacial meltwater during the retreating Presumscot Transgression (Retelle and Bither 1989). The parent soil is mostly sand. The sand is coarse with small pebbles along the Androscoggin River. Soil particles become much finer inland so that the soil behind the Purinton Barn is a silty fine sand. The landform has been dissected on the east by a small stream that carries water all year. The stream valley is deeply incised with steep walls carved into the fine glacial sediment. The river front consists of a series of erosional river terraces with the major and highest one at about 35 feet of elevation. Lower terraces are often narrow and localized in extent with a habitable terrace about 30 feet of elevation and another at 20 feet of elevation. The modern

flood terrace (T0) is just above the river high tide line. All of these terrace surfaces were utilized sporadically by prehistoric inhabitants, except the T0 terrace.

The soils, where undisturbed, are a well developed Spodosol. Most of the site area, however, has been plowed for most of two centuries although the plowzone is relatively shallow. Shallow (?horse-drawn) plow-scars are evident at the base of the plowzone in places so that replowing during the 20th century, using a tractor, has not been deep or extensive.

Vegetation cover was primarily lawn around the buildings and hay fields across most of the southern 2/3 of the site. Small hawthorne and other weedy shrubs were growing in patches. The southwest corner of the site was covered with a young and dense growth of white pine. Mature trees along the upper slopes of the stream along the east edge of the property, which had not been cut for centuries, include huge white pine and hardwoods (maple, birch and red oak). The wetter stream bottom, just east of the site, grew a dense tangle of younger hardwoods (elm, ash, maple), vines and brush. The river edge terraces, which had not been plowed for some time, supported young red oak, birch and pine trees.

Prehistoric material was found in two places on the site. Most of it was scattered along the riverfront terrace edges, up to and including the 35 foot terrace at N70 on the site grid. Some prehistoric material was found scattered around the Purinton House in disturbed context (such as structure foundations). There was also a small concentration of prehistoric material, mostly in the plowzone but associated with a sub-plow zone feature "behind" (just southeast of) the barn (Figure 2). This small occupation was apparently oriented toward the adjacent stream bank since it was located approximately 200

meters from the riverbank.

With the exception of the small occupation behind the barn, (hereinafter: "the Purinton Barn concentration") none of the prehistoric material from site 15.153 was in situ or horizontally concentrated. The vast majority of it was recovered from the plowzone. Site 15.152 did not exhibit any of the fine prehistoric context or preservation so common at other prehistoric sites in the Topsham area. In fact, with the exception of the Purinton Barn concentration, the prehistoric component of site 15.153 was found to be "not significant" at the conclusion of Phase II archaeological studies. No effort was made at complete data recovery except for the Purinton Barn concentration.

HORIZONTAL PATTERNING AND CONTEXT

Phase I testing of site 15.153 had revealed a widespread scatter of prehistoric material over hundreds of square meters along localized 20, 25 and 30 foot terraces of the Androscoggin River. Almost all of this material was positively provenienced to the plowzone. One goal of Phase II testing was to determine the inland limit of this scatter which we accomplished by excavating transects 8 and 10 (Figure 1), both of which were sterile for prehistoric material. The sterility of Transect 8 testpits 8 through 16 was surprising since Transect 8 converged with Phase I Transect 2 testpits 29 through 40 from which we had recovered 5 pieces of debitage and one Susquehanna Tradition drill tip. (However, 7 of these 12 Transect 2 testpits had been sterile).

Our Phase II testing strategy south of the area of the house and barn was the excavation of relatively large blocks of the site organized in groups of 2 x 2 meter squares. The plowzone was excavated and screened in 50X50 cm quarter-quadrants and the sub-plowzone soil was scraped with trowels and inspected for the

presence of features. Around the house and barn, with the exception of the concentrated prehistoric occupation behind the barn, the recovery of prehistoric material was incidental in units excavated to explore the historic structures.

Historic material was encountered frequently in the testpits and 1989 block excavations along the river terraces. All of it was encountered in the plowzone except for pieces associated with the railroad structure. The vast majority of this historic material was building debris (ie. small fragments of brick and glass, cut and wire nails). The majority was non-diagnostic and could date anytime between the late 18th and mid-20th century. As stated above, all diagnostic ceramics postdated Euroamerican construction on the site. There were no trade beads or other evidence of the Contact Period aside from the clay tobacco pipe fragments mentioned elsewhere in this report. It is possible that a few scraps of metal or hand forged nails were recovered from a Contact Period component but they were unrecognizable in the mass of similar material from the Euroamerican occupation.

Calcined bone fragments were present in the plowzone. We believe that most of the calcined bone fragments recovered from the plowzone are historic debris, based on the presence of calcined bone in the historic-age fill around the Purinton House, much of which is identifiable as domestic animal. Calcined bone was evidently generated by disposal of bone into open fireplaces in Euroamerican households and then discarded with fireplace ash. Such material would be a natural inclusion in field broadcast garbage scatter. The best explanation for the historic debris along the riverbank is a broadcast scatter due to garbage and debris disposal or field manuring.

There is one additional complication to interpreting the prehistoric component on this

site, one that is unique in our experience. *Much of the quartz flaking debris from the site is of historic (20th century) age.* During World War II the owner (Ormandel Wilson, personal communication) mined chunks of local pegmatite which contain polycrystalline quartz and sheet mica in close association. He moved this material to his property and broke it apart to extract the mica which he sold. Mica has electrical insulating qualities which were in great demand during the war. We presume that Mr. Wilson used iron hammers and other iron tools to break up the pegmatite and mica.

We recovered many kilograms of flaked quartz and broken pegmatite (thousands of pieces), saving only the quartz, and noted many large (centimeter size and larger) flakes of mica around the Purinton House and barn outside of sealed 18th and 19th century contexts. A significant amount of quartz debris was recovered from the Purinton Barn concentration and from the river terraces, all in the plowzone. This quartz material varied from very low grade, granular polycrystalline material attached to chunks of pegmatite (sometimes with mica still adherent), to fine white polycrystalline chunks and flakes, to occasional flawed clear crystal quartz chunks and flakes. Inspection of quartz outcrops in the local pegmatite elsewhere in the Brunswick-Topsham bypass planning area (Spiess et al 1990) indicates exactly the same range of quartz quality availability. Moreover, we discovered and excavated a lithic reduction station (site 15.154, Spiess et al 1990: 33-37) at the top of a steep stream bank a few hundred meters north of the Purinton House. The 15.154 reduction station involved breaking apart 12.7 kg of pegmatite and quartz with the largest remaining piece being 0.54 kg. We did not recover any evidence of prehistoric material (eg. hammerstones, rhyolite flakes) at site 15.154 despite total excavation. In retrospect, we now

conclude that site 15.154 was an historic reduction station of a mass of pegmatite-quartz-mica that was too heavy to transport any closer to the Purinton House. There is, of course, the possibility that 15.154 was a prehistoric reduction station for the removal of high quality polycrystalline or crystal quartz. The quartz debris from site 15.153, which has been saved except for specimens found in historic period features, undoubtedly contains some prehistoric flaking debris. All the pieces are recognizable quartz debitage (with a sharp edge and, sometimes, a striking platform) or cores or core fragments. However, only one is recognizable as a possible prehistoric tool form such as a biface edge fragment or an endscraper or wedge. It is a possible scraper fragment or utilized flake (catalogue #10251) with a steep, 90 degree edge that shows minor use wear or retouch. After being inspected for prehistoric tool forms and finding only this one piece, the quartz debris from site 15.153 was not further analyzed. We now turn to a description of the horizontal patterning of test block excavations along the river terraces.

HORIZONTAL PATTERNING ALONG THE RIVER TERRACES

All prehistoric material (Table 1) from the block excavations along the river terraces (see Figure 1 for locations) was recovered from the plowzone. Often the plowzone (Ap) was a black, fine sandy loam about 18 to 20 cm deep, indicating plowing by horse drawn equipment incorporating an original dark forest A horizon. The underlying B soil horizon is a truncated, slightly orange-brown remnant lower B₁ and B₂ horizon. No prehistoric features survived the plowing.

We first opened what was to have been a 6x10 m block (*N60E94 block*) close to the 1988 transect 2 testpit 32, which had yielded two pieces of debitage. After excavating 4 2x2 m

squares and recovering little, we moved elsewhere. Excavation of the block and troweling of the sub-plowzone surface revealed plowscars in the subsoil running north-south. The second excavation block (N28-38 E74-80) was located closer to the riverbank, an area of 60m². In the middle of the excavation block was a large pit which had cut through the plowzone (postdating the plowzone), subsequently backfilled with grey, gravelly sand. No historic artifacts or other features helped explain this excavation, but prehistoric material was slightly concentrated to the north and south in areas where the preexisting plowzone had been piled up. Plowscars were again encountered at the top of the B horizon, running north-south in the north part of the. Excavation block and east-west in the southern part of the block. This change in direction indicates that the edge of the plowed field had coincided with the break-in-slope of the river terrace edge.

Eight meters north of the N28-38 E74-80 block we opened a 4x4 m square (N46-50E76-80 block). Our intent was to test near transect 3 testpit 20 which had yielded two pieces of quartz debitage and a stone bowl fragment during Phase II. Further north a nearby testpit (t2 tp38) had yielded a Susquehanna tradition drill tip, so we wished to determine whether a Susquehanna tradition locus was present in the area. No features were located, and we recovered a light scatter of flakes, calcined bone and fire-cracked rock.

A 6x 10 m block (N20-26 E40-50) was excavated along the edge of the 25 foot terrace just east of the railroad grade. Here we encountered disturbed soil, burnt wood and charcoal, a layer of asphalt or black, oily concrete, and two large wooden beams just beneath gravel fill. This material is apparently the remains of a small railroad shed, illustrated in a bird's eye view of Topsham dated 1877. A modest sample of

prehistoric material was recovered from these disturbed soils.

We excavated a 4 x 4 m block (N22-26 E166-170) in the middle of the 20-foot terrace near a testpit which had yielded one undecorated prehistoric ceramic sherd. We encountered a sub-plowzone feature with partially burned wood, perhaps from burning and pulling of stumps during initial land clearance. No more ceramics were encountered, and we recovered a few pieces of debitage and calcined bone. Finally, we opened a 4x4 m block (N50-54 E246-250) in order to test the eastern portion of the high terrace near the stream confluence with the river. Three pieces of debitage had been recovered in two Phase I testpits. We again recovered a small sample of prehistoric material from a shallow plowzone and no features.

Around the Purinton House, ex-situ. Six definite prehistoric objects were recovered during excavation in and around historic features adjacent to the Purinton House. The most diagnostic artifact (.8841) is a corner-notched point (Figure 3) from N235 E112, in a complex of historic features just northwest of the house. The assemblage also contains a quartz utilized flake (.10251) from N198 E120 south of the house, three felsite or argillite flakes from about N212 E126 just south of the house, and a rhyolite flake from inside the Feature 2 cellar hole. A ceramic sherd (.1720) was recovered immediately outside the Feature 2 cellar hole. In addition, there is one ceramic sherd (.7363), an unworked European flint pebble (.2170) and a European gun flint (.5856) from the plowzone in the Purinton Barn concentration. These latter two items evidently belong to the scatter of Contact Period material across site 15.153, rather than the circa 2800 B.P. concentration.

Prehistoric Locus behind the barn. During the course of testing Transect 12 (Phase II), we encountered 6 flakes of felsite or argillite in 4

Prehistoric Occupations On The Purinton House Property

Block	Tools/Ceramic	Debitage	Bone (calcined)	FCR
<i>N60 E94</i>		7 (5 quartz, 1 felsite)		
<i>N28-38 E74-80 North half</i>	2 sherds, 2 possible hammerstones, felsite point	28 (26 quartz, 2 felsite)	7 (including 1 sturgeon scute, 1 bird longbone, 2 unid. mammal)	48, 2.9 kg
<i>N28-38 E74-80 South half</i>	1 sherd, 1 point, 1 biface-drill	41 (28 quartz, 11 felsite, 2 yellow jasper)	6 (1 sturgeon scute, 4 unid. mammal)	62, 3.8 kg
<i>N46-50 E76-80</i>	1 felsite hammerstone	9 quartz	15 (2 unidentifiable mammal)	6
<i>N20-26 E40-50</i>	3 sherds, 1 Onondaga chert endscraper	31 (22 quartz, 3 felsite, 4 chert, 2 yellow jasper)	2 (unid. mammal)	10
<i>N22-26 E166-170</i>		20 (7 quartz, 4 chert, 2 felsite, 1 mudstone)	6 (all unidentifiable)	
<i>N50-54 E246-250</i>		3 (2 felsite, 1 quartz)	1 (unidentifiable)	7

Table 1. Prehistoric material from block excavations along the river terraces. FCR stands for fire-cracked rock.

testpits. Excavation of a 4x4 meter square recovered 73 flakes, six pieces of fire-cracked rock and a sub-plowzone feature (Feature 14).

During Phase III the block excavation around Feature 14 was expanded to a total of 53 square meters, extending from N172 to N182 and from E136 to E144 (Figure 4). Ultimately, we recovered 28 fire-cracked rocks, 177 flakes (debitage) and three lithic artifacts. This assemblage is described in detail below.

Feature 14 was a small, shallow, basin-shaped reddened discoloration of the subsoil below the plowzone base, approximately 50 cm in diameter. Five grams of charcoal were recov-

ered by flotation of the feature fill. All was wood charcoal and a sample of 40 fragments were identified as all pine charcoal by Nancy Asch Sidell. The sample returned a radiocarbon date of 2790±80 B.P. (Beta-36959).

Five other features in the N172-182 E136-144 block were recognized during excavation but four were historic and the fifth was too amorphous to confirm a prehistoric origin. Feature 25 first appeared below the plowzone as a reddened area of the B soil horizon with charcoal flecks. We initially thought it might be a hearth but the feature was too indistinct and

shallow to confirm any specific form. Feature 26 is a trench dug to 211 cm depth below surface with a 1 3/4" outside-diameter cast iron pipe in the bottom. Other historic features in the area include Feature 27, a disposal pit for a turkey carcass (which was, presumably, diseased or spoiled at the time of disposal since we recovered the bones in anatomical position) and Feature 28 which was a 28x80 cm rectangular stain (possibly an impression of a cut timber). Feature 29 was a rodent disturbance.

All stone prehistoric material around Feature 14 was recovered from the plowzone. The decrease in debitage and fire-cracked rock frequency on the edges of the distribution map (Figure 4) indicates that we excavated all the way to the western, northern and southern boundaries of the distribution. The eastern boundary of the distribution was formed by a steep embankment falling off to a driveway access to the Purinton House, constructed by Mr. Wilson. His construction may have truncated the eastern edge of this prehistoric activity area, although there is no evidence for such impact (such as debitage strewn around the driveway). Apparently, the land sloped naturally down to the stream within a meter or two of the present edge of the embankment. Although this distribution pattern has been disturbed by plowing, archaeologists can often work from a plow-disturbed context back to some reconstruction of pre-plow distribution (Odell and Cowan 1987; and *American Antiquity* 55:592-605). In this case, with the only surviving feature in the center of the distribution, we reconstruct an original oval or round distribution of material of 3 to 4 meters diameter. There is no evidence of two or more focal points of prehistoric material. This distribution and a consideration of the lithic assemblage (aside from the Late Ceramic Period potsherd and European flint) indicates a single habitation or limited work area. We will return

to a full description of the assemblage below.

NON-DIAGNOSTIC PREHISTORIC MATERIAL

Non-diagnostic prehistoric material from the site (except for the Purinton Barn concentration) is comprised of three categories: stone artifacts, debitage (or flakes from tool manufacture) and fire-cracked rock (FCR). The non-diagnostic stone tools comprise one flattened rhyolite pebble hammerstone (.1201) with shatter marks along about half of the circumference, and two larger metasedimentary possible pebble hammerstones (.5911, .1266).

A limited number of materials are represented in the debitage sample. Again, we are eliminating quartz debris from consideration since most of it is apparently 20th century in origin. Kineo rhyolite is the most common (n=39 flakes). Only one of the flakes exhibits cobble cortex. The rest are thin flakes, about 2/3 of them are tertiary biface trimming or resharpening flakes and about 1/3 of them are large secondary reduction flakes. Second most common (n=11) is a granular to smooth argillite or mudstone. Again, all the flakes are thin and most are tertiary biface trimming or resharpening flakes. This combination of felsite and argillite thin flakes characterizes the Purinton Barn concentration (see below). Therefore, that activity area was not necessarily unique on the site.

The third most common material is surprising: Pennsylvania jasper (n=9). This material is represented by three large (>3cm), very thin biface trimming flakes and smaller flakes. No cortex is present on any of them. Some of the pieces have been oxidized to a crimson color as happens to this material when it is exposed to fire. They are not particularly closely grouped horizontally. Thus access to Pennsylvania jasper as large flakes or trimmed bifaces characterized part of the occupation. Pennsylvania jasper in

Maine is most commonly associated with the Middle Ceramic Period for which there is no other evidence on the site.

There are three flakes of a black felsite with medium to large phenocrysts, one of which has cobble cortex along one edge. This material may come from coastal volcanics in the northeast Penobscot Bay region. There are four small flakes of dark grey-to-brown dull-to-waxy luster chert. This material is of unknown origin but could come from northern New England Ordovician age cherts with possible bedrock sources distributed from Vermont to northwestern Maine. Finally, there is one specimen of a granular medium-grey, semi-translucent quartzite (.1277, again from the plowzone, N28E74)). The specimen is a large flake fragment with cobble cortex on the dorsal side and some re-touch along one edge (ie. possibly a utilized flake). The material exhibits some iron inclusions and small, black mineral inclusions and resembles Cheshire quartzite from the Green Mountains in Vermont.

We suspect that the vast majority of these materials originated with the late Susquehanna Tradition occupation and Late Ceramic Period and/or Contact Period occupation demonstrated on the site by diagnostic artifacts. Since Susquehanna tradition craftsmen seemingly preferred rhyolite and other volcanics, most of the chert, jasper and quartzite may have been utilized by the Ceramic/Contact Period occupants. As such (and coupled with the Onondaga chert and Nova Scotia chalcedony endscrapers) this demonstrates trade connections with much of the Northeast.

Fire-cracked rock was found in a diffuse scatter across the area of the river terraces. Modest sized samples were recovered from some of the Phase II block excavations (eg. 29 pieces weighing 3.2 kg from the N60E94 block) but no sub-plowzone features or concentrations

of FCR that might be associated with features were encountered. Preliminary experimental data (Yoon 1986) indicate that the frequency pattern of different fracture types in samples of FCR indicate how rapidly and repeatedly the FCR was cooled. Percentages of 60% to 70% or greater of fracture type 2 indicates that the heated rock was allowed to cool in an open fire or in open air after the fire died out. Lower frequencies (less than 40%) of type 2 fracture, accompanied by a relatively even distribution (5-20%) of other fracture types, indicates cooling by repeated immersion in water such as cooling by stone boiling (dropping heated rocks into a pot or kettle to boil the contents) or by splashing water on hot stones to create steam (as in a steam bath). The FCR samples from four block excavation areas along the river terraces (Table 3) exhibit low frequencies of type 2 fracture and relatively high and even distributions of other fracture types. Therefore, we conclude that most of the FCR along the river terraces was produced by stone boiling (ie. heating in a fire and dropping into a pot or kettle to boil the contents).

THE PREHISTORIC ACTIVITY AREA BEHIND THE BARN

We have already described the horizontal distribution of flakes and FCR more-or-less centered around Feature 14 between N172 and N182, E136 and E144. The charcoal from Feature 14, all pine charcoal, was radiocarbon dated to 2790±80 B.P. which means that the pine tree that was burned died most likely between 2950 and 2630 B.P. This range of dates places this limited occupation at the very end of the late Susquehanna Tradition or early in the Early Ceramic Period. One late Ceramic Period sherd was recovered from the plowzone inside this area but it dates at least 2000 years too late to be associated with the occupation dated by the charcoal. No artifacts were recovered from the Feature 14 fill so our character-

	1	2a	2b	3	4	5	6	0
N60-64 E94-100	13%	10%	16%	5%	17%	2%	36%	
N50-54 E246-250		3%			12%	85%		
N20-26 E40-50	6%	19%	13%	12%	50%			
N28-38 E74-80	5%	9%	9%	11%	39%	20%	1%	5%

Table 2. Fire-cracked rock from the test areas on site 15.153. Percentage of weight for each fracture type.

ization of the occupation will have to be based upon the majority of diagnostic material within the concentration in the plowzone.

Four lithic artifact fragments were recovered from the concentration which are made of felsite or argillite and, therefore, seem to "go with" the debitage sample. Two of the pieces conjoin (.5844 and .7359). These four artifact fragments, including each of the pair that conjoin, are found on both sides of Feature 14 and, therefore, seem even more to indicate the integrity of the distribution pattern (Figure 4).

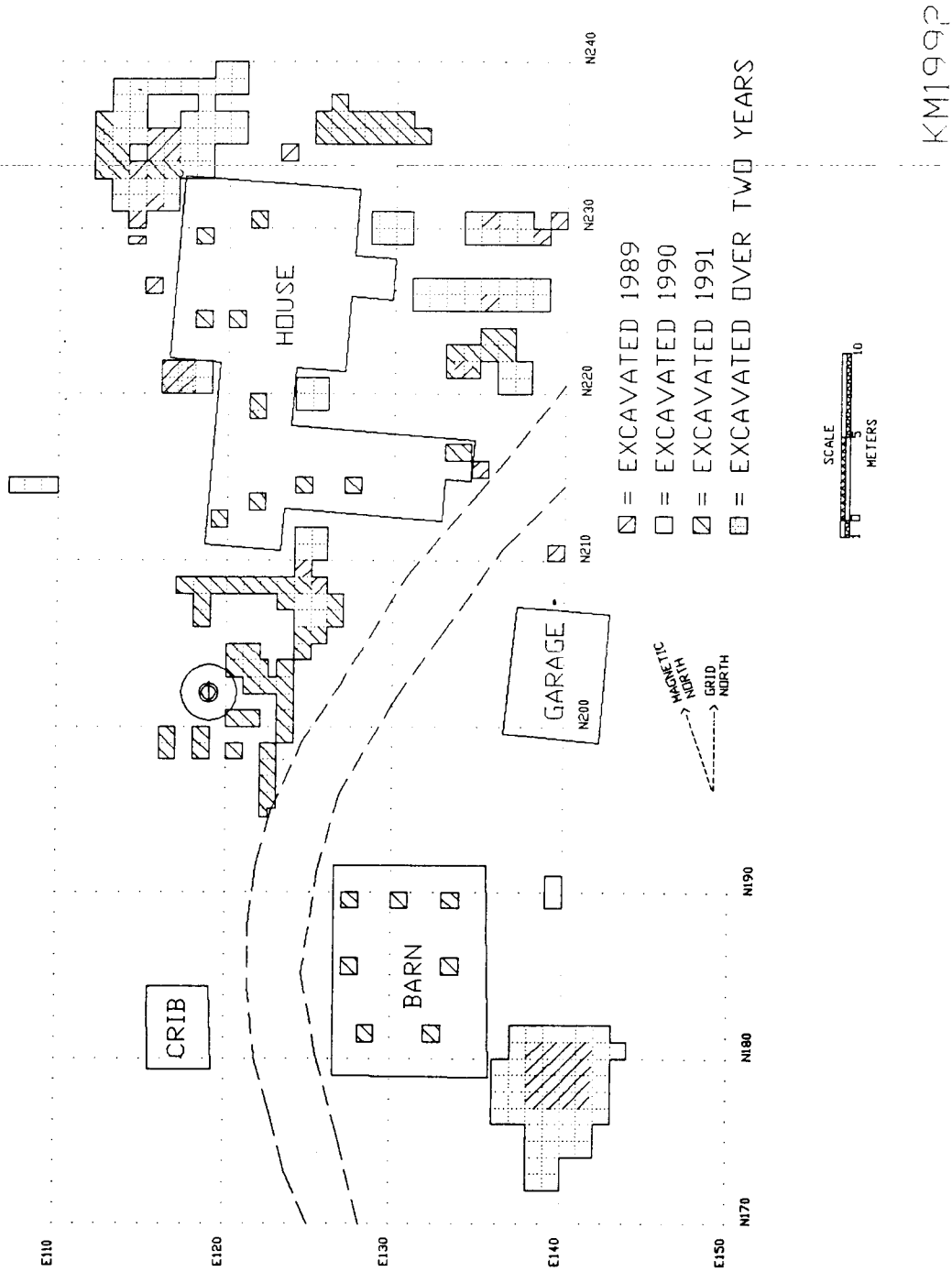
Item .5870-2 is a bifaces thinning flake or accidentally broken piece of biface that retains 19.7 mm of trimmed biface edge. The piece is made from a gray-patinated, medium-grained argillite and weighs 0.7 grams. If this was an intentional biface reduction flake it "feathered out" rapidly (only 13mm long) from a striking platform width of 5.2mm along the biface edge. The preserved edge of the biface had been trimmed with thinning flakes to an angle of 29°, indicating a finished and usable biface. The edge has not been ground in preparation for an episode of resharpening or reflaking. All of this evidence indicates that the piece was either broken accidentally or it was part of a major reworking of a functional knife or point into something much smaller.

Item .5910 (Figure 3, lower right) is a stemmed biface base weighing 1.2 grams and made from

a rhyolite (patinated) which may be Kineo rhyolite (both dark and light phenocrysts). The base snapped off from the rest of the artifact a few millimeters above the neck of the stem. The stem is parallel-sided with a straight base and square corners but it is short (width -15.75mm, length-8.0mm, thickness-4.4mm). It has been thinned by a couple of well-placed retouch flakes originating on one face of the base. The spacing and size of these two thinning flakes from the base are identical to those on one side of the base of the corner-notched point previously described (#.8841). This point base, however, is perfectly straight-sided and the shoulder form indicates a right angle or less between the stem and shoulder (ie. no corner notches).

Items #.5846a and #.7359 (Figure 3, second from right) conjoin to form a 50mm long section of an argillite blade (weight 4.1 grams). This piece varies from 9 to 13.5mm in width and exhibits a triangular cross section with a dorsal ridge. This piece started from a true blade driven from the angled edge of a large blade core. The right side of the piece (narrow end oriented away from observer) has been retouched on both the dorsal and ventral sides with scalar flakes. The left side has been retouched only on the dorsal side. This edge retouch is generally accomplished with short, deep flakes averaging about 4mm width and spacing. We strongly suspect that this piece was a preform for a diamond-cross section drill such

Prehistoric Occupations On The Purinton House Property



KM1992

Figure 2. Location of the Purinton Barn concentration of prehistoric material in irregular excavation block adjacent to southeast corner of barn.

as characterized the Susquehanna Tradition or an attempt to prepare a functionally analogous piece.

The point base seems most reminiscent of short, square stems found on large bifaces of "aceramic" or Early Ceramic Period age (eg. Kidder Point, Spiess and Hedden 1983:68, Plate 4-13, lower left). We pointed out (ibid) the presence of a true blade technology in the Kidder Point assemblage also. Thus, the radiocarbon date and stone tool assemblage from the Purinton Barn concentration could support either a late Susquehanna Tradition or Early Ceramic Period affiliation.

The debitage sample from the concentration consists (besides many quartz chunks and pieces of shatter) of one rhyolite biface retouch flake with a single-faceted striking platform (11.8 mm length, 0.8 grams) and a large Kineo rhyolite (n=331) and argillite (n=146) assemblage. We will characterize the latter in some detail (see Table 4). In general, the flake sample can be characterized as relatively long, broad and thin. Whoever was doing the work was an accomplished flint knapper. The felsite flakes are, in general, thicker, shorter and heavier than the argillite flakes, probably reflecting differences in ease of working the material. In a sample of complete flakes (with both striking platform and distal edge) none of nine felsite flakes exceeded 30 mm in length while 6 of 17 argillite flakes did. Thus, it was possible for the knappers to remove longer thin flakes from the argillite core(s) or preform(s). An examination of striking platform morphology showed argillite quarry block cortex on 3 (of 52) and felsite cobble cortex on 2 (of 15) specimens. Thus, the reduction sequences began with one or more river cobbles for felsite and one or more blocks from outcrops for argillite. Flakes of both materials exhibit untrimmed or minimally prepared striking platforms, evidently from early-reduction-stage cores,

often with striking platform angles over 80°. Seven of the felsite flakes were struck from a prepared biface edge (during the later stages of biface reduction), with striking platform angles (previous biface edge) of 50 to 70 degrees. Twenty-seven of the argillite flakes were struck from a prepared biface edge and (with one anomalous exception) their striking platform angles ranged from 45° to 62°. Evidently the knapper could exercise greater control over the argillite. At least one argillite and one Kineo rhyolite biface were produced within the Purinton Barn activity area and taken away later (not recovered archaeologically).

Eighteen FCR specimens from within the Purinton Barn prehistoric concentration were analyzed for fracture type. The distribution by count (type 2=56%, type 4=33%, others 12%) and weight (type 2=51%, type 4=35%, others 14%) are virtually identical. This clear distribution contrasts with the pattern from the block excavations on the river terraces which were interpreted as resulting from stone boiling. In contrast, the Purinton barn concentration FCR exactly fits Yoon's (1986) pattern for heating and cooling in a fire.

Summary

The Purinton Barn concentration diagnostic stone tools may be representative either of late Susquehanna Tradition or the Early Ceramic Period based upon both stylistic grounds and the available radiocarbon date. There was no ceramic production or breakage associated with this 2800 B.P. occupation although a Late Ceramic Period sherd and Contact Period material came to rest in the plowzone within the area at a later time. Circa 2800 B.P. one or more artisans used the spot for stone tool production starting with at least one felsite cobble and at least one quarry block of argillite. Some sort of biface (point or knife) was produced from each material. This activity occurred around

a stone-lined hearth (subsequently plowed up except for its base) which was fueled with pine wood. The associated rocks were not used for the stone boiling method of cooking in contrast with the FCR assemblage recovered from the river terraces. The location of the Purinton Barn concentration (several hundred yards from the river and facing a small stream valley) is anomalous within the sample of prehistoric habitation sites in Maine. It seems to have been a workshop or short-term camp that was physically separated from normal habitation areas (elsewhere on the site or at other sites) for some reason.

COMPONENTS AND ARTIFACT DESCRIPTIONS

As we discussed above, there are a minimum of two Native American occupation components on this site: a Susquehanna Tradition component and a late Late Ceramic Period or early Contact Period component. It is possible that the Susquehanna Tradition component is late within the generally accepted time frame (to circa 3000 B.P.) and possibly relates to the circa 2800 B.P. radiocarbon date from Feature 14. Certainly the small prehistoric occupation around Feature 14 did not yield any diagnostic Early Ceramic Period vessel fragments. Alternatively, it is possible that the late Susquehanna Tradition occupation on the site was followed by an Early Ceramic Period occupation around Feature 14 where no ceramic vessels were broken or discarded. There is at least one occupation on the site that discarded or lost a few stone points and scrapers and sherds from 8 Native American vessels. All the vessels recovered are Late Ceramic Period in age or, possibly, early Contact Period in age. Evidence for Contact Period use of the site includes clay tobacco pipes of 17th century or later date and European flint. It is likely, but not certain, that there are more than one Contact period occupation represented and/or that the Late Ceramic Period occupation was a

century or two earlier than the Contact Period occupation.

In the paragraphs that follow we group diagnostic Native American material from the site (except for the prehistoric lithic artifacts from the Purinton Barn concentration around Feature 14) into several components. We then discuss the non-diagnostic tools, debitage and fire-cracked rock assemblage (again omitting the area around Feature 14). The material from the component around Feature 14 is discussed in a separate section.

The Susquehanna Tradition Component

There are three artifacts that can be assigned with greater or lesser confidence to the Susquehanna Tradition (as broadly defined, Spiess 1991). The first item is a 3 cm long piece of the tip of a bifacially flaked, diamond cross section drill made from felsite (artifact 15.153.005, transect 2 testpit 38, Spiess and Cranmer 1989). Diamond cross section drills are common in early Susquehanna Tradition components (eg. Atlantic Phase), including the cremation burials at the Turner Farm, North Haven (Bourque 1995:113-114). A large fragment of an identical drill form was recovered from sealed context with multiple radiocarbon dates of about 3100 B.P. at Fort Halifax (Spiess, unpublished) so the drill form survived into the late Susquehanna Tradition. (A similar, form which may not be easily differentiated from fragments, is found in Middle Archaic contexts with Neville points.)

The second diagnostic artifact (catalogue .0006) is a fragment of a possible stone bowl (Figure 5) recovered in transect 3 testpit 20 during Phase I testing of the site. The piece is maximally 6 x 4 cm by 1.5 cm thick. It exhibits a gradual curvature on its exterior without sharp corners. The exterior is either partially finished or was completely finished then heavily eroded as well as scarred with two plow scars. The interior is heavily eroded or was poorly finished and is



Figure 3. Late Susquehanna Tradition corner-notched point (.8841), upper left; 5/64" bore pipestem, cut and whittled (.6258), upper right; three Ceramic Period bifaces, lower left (l. to r. .1254, .1284, .1250); argillite blade, retouched into drill-like form (.5846-2 & .7359), second from right lower; stemmed biface base (.5910) lower right.

characterized by a pitted and spalled surface.

The material is a brown metamorphic rock with a granular texture containing many small (0.5 mm) rhomboidal black crystals, smaller red translucent crystals (garnet?) and gas vacuoles or solution cavities. The specific gravity is 2.3. This stone material can be easily cut with a steel knife although it does not feel "soapy" as does soapstone or steatite. Its overall hardness is probably about 3 on the Mohs hardness scale. This material is not soapstone (massive talc, specific gravity 2.7 to 2.8, hardness 1) or chlorite (specific gravity 2.6 to 3,

hardness 2). It may be serpentine (specific gravity 2.2-2.6, hardness variable between 2 and 5, sometimes including garnet). In southern New England and New York state stone bowls are associated with late Susquehanna Tradition occupations (eg. Frost Island phase dating after 3400 B.P.) and with later occupations with Orient Fishtail points (Snow 1980:240, 250; Ritchie 1980: 150, 170-174). Stone bowls are not found in early Susquehanna Tradition contexts and they are absent, as far as we know, from the rest of prehistory. Soapstone bowls from southern New

England tend to be smoothed inside and out (Snow 1980: 249) in contrast to bowls from Pennsylvania and central New York which are less well finished. This piece is, therefore, anomalous for New England. Moreover, the bowls that have been reported to date (and reported stone bowl quarries (Dixon 1987)) are soft soapstone or steatite. Again, this fragment is anomalous in that it is made of a harder (although still workable) material.

The third diagnostic artifact is a corner-notched point (catalogue #.8841) from N233E113 on the northwest corner of the Purinton House (Figure-3, upper left). It was recovered from a disturbed Euroamerican context. The point is 39.7mm long, 32.1mm wide at the shoulders, 20.5mm wide at the base and maximally 6.7 mm thick. Thus, it is relatively thin for its width. The base has been thinned for hafting by several flakes originating along the base. The base and notches have been lightly ground. The piece is made of a dark grey rhyolite (observable on one small broken portion). patinated, the material is medium-grey with tan blotches, small (<0.1 mm) phenocrysts which patinate white and slightly smaller solution cavities for some mineral which has dissolved. (This material is not closely related to Kineo rhyolite.) Overall, the high quality of workmanship on a volcanic rock is indicative of the Susquehanna Tradition. Corner-notched points are rare but not absent in the Early Susquehanna Tradition in Maine (eg. Turner Farm, Bourque 1995: 108-111). However, this point is shorter and broader than the vast majority of Early Susquehanna Tradition points from Maine. The combination of its shortness and broadness and broad corner-notching is commonly matched by many points in the late Susquehanna Tradition Frost Island Phase in New York (Ritchie 1980: 156-164; Trubowitz 1983: 85-88).

None of these three objects were found in close proximity to each other. Thus, we cannot specify



Figure 4. Stone bowl fragment.

the location of a Susquehanna Tradition occupation on the site. We can state that there was at least one Susquehanna Tradition occupation on the site and that it was a late Susquehanna Tradition occupation probably postdating 3400 B.P.

Ceramic Period Component

Site 15.153 yielded ten fragments of Native American ceramic which came from 8 different proveniences and 8 different vessel lots (Table 1). However, all eight vessels, and thus all aboriginal ceramics from the site, can be confidently ascribed to the Late Ceramic Period or Early Contact Period, CP 6 and/or 7 of Petersen and Sanger (1991), circa 650 B.P. to 200 B.P. All sherds from 15.153 are small body sherds. Most were recovered from the plowzone. CP 6 and CP 7 vessels are large, globular vessels which represent a "new" ceramic technology compared with previous ceramic production. The absence of rim or collar

sherds in the assemblage precludes a decision whether these are Iroquoian-style or Iroquoian-copy vessels (see Petersen and Sanger 1991). The total absence of ceramics of other periods on this site is a good argument that the land surface was not used for any kind of extensive or repetitive occupation at other times during the Ceramic Period.

There are five lithic artifacts that can be ascribed to a Ceramic Period occupation: 3 bifaces and two endscrapers. The three bifaces were recovered in relatively close proximity (Table 2, Figure 3 lower row, three left). Although the materials and treatment of the bases varies, all three are long relative to width and poorly made. Item .1254 exhibits a square base with parallel sides extending for 1.3 cm. Distally, the edges converge irregularly to a rather thick point. The piece was never fully thinned since the artisan left a lump of material ("turtleback", unremoved remnant) on one surface. This piece may have been a borer or drill. Item .1250 is an asymmetrical and poorly flaked side-notched point. It has broken distally. Neither the stem nor the body of the point is bilaterally symmetrical. Item .1284 is an isosceles triangular point with a broken tip. The piece is made by retouching a flake, leaving the general curvature of the flake to control the dorso-ventral symmetry of the point.

The artisan left a bit of the striking platform (unretouched) to form the edge of one of the proximal corners of the point. The piece has been basally thinned by removal of a few short flakes from the base.

Side-notched and triangular points are, together, markers of the late Ceramic Period in Maine and associated with cord-wrapped stick (CP 5) or later ceramics. Usually, Ceramic Period points are made much more carefully while these exhibit minimal flaking skill. Previously we have com-

mented that there are no Native American ceramics from the site except for CP 6 and CP 7 ceramics. A few sites (Spiess 1984; Will and Cole-Will 1989) have now produced flaked stone points that postdate European contact and may date as late as circa 1675. These stone points are characterized by a variety of basal treatment, usually contracting stems, but uniformly by poor workmanship skills.

Perhaps a hypothesis of loss of skill during the dislocations of Native American life due to European contact may explain this phenomenon. Thus, we presume the possibility that these three lithic points are part of the CP 6 or CP 7 occupation of the site and that occupation was post-contact.

The two other Ceramic Period lithic artifacts are small unifaces produced from exotic raw material. Item .1215 (N20 E48 plowzone base) is a small (17 x 18 mm) "thumbnail" endscraper made on a flake of grey and tan-grey mottled chert. The distal, retouched edge is unique in extending through about 90 degrees of arc from the distal to the lateral side of the piece. Wear on the distal edge is extreme: heavy undercutting step-flaking, dulling and polish. Item .1197 is an endscraper fragment (20 x 17 mm.) made on orange-tinged, translucent Nova Scotia chalcedony. The distal edge is still sharp; the piece may have broken before it was too dull to use further. Small "thumbnail" endscrapers made on "exotic" material or on Maine chert (accompanied by varying percentages of rhyolite endscrapers) are diagnostic of the Ceramic Period in general. There is some evidence that the percentage of chert and exotic material increases from the Early Ceramic to the Late Ceramic sub-periods, but we do not have any archaeological evidence of the frequency of use of exotic material during the Early Contact Period.

Contact Period Component

There are three items of European origin from

Prehistoric Occupations On The Purinton House Property

CATALOG. NUMBER	PROVENIEN.	TEMPER	THICKNESS	INTERIOR SURFACE	EXTERIOR SURFACE	WT gr.
1278	N28E74 SWq plowzone	crushed quartz and fine sand <0.5mm	4.7mm	smooth	fabric paddled, Z-twined, unspun or very loosely spun fiber, 0.15mm dia., 3 mm spacing warp	1.3
7363	N177E137 NEq plowzone	sand, some mica, <2.0mm	6.8mm	rough, patted with leather?	smooth, burnished?	1.4
1227-1229	N20E48 SWq PZ/B inter.	fine crushed quartz, sand <2.0mm	5.9mm	??	knotted fabric impress. spacing between knots 3.0 mm.	1.6
1271	N36E76 NEq plowzone	fine sand with small mica <.5	6.1mm	wiped (fine para. lines)	random, well spaced fiber impressions	1.6
1316	N36E78 SWq plowzone	fine crushed quartz <1.6mm	>7.8 mm	?smoothed, irregular	??	1.0
1720	N221E134 NEq 40-60 cm	quartz and dense mica about 1.0 mm	>4.8 mm	smooth, burnished?	??	0.9
0003	A3 trans6 tp10	crushed quartz and fine sand <1.0 mm	7.4mm	rough, leather patted?	coarse fabric or matt impressed	1.8
1264	N36E74 plowzone	v.fine mica and sand, poss. shell	3.5mm	smooth	smooth	0.5

Table 3. Native American vessel lots from site 15.153. All vessel lots are comprised of one sherd, with the exception of catalogue number 15.153.1227-1229, which contains three small sherds. All sherds are body fragments (no rim sherds) and all are less than 2cm maximum dimension.

the site that might be ascribed to a Contact Period Native American occupation because they either predate the Euroamerican habitation on the site or do not seem to be associated with it. Two are European clay tobacco pipes.

A white clay tobacco pipe stem fragment (.0093) with a 7/64" bore diameter was recovered from the plowzone on transect 5 testpit 5. This pipe probably dates 1650 to 1680 and must date to the 17th century. Thus, it represents Native American occupation of the site about a century before Euroamerican settlement on the spot.

A second white clay pipe stem fragment is likely to represent Native side- American use of

the site because of modification (Figure 3 upper right) rather than just its age. This item (.6258, Purinton Barn concentration, plowzone) is a 3.5 cm long section of 5/64" bore diameter pipe stem and includes the proximal end of the pipe. There is a well-defined, shallow groove from tooth wear around the proximal end of the stem. After the stem fragment was broken from the rest of the pipe, the rough edges of both ends were beveled at about a 45 degree angle. This modification essentially transformed the pipe stem into a symmetrical white bead that could be suspended without catching on the broken end. Pipes with stems of this bore diameter could have been manufactured from 1690

Catalogue #	Provenience	Length mm.	Width mm.	Thickness mm.	Material
.1250	N36E78 plowzone	31.7	17.5	6.9	dark grey rhyolite
.1254	N28E78 plowzone	39.9	15.4	8.2	Kineo rhyolite
.1284	N28E76 plowzone	34.9	16.9	6.0	light green granular rhyolite

Table 4. Bifaces ascribed to the Ceramic Period occupation.

to 1800, but were most likely to have been manufactured from 1710 to 1750. Therefore, it is likely that this piece immediately precedes the first Euroamerican habitation at the site. Moreover, modification of a pipe stem for suspension is not a likely Euroamerican activity but clearly fits within traditional use of large shell beads by Native Americans.

Item .0982, recovered from the plowzone in N22E166, is an unmodified pebble of European white flint (2.8 x 1.1 cm). It obviously originated as a piece of river gravel in Europe from whence it may have been carried to Maine as ship's ballast. Flaked Europe flint is a recurring material in Contact Period Native American sites. Recovery of an unmodified piece of flint river gravel is rare. If, in fact, it does date from the Contact Period occupation, then it indicates opportunistic recovery of this raw material from piles of ship's ballast.

Summary of Native American Components

The limited sample of ceramics from the site (10 sherds, 8 vessels) derives from the Late Ceramic and/or early Contact periods circa 1400 A.D. to 1675 A.D. Diagnostic stone tools come from a similar possible time span although the notched point could date as early as 1100 or 1200 A.D. European clay tobacco pipes are likely to be 17th and early 18th century, respectively, but there is a remote possibility that they could both date circa 1690. Overall, there is a remote possibility that all the Ceramic Period and Contact Period material dates to a single occupation around the end of the 17th century, perhaps during King Phillip's War. However, it is more likely that several to multiple small occupations between 1400 or 1500 A.D. and 1750 A.D. are represented.

REFERENCES

Bourque, Bruce J.
 1995 *Diversity and Complexity in Prehistoric Maritime Societies: A Gulf of Maine Perspective*. Plenum Press, New York.

Prehistoric Occupations On The Purinton House Property

Bourque, Bruce J. and Deborah Wilson

1992 Report on the Phase 3 Archaeological Investigations of the Indian Spring Site, Brunswick, Maine. Report on file, Maine Preservation Commission.

Cox, Steven L.

1992 The Topsham Archaeological Project: Report on 1991 Investigation of Sites 15.233 and 15.238. Report on file, Maine Historic Preservation Commission.

Cox, Steven L. and Deborah Wilson

1991 4500 Years on the Lower Androscoggin: Archaeological Investigation of the Rosie-Mugford Site Complex. *The Maine Archaeological Society Bulletin* 31:1:15- 40.

Cranmer, Leon

1993 The Purinton House: Colonial and Federal Archaeology in Topsham. *The Maine Archaeological Society Bulletin* 33:1:1-55.

Dixon, Boyd

1987 Surface Analysis of the Ochee Spring Steatite Quarry in Johnston, Rhode Island. *Man in the Northeast* 34:85-98.

Odell, George H. and Frank Cowan

1987 Estimating Tillage effects on Artifact Distributions. *American Antiquity* 52:456- 484.

Petersen, James B. and David Sanjer

1991 An Aboriginal Ceramic Sequence for Maine and the Maritime Provinces. *Prehistoric Archaeology in the Maritime Provinces: Past and Present Research*, ed. Michael Deal, New Brunswick Historic Resources(Pub. in 1994), Pp 113-169.

Pike, John

n.d. Journal of John Pike. *New Hampshire Society Journal* vol? 58.

Purchas, Samuel

1624 *Hakluytas Postumus or Purchas His Pilgrimes*. James MacLehose and Sons, Glasgow. Reprinted by The MacMillan Company, New York, 1906.

Retelle, Michael and Katherine M. Bither

1989 Late Wisconsinan Glacial and Glaciomarine Sedimentary Facies in the Lower Androscoggin Valley, Topsham, Maine. Pp. 33-52 in Robert D. Tucher and Robert G. Marvinney, eds. • *Studies in Maine Geology, Vol 6: Quaternary Geology*. Maine Geological Survey, gical Augusta.

Ritchie, William A.

1980 *The Archaeology of New York State, Revised Edition*. Harbor Hill Books, Harrison, New York.

Snow, Dean R.

1980 *The Archaeology of New England*. Academic Press, New York.

Spiess, Arthur

1984a Allen's Island, Site 17.76, 1983 Test. Manuscript on file, Maine Historic Preservation Commission.

The Maine Archaeological Society Bulletin

1984b Promise of the River Terraces: 1983 Kennebec Valley Survey for Prehistoric Sites. Manuscript on file, Maine Historic Preservation Commission.

1991 Susquehanna Tradition Context. Manuscript on file. Maine Historic Preservation Commission.

Spiess, Arthur and Leon Cranmer

1989 Brunswick-Topsham Bypass Archaeological Phase I Survey. Report on file, Maine Historic Preservation Commission.

Spiess, Arthur E. and Mark H. Hedden

1983 *Kidder Point and Sears Island in Prehistory*. Occasional Publications in Maine Archaeology #3, The Maine Archaeological Society and Maine Historic Preservation Commission, Augusta.

Trubowitz, Neal L.

1983 *Highway Archaeology and Settlement Study in the Genesee Valley*. Occasional Publications in Northeastern Anthropology 8. Rindge, New Hampshire.

Will, Richard and Rebecca Cole-Will

1989 A Preliminary Report on the Ann Hilton Site. *The Maine Archaeological Society Bulletin* 29:2:1-12.

Wilson, Deborah, Steven L. Cox and Bruce J. Bourque

1989 The Topsham Archaeological Project: Report on the 1988 and 1989 Surveys. Report on file, Maine Historic Preservation Commission.

Yoon, David

1986 The Analysis of Variability in Fire-Cracked Rock. Honors thesis, Dept. of Anthropology, University of Michigan.

1000 B.P in West Penobscot Bay:

41.68 & 41.68A

Harbour Mitchell III

INTRODUCTION

In 1988, the author began an ongoing archaeological survey of one section of central Maine coastline, Ducktrap Harbor in West Penobscot Bay. The survey's two primary goals are to locate prehistoric archaeological sites along the littoral in Ducktrap Harbor and define the spatial and temporal extent of any such sites. Surface collection and limited sub-surface testing, the two primary techniques employed in this survey, have resulted in the discovery of seven sites along the harbor's shore. Of the ten known prehistoric sites in Ducktrap Harbor, three have been investigated in four limited investigative efforts (Mitchell 1992, 1993, 1994). Based on artifactual evidence recovered during those investigations, the temporal range of the aboriginal occupations in Ducktrap Harbor is at least 4000 B.P. to 1675 A.D.

Site 41.68 was first located in 1989 by the author's observation of cultural materials eroding from the shoreline. The site was subsequently numbered and placed on the Maine inventory of archaeological sites kept at the Maine Historic Preservation Commission in Augusta, Maine.

Testing in May, 1993 revealed that site 41.68 covered an area of over 300m², and includes pit features, large amounts of lithic and ceramic artifacts, and high levels of calcined bone. Noted at the time was Test Pit 1 (TP1), a 50cm x 50cm test pit within 5m of shore. Test Pit 1 revealed a black sandy silty soil that contained exceptionally high amounts of lithic

debitage and artifacts, ceramics, and calcined faunal remains. In August, 1994, the author returned to 41.68 and excavated a 1m² test pit (TP40) adjacent to TP1.

TP40 revealed the same sub-surface attributes as TP1 and helped define the area as a possible non-shell midden, or a large pit feature, or both.

Analysis of the 1993 and 1994 investigations revealed three spatially discrete areas exhibiting levels of cultural materials. The areas identified were: Area A (the area in which TP40 was located), Area B (an area relating to TP9) and Area C (an area relating to TP11). Cultural materials found in these areas included lithic artifacts and debitage, ceramics and calcined faunal remains.

In July, 1995, excavation continued at 41.68 with the opening of several 1m x 1m excavation units in Areas A and B. (No excavation took place in Area C due to the limited availability of both time and resources). This article synthesizes the results of the 1995 excavations at 41.68, explores the possible relationship between 41.68 and its sis-ter site, 41.68A, a Late Ceramic Period activity locus 100m to the west(see Mitchell 1994, 1995), and presents hypotheses relating to seasonality of occupation at 41.68 and 41.68A, Late Ceramic Period settlement patterns, and Late Ceramic Period ceramic development.

GEOLOGY

While 41.68 is located in "mid-coast"

Maine, an area extending as far south as Thomaston and as far north as Belfast, the area involved in this report is the immediate coastal plain in Lincolnville and Northport, Maine. The geology of Lincolnville and Northport is dominated by the presence of the Penobscot Formation (Berry 1986:6), and includes the Megunticook Formation (Berry 1986:6). The latter, com-

monly referred to as The Camden Hills, is comprised of eight small mountains stretching southwest to northeast the largest of which is Mt. Megunticook at 1300' amsl.

Along the eastern base of The Camden Hills lies a narrow strip of gently sloping coastal plain. This glacially formed plain is comprised primarily of deposits of unconsolidated sands and gravels. A mile wide at most, and extending a distance of approximately 10 miles, this coastal plain affords modern passage along the coast between Camden and the Lincolnville-Northport area. 41.68 is located at the northern maximum (and narrowest) portion of this plain.

Subsequent to glacial deposition, runoff from the hills to the north and west bisected the sand and gravel deposits resulting in the formation of numerous broad, gently sloping knolls lying perpendicular to the shoreline. Typically, Ducktrap's coastal knolls are bounded on at least one side by some form of fresh water, either a small stream, weepage, or low lying wetland. The circumstances at 41.68 are no different.

41.68 currently lies directly east of a small wetland/swale that acts to drain large amounts of fresh water from the hills to the north. While bounded to the west by the typical low topography, the eastern portion of 41.68 is located at the base of a significant incline. This incline represents the immediate lower portion of the large hill to the north and the end of the

narrow coastal plain referred to earlier. Of note, 41.68 is bounded along its southern, ocean facing margin by substantial angular bedrock projections (The shore of Ducktrap Harbor extends approximately 2 miles, east to west, giving it a generally southern orientation.). East of these outcrops lies a tidal zone characterized by extensive cobble and boulder accumulations. West of the outcrops lie extensive, gently sloping sand beaches.

WATER BODIES

41.68 is located within an intricate and spatially broad watershed, the Ducktrap River watershed. The main water course in the watershed, the Ducktrap River, is located approximately 1/2 mile southwest of 41.68 and extends into the interior regions of Lincolnville and Searsport, Maine. It is fed by the outlet streams of three major permanent ponds and a number of small, unnamed streams and brooks throughout the watershed.

The Ducktrap River's furthest interior source, Tilden Pond in Belmont, drains directly into a large wetland area out of which flows the Ducktrap River. Running parallel to and east of Ducktrap River is Pitcher Pond. Pitcher Pond lies several miles into the interior in Lincolnville and Northport and is separated from the river by slightly higher topography. Its only outlet, Kendall Brook, connects directly to the Ducktrap River. Coleman Pond, the third permanent body of water that supplies Ducktrap River, also lies several miles inland. Coleman Pond's only outlet, Black Brook, connects directly to the Ducktrap River.

Although not directly connected to The Ducktrap River, a fourth permanent body of water is considered part of the watershed. Knight Pond lies 1 mile due north of 41.68 at an elevation of 204' amsl. It drains into Pitcher

Pond via shared wetlands (large areas of wetland abound above 41.68 at higher elevations). In addition to the permanent water bodies, many unnamed and semi permanent streams and weepages also drain the area.

While no flowing water or spring currently exists at 41.68 it is bounded by a small wetland/swale to the west. Area A of 41.68 was prone to large quantities of ground water intrusion during excavation. Given the volume of ground water moving through Area A, it is possible that a small part-time stream existed at 41.68 prior to historic modification of the land form.

Of course, the most notable water body in the region is Ducktrap Harbor and West Penobscot Bay.

METHODOLOGY

Archaeological efforts at 41.68 span several years with each year seeing a limited but progressively more complex amount of work being done. Initial testing efforts in May, 1993 involved the shovel excavation of 14 50cm x 50cm test pits located at 5m intervals within an established grid. Screening of all excavated soil was accomplished through 1/4" galvanized hardware cloth and all cultural materials were bagged, labeled, and stored for future analysis. Due to the fact that 41.68 is in large part a landowner's front yard and mowed field, the testing protocol called for the removal of 5cm⁺ thick sod layers from all test pits (to be replaced after their completion). Although the spacial extent of 41.68 was not fully defined in 1993 (and to date remains so) initial testing did define the broad temporal horizons within the site and, to a large extent, the degree to which cultural materials were present.

Work continued in August, 1994. Of specific interest was "Area A". Area A, was

known to have high levels of sub-surface water. While this difficulty did not preclude excavation the water did make excavation and the recovery of cultural materials difficult. Special logistics were required. A permanent water screening area was established in a natural basin nearby and large, 2' x 3', 1/8" mesh water screens were set up on saw horse frames to facilitate stationary water screening.

Using the base line from the previous year, the author established a 1m x 1m excavation unit (TP40) east of, but adjacent to, TP1. Test Pit 40 was subdivided into standard 50cm x 50cm quads, 1,2,3,4 (NW, NE, SW, and SE respectively), and excavation proceeded in 10cm, arbitrary levels. The volume of cultural materials recovered, the slow pace of water screening and inclement weather so overwhelmed excavation that TP40 was excavated to a depth of only 50cm below surface (b.s.). Although desirable, further excavation was not possible due to water intrusion into the unit.

In July, 1995, the author returned to 41.68, relocated the 1993 base line, reestablished the grid and began excavation in Area A and Area B. Due to its complexity, 1995's effort required the site grid be given a compass designation. A southwest designation was chosen and excavation units were labeled accordingly.

Excavation in Area A involved two 1m x 1m excavation units, one immediately northeast and one immediately northwest of TP40, and proceeded in the same fashion as 1994's effort. The only significant deviation from the previous year was the decision to excavate in 5cm levels.

Excavation in Area B involved a 2m x 2m area bounding TP9. Excavation in Area B maintained the same protocol as Area A with the exception of the use of 10cm excavation levels and dry screening using galvanized 1/4"

mesh shaker screens. While water screening of Area B matrix was required intermittently due to difficulties relating to wet weather, Area B fill was dry screened in the majority.

STRATIGRAPHY

With the exception of a plow zone, profiles from archaeological excavations along Ducktrap Harbor generally reflect natural stratigraphy. However, wall profiles from excavation at 41.68 indicate a large portion of the site's stratigraphic record is the direct result of cultural activities.

1995's excavation took place in two spatially distinct areas. The first, Area A, involved a subsurface pit (Feature 2) and a non-shell midden. The second area, Area B, involved a possible Middle Ceramic period house pit (Feature 1).

Area A is comprised of three strata: Strata I, II, and III (Figure 1, bottom) (Note - the Area A profile is composed of perpendicular walls). While Strata I, II, and III are discrete strata, both visually and relative to their matrices, they are considered as combining to form one cultural unit: a non-shell midden. With the exception of a dense, but limited, root structure associated with swale vegetation (e.g., ferns), Area A has virtually no root mat. Instead, a layer of dark brown, very silty, coarse sandy soil begins directly at the surface. While this stratum (Stratum I) is interpreted as an A-Horizon, it is noteworthy that aboriginal cultural material (debitage) exists immediately below the surface in Level 1 (0-5cm b.s.).

Directly beneath Stratum I lies Stratum II, a well defined, 10-15cm thick lens of silty, coarse sand also containing cultural material. As Area A is less than 1m above the high tide line and directly adjacent to a sand beach, this sand lens might intuitively be considered the result of a severe storm event. However, wall profiles

clearly illustrate that the sand lens is not only limited in its horizontal extent east, west, and north, but that it is limited to the area immediately above Feature 2. While its southern extent is unknown it is quite apparent that Stratum II is a sand lens capping Feature 2, not a broadly developed stratum over Area A as would be expected from storm surge activities.

Stratum III, directly beneath the sand lens, is a visually distinct dark black-brown to black sandy silty soil horizon approximately 20cm in thickness (Stratum III). The excavation unit's wall profiles indicate that Stratum III extends in all directions beyond the current excavation and involves no less than twelve additional square meters. Stratum III contains the majority of cultural material found within the non-shell midden and, given the presence of refitted ceramics, appears to result from continued efforts at refuse dumping after Feature 2 was filled.

Stratum IV, lying directly beneath Stratum III, is a light yellow-brown to tan, silty soil with rock (subsoil). Although not encountered during excavation, a bedrock substrate is indicated by the extensive bedrock outcrops noted along shore within a few meters of the excavation.

Dominating the stratigraphic profile of the excavated portion of Area A is Feature 2, a large refuse pit. Feature 2 is estimated to measure between 1.5m and 2m in maximum diameter and approximately 45cm in depth (measured from the base of the non-shell midden). Feature 2's fill is equivalent to Stratum III: black to black-brown, silty sandy soil. Four forms of cultural material are present within Feature 2: aboriginal ceramics, lithic artifacts, lithic debitage and calcined faunal remains. Additionally, while not culturally manufactured, the high rock content of Feature 2 must be considered culturally generated and introduced

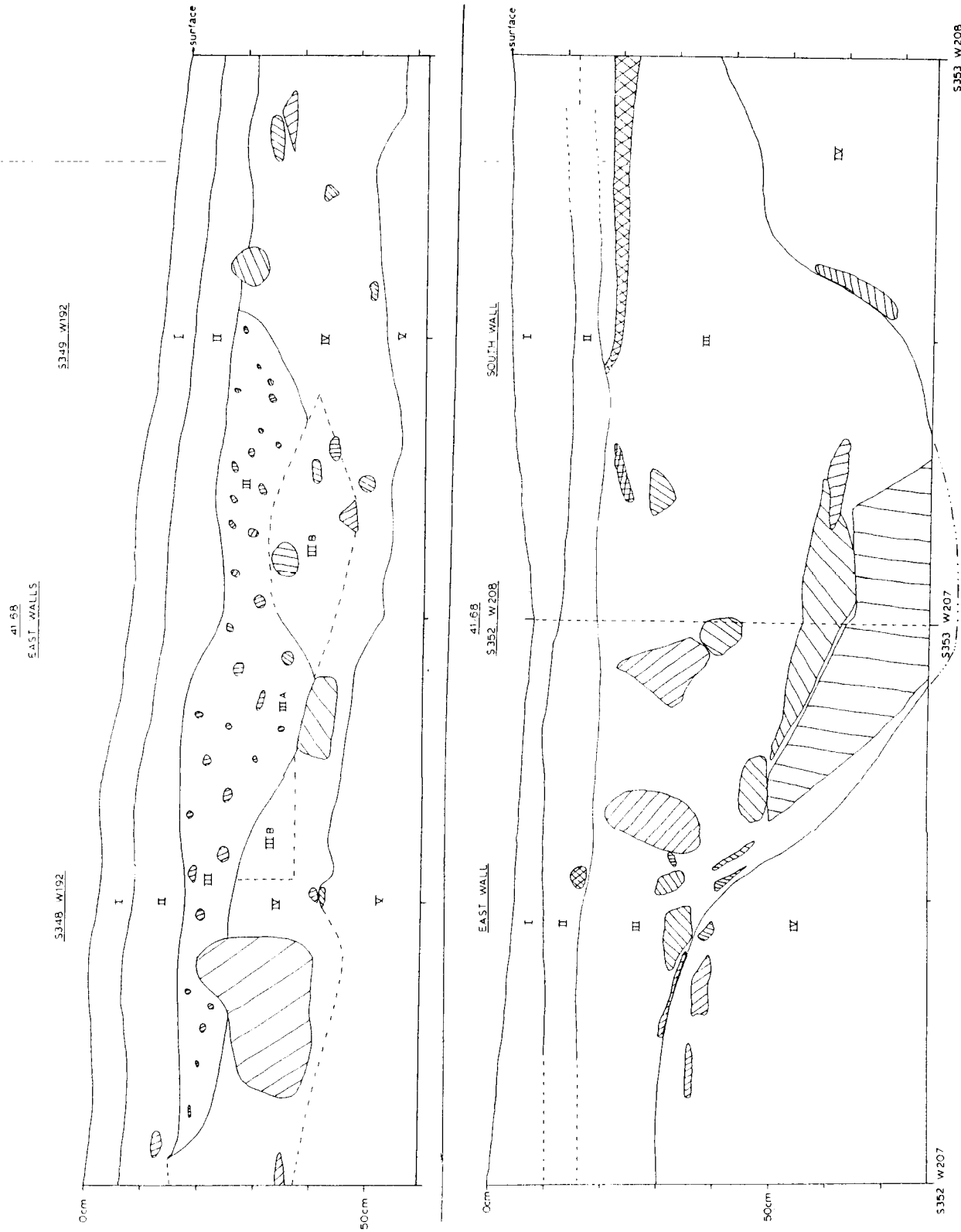


Figure 1. Wall profiles: Area A (top), Area B (bottom).

to the feature. Excavation in Area B was initiated due to the presence of three varieties of cultural materials within a single 50cm x 50cm test pit excavated in 1994 (TP9). Lithic artifacts and debitage, calcined faunal remains and aboriginal ceramics were all present in TP9 (indicative of intense cultural activity in that location). The assumption was that a feature of some form was responsible. Not until 4m² had been excavated and a 2m-long wall profile was exposed did a feature reveal itself (Figure 1, top).

Although the slope of Area B suggests plowing probably was not attempted, a stone wall to the north attests to some form of agricultural activity there. Thus, though thin, Stratum I and II, in Area B, are considered a probable Ap-Horizon.

Feature 1 is considered as beginning at approximately 15cm b.s. even though black, charcoal/organically enriched matrix was noted as high as Level 2 (10-20cm B.S.), Feature 1's matrix (Stratum III, IIIA, and IIIB) begins as very dark brown to black sandy silty soil with copious amounts of pea gravel, then changes with depth to virtually gravel free, black, sandy silty soil. Minimally, Feature 1 measures 1.5m in diameter, and extends at least as deeply as 40cm b.s. Feature 1 is also identified by the extremely high levels of cultural materials present within its matrix. Over 3000 flakes and flake fragments were recovered from the 4m² associated with Feature 1.

Making stratigraphic interpretation of Feature 1 difficult is Stratum IV. Stratum IV, an olive to dark yellow brown, silty sandy soil with gravel, surrounds and underlies Feature 1's black, pea gravel rich matrix in virtually all

excavation units. Below Stratum IV, cultural sterile tan-yellow silty sub-soil was encountered (Stratum V). Although the W192 2m wall profile is insufficient to fully define its sub-surface contour, Stratum IV is considered as possibly cultural in origin and associated with Feature 1.

While Feature 1 indicates a significant amount of activity by the occupants of Area B, due to the limited nature of excavation, interpretation of the feature is dependent upon stratigraphic profiles and a "best fit" with known behavioral patterns of the time. To that end, a literature review revealed that there is one form of sub-surface feature as large as Feature 1, and identified as to function: a Ceramic Period house pit.

While archaeologists have identified numerous house pits throughout the region (Sanger 1976, Belcher 1988, Skinas 1987, Cox 1983), in virtually all cases the site contexts are multi-component shell middens. Even so, a general archaeological pattern has emerged that is, the author believes, applicable to understanding Feature 1 and Stratum IV.

Most references to Ceramic period houses, or house floors, generally cite three main attributes: 1) a semi-subterranean nature, usually saucer shaped in profile, up to 60cm in thickness; 2) an oval configuration 3-4 meters in maximum diameter in plan view; and 3) a living floor consisting of gravel lenses and/or organically enriched soil (Sanger 1976:6,10; Skinas 1987:61, Belcher 1988: 168,170,173, Belcher 1989:33, Cox 1983:23). Additional attributes found within the confines of a house pit may include: hearths (rocked or unlined), entrances (possibly facing away from shore and

possibly comprised of gravel) and a high artifact density relative to surrounding non-house matrix (see Sanger 1976, Skinas 1987, Belcher 1988, Cox 1983).

An analysis of Area B reveals several correlations with the attribute assemblage outlined above. Feature 1 is, in profile, both semi subterranean and roughly saucer shaped, being approximately 1.5m in width and reaching a maximum depth of greater than 40cm below surface. Its matrix is heavily enriched with either charcoal and/or organics (making it black-brown to black in color) and maintains a high level of pea-like gravel presumably introduced from the beach below.

Also conforming with the "list" above, the density of lithic artifacts and debitage is remarkably high. Over 1000 flakes and flake fragments are associated with one 10cm thick, 50cm x 50cm area associated with Feature 1. And, based on their horizontal distribution, lithics and ceramics are generally concentrated and continue with depth to the east/southeast in direct correspondence with Feature 1 matrix and Stratum IV.

Given that Feature 1 conforms to many of the parameters noted as belonging to a Ceramic period house pit, (and those parameters with which it does not conform may exist but have yet to be revealed) the author tentatively suggests that Feature 1 represents a spatially limited living floor on which intense cultural activity took place i.e. a Ceramic period house pit.

LITHIC TOOLS

To date, there are over 50 specimens included in 41.68's lithic tool sample. Included are: 44 bifaces (completed, fragmentary, and preforms); 4 steep edged unifaces (including a biface reworked into a steep edged uniface), 3

cores, 1 abrader, and 1 utilized flake. Field observations suggested a difference might exist between the lithic samples from Area A and Area B. Specifically, Area A's lithic tool sample appeared to maintain a significant level of fine grained chert, while Area B's lithic tool sample appeared dominated by felsite.

Area A's lithic tool sample is comprised of seventeen individual tools: 11 bifaces, 3 steep edged unifaces, 1 utilized flake, 1 core, and 1 abrader. Of the bifaces, all are broken to some degree. Forty-five percent (n=5) of the bifaces from Area A are represented by extreme tips only, 9% (n=1) by a large midsection, and 36% (n=4) are bases. Additionally, of those specimens identifiable as to stage of production, only two (18%) reflect finished pieces. Of these two, only one maintains well defined attributes- (41.68.116).

41.68.116 is an intact biface base composed of lustrous, fine grained, blue-green and maroon chert (Plate 1, bottom row, far left). Its attributes include: two corner/side notches, a contracting base, a well-thinned, straight basal margin and a straight to slightly convex blade 2cm in width at the shoulders.

While a second notched biface base is present (41.68.100), its attributes are not as readily discernible. 100 is broken. It is 3.5cm in maximum width and composed of a fine grained, black to dark red-brown, semi-lustrous chert with numerous white intrusive bands. Its attributes include a single, low, shallow side notch and a well thinned slightly convex basal margin with rounded lateral ends. Due to the limited nature of the base, no data are available on blade specifications or shoulders.

Of the three biface preforms recovered from Area A, 41.68.170 is an isosceles triangle 5.5cm in maximum length with a central mass indicating possible difficulty with thinning the



Figure 2. Bifaces from 41.68A (top) and 41.68 (bottom).

rough grained felsite. The others, 41.68.117 and 140, are composed of felsite and well thinned. Although missing their tips, they are clearly rectangular in form.

Lithic materials represented by bifaces recovered in Area A include (in their order of priority within the sample): felsite (n=7, 63%), chert (n=3, 27%) and white quartz (n=1, 9%). Of the chert bifaces, three varieties are present: a lustrous blue green and maroon Munsungun chert, a lustrous tan and brown chert, and a lustrous dark red brown chert (the latter two of

unknown origin). Interestingly, the materials represented by bifaces (all stages) and the materials represented by debitage do not correlate. Fully 50% (n=1138) of Area A's debitage is finegrained chert. The answer to this apparent inconsistency may lie in the horizontal distribution of lithic materials.

When viewed at the quad level, the horizontal distribution of Area A's debitage suggests a discontinuity exists between lithic materials. Fine grained cherts appear more prevalent in the initial occupation of Area A

(represented by fill within and directly above Feature 2) while the latter part of the occupation (represented by non-shell midden) exhibits a reliance on locally available rhyolites. Future analysis of 41.68 lithics will have, as one of its primary foci, this apparent shift in lithic material use during the occupation of Area A.

To date, 35 lithic tools are present in the sample from Area B. They include: bifaces or biface preforms (n=32), a steep edged uniface (n=1) and cores (n=2). Of the bifaces within Area B's sample, ten are represented by tips and unidentifiable as to stage of production, fifteen are complete biface preforms, and four are bases. Only three (representing two distinct forms: notched and stemmed) appear finished or nearly finished.

With the exception of its extreme tip, 41.68.139 is a complete stemmed biface composed of grey-green felsite with white phenocrysts (Plate 1, bottom row, far right). It measures 5.2cm in length and 2.5cm in maximum width. Technologically, 139 is a poor specimen. Its thick and somewhat "clunky" appearance reflects the difficulty encountered working the low quality felsite.

The blade maintains straight to slightly convex margins that terminate at rounded shoulders and the shoulders contract to form the distal portion of the stem. The stem itself is excessively thin, leading to the need for interpretation as to its intended form. However, beginning directly beneath the rounded shoulders, the stem expands from a minimum of 1.45cm to a maximum of 1.56cm in width, strongly suggesting a rounded, or lobate morphology.

The two notched specimens appear both technologically and morphologically similar. 41.68.141 is a complete biface, less the extreme tip and one shoulder. It is composed of grey-

green felsite with white phenocrysts (Plate 1, bottom row, center left). The blade is broad and short, 3.9cm and 2.9cm respectively. Just as with 139, 141 is somewhat thick and "clunky" in appearance due to the poor quality of the rhyolite. Fracture planes and a resistant central thickness are noted. The blade margins are clearly convex and terminate in sharply downturned barbs.

As noted above, only one shoulder (hence only one notch) is present making interpretation somewhat difficult. While the author interprets 141 as corner-notched, some might perceive it as having a triangular, expanding stem. This perception derives from the notch's increasing width toward the lateral corners of the base resulting in the basal width being narrower than the blade width at the barbs above. It also appears that difficulty was encountered when thinning the base. The basal margin, while interpreted as straight, tends toward a slight concavity due to repeated efforts at thinning.

The second notched specimen (41.68.143) is composed of a sugary textured, grey quartzite and has been refashioned distally to form a steep edged uniface (Plate 1, bottom row, center right). The blade is relatively well thinned, maintains slightly convex margins, is broad (2.8cm in width) and terminates at a rounded shoulder in one instance and a sharply downturned barb in another (downturned barbs are believed to be the intended form). 143 can also be interpreted as either corner-notched (with expanding notches) or expanding-stemmed. The basal margin is narrow (1.5cm) and rounded. Assuming no post production modification, the base is interpreted as convex.

In addition to completed biface forms, numerous biface preforms are also present in Area B's sample. When four additional preforms, recovered from TP9 in 1993, are

added to the sample the total increases to 23. Next to lithic debitage, this is the single largest class of lithic artifacts recovered.

The lithic tool sample from 41.68 is interesting for several reasons. First, it appears to reflect two very different realities. Area A's lithic tools emphasize a diverse suite of materials including fine grained exotic cherts, quartz, and rhyolites (felsite). However, the lithic materials from Area B are extremely limited. Although several flakes of banded maroon chert are present, the lithic tool sample is overwhelmingly dominated by rhyolite (felsite).

Additional differences are noted in the sample of biface preforms. Within the sample of completed bifaces, both Area A and B appear to reflect a corner-notched biface tradition; bases from both areas, though damaged in several cases, clearly indicate an effort at low corner notching. However, Area A's and B's respective biface preforms indicate a very real difference in focus.

Of the three biface preforms recovered from Area A, all are composed of green felsite with white phenocrysts. While one is triangular in form, 140 and 117 are both rectangular and well thinned. This contrasts sharply with biface preforms recovered in Area B. Although the "stage" of biface production in Area B may be characterized as early, the overall emphasis in preforms is clearly on producing triangular forms.

It is the author's contention that while very closely related temporally, the two lithic samples from 41.68 reflect two distinct lithic traditions and the differences between those traditions is reflected especially well by their respective bifacial preforms.

DEBITAGE

Debitage represents the single largest sample of aboriginal cultural material recovered from 41.68 (n=6215). During excavation the author noted that not only was the lithic flake sample dominated by only two lithic materials (chert and rhyolite) but these materials appeared spatially differentiated. Analysis of debitage confirms this field observation.

Although excavation in Area A encompassed a total of only 3.25m², 2276 flakes were recovered. Of the total sample, 44% (n=1011) are felsite and, astonishingly, 50% (n=1138) are fine grained chert. The remaining 5% (n=127) are agate, chalcedony, quartz, quartzite and, possibly, basalt. Of all the chert flakes associated with Area A, 93% (n=1060) are visually identified as maroon, maroon and green, or tan blue-green Munsungun chert.

Although only a few meters separate Area A and Area B, Area B debitage differs dramatically from that of Area A. The debitage sample from Area B totals 3785 flakes/flake fragments. Of these, over 98% (n=3715) are felsite, .5% are chert, and the remaining 1%+ are quartz and other non-chert lithics. Additionally, substantially greater amounts of debitage with cortex is present in Area B. Roughly 3% (n=112) of all debitage in Area B exhibits smooth, water worn, cobble cortex. Given 41.68's location adjacent to a cobble beach this is not surprising. However, Area A (also adjacent to the same beach), produced only 10 flakes with any cortical surface (.4% of Area A's total).

CERAMICS

The analysis of 41.68's ceramic sample utilized an attribute analysis technique, i.e., an analysis of specific technological and



Figure 3. Ceramics from 41.68: Vessel 1 (top) and Vessel 3 (bottom).

morphological attributes associated with the Ceramic period in the Gulf of Maine (Petersen and Sanger 1991). Attributes used for the analysis included exterior decorative efforts, interior decorative efforts, temper type and size, vessel wall thickness, rim and lip form and decorative efforts, and vessel construction. This approach revealed four distinct vessels within 41.68's ceramic sample: Vessels 1 and 2 in Area A, and Vessels 3 and 4 in Area B. Vessel 1's attributes include linearly impressed Cord

Wrapped Stick (C.W.S.) exterior decoration, a single row of circular punctates on the vessel's rim, right oblique C.W.S. impressions on the lip, shallow C.W.S. punctates along the rim (above the circular punctates but below the lip), and grit temper.

A refitting effort, initiated to help define stratigraphic relationships between Feature 2 and the non-shell midden, resulted in the refitting of two Vessel 1 sherds. A decorated body sherd recovered from Level 8 (35-40cm

b.s.) in Feature 2 refits a rim/lip sherd recovered from Level 6 (25-30cm b.s.) in the non-shell midden.

Vessel 2 is represented by undecorated, shell tempered body sherds, the shell having since dissolved leaving cavities throughout the paste. As with Vessel 1, Vessel 2 is also present in both Feature 2 and the overlying non-shell midden. Several Vessel 2 sherds were recovered from Level 10 (45-50cm b.s.) in Feature 2, and from Level 3 (10-15cm b.s.) in the non-shell midden.

Numerous sherds representing Vessel 3 are associated with Feature 1 in Area B (Plate 2, bottom row). Unfortunately, the sample consists of sherds only 3cm or less in maximum length making interpretation of decorative efforts difficult. Vessel 3's attributes include a poorly defined, rocker impressed exterior decoration on grit tempered paste. Although there is no questioning the rockered aspect of the motif, considerable difficulty was encountered when attempting to define the tool form utilized to produce it as the impressions are very indistinct.

The vessel's surface condition suggests the exterior surface may have been very firm when a decorative effort was attempted resulting in indistinct impressions (Karen E. Mack: personal communication). No post-decorative wiping of the surface is evident and few striations are present in the exterior surface. Additionally, the decorative impressions do not "fit" the author's expectations for dentate impressions, most often associated with rockering. Vessel 3's impressions appear "rounded" or "oval" along the lateral margins and at either end of the individual impressions. To the author, the impressions resemble those produced from a "weakly" impressed C.W.S. tool and micro-impressions resemble those made by cordage.

Initially, the author interpreted Vessel 3 as C.W.S. rockered. However, as the author has no knowledge of such a decorative effort regionally, and as Vessel 4, a dentate rocker decorated vessel, was also present in Area B, doubt remained. Therefore, others were asked to review the Vessel 3 sample. Both Rebecca Cole-Will, curator of the Abbe Museum, and Karen E. Mack, Research Assistant attached to the MacKay Lab at the University of Maine, Orono, reviewed the Vessel 3 sherds independently. It is both their opinions that, while indistinct, Vessel 3 appears to be C.W.S. rocker impressed (Rebecca Cole-Will: personal communication; Karen E. Mack: personal communication).

Vessel 4 maintains rocker decoration and grit tempered paste. Although somewhat indistinct, Vessel 4's decorative effort is more easily defined than Vessel 3's, both in terms of the implement used and the application technique employed. The exterior decorative pattern on the single Vessel 4 sherd is clearly Middle Ceramic period, fine rocker dentate, superimposed over a field of lineal dentate impressions.

FAUNAL REMAINS

Ducktrap Harbor presents a well developed, and diverse habitat from which a prehistoric people might procure any number of marine, avian, and terrestrial species. In addition to shell fish, inshore and migratory fish species such as flounder, sculpin, sea bass, sturgeon, and salmon, are all present in the harbor and inner bay today. Personal accounts by 41.68's land owner state that large migratory salmon were captured as recently as the mid 1900's utilizing simple suspended net weirs setup on the sand flats adjacent to 41.68. Large marine mammals,

such as seals, seen today bobbing on the surface across the harbor, would also have been present prehistorically. Waterfowl of all kinds are presently abundant. In fact, Ducktrap Harbor gets its name from the historic practice of trapping molting waterfowl in the steeply banked, constricted mouth of the Ducktrap River. It is likely that many species of marine fowl, e.g., cormorant, duck, and gulls, would have all been readily available in prehistoric times.

Given the broad subsistence potentials there, it is likely that 41.68's inhabitants utilized many different species in their subsistence economy. However, faunal remains at 41.68 are limited to only 901 pieces of bone and a small sample of moose tooth enamel (Will, personal communication; 1995). The overwhelming majority of bone at 41.68 is small (<1cm), calcined, and unidentifiable. Of those pieces that are identified to species (7 pieces of moose tooth enamel and 1 sturgeon scute fragment) little can be said. Without doubt, the age of the site contributes significantly to the lack of preserved, uncalcined faunal remains. However, the primary cause of poor bone preservation at the site (a factor worth further discussion) is the lack of any shell accumulation within the site matrix.

One common expectation applied to coastal Ceramic period sites is the presence, to some degree, of shell midden accumulation. In fact, shell middens and the Ceramic period are virtually synonymous in the archaeological record along Maine's coast. It is of great interest, then, that no shell of any kind is present at 41.68. This reality is all the more curious in light of two facts: data from other archaeological efforts in Ducktrap Harbor suggest that the clam flats adjacent to 41.68 existed at, or near, their current locations at least as early as

the Middle Ceramic period circa 2000 B.P. and, other shell midden accumulations within Ducktrap Harbor reflect Late Ceramic period occupations.

It is these realities that cause the author to consider not only those faunal data that are present, but those faunal remains that are conspicuous by their absence, notably, shellfish. The lack of a shell midden accumulation in a coastal Ceramic period site is noteworthy and the author believes a relationship may exist between the season of occupation and the lack of such an accumulation.

While large clam flats adjacent to 41.68 currently produce both soft shell clams (*Mya arenaria*) and Surf clams (*Spisula* sp.) no shell accumulation, in fact, no shell of any kind, is present within the site. A simplistic rationale as to why this is so might be the erosion of any accumulated shell midden. However, given the occupants' emphasis on refuse deposition in Area A and the apparently intact nature of the non-shell midden there, loss due to erosion seems unlikely.

Another possibility, the prehistoric unavailability of the clam flats at the time of aboriginal occupation, also seems remote. The available evidence indicates that the clam flats adjacent to 41.68, as well as several others in Ducktrap Harbor, have been viable throughout most of the Ceramic Period. Prehistoric archaeological sites within a few minutes walk of 41.68, have produced artifactual evidence of both the Middle and Late Ceramic periods in association with remnant shell midden accumulations (see Mitchell 1992, 1993). Another rationale must be developed for the lack of shell fish remains at 41.68.

Cox (1983) proposes that non-shell midden contexts are quite possibly a reflection of culturally determined, seasonally related

activities i.e. Late Ceramic Period summer occupations did not involve the harvesting of shellfish (Cox 1983:21). Based on numerous faunal indicators recovered from the Goddard Site, a predominantly non-shell midden site located in East Penobscot Bay (Bourque and Cox 1981:3), Cox indicates that the Late Ceramic Period occupation there was limited to summer/early fall (1981:18).

Testing the hypothesis of a Late Ceramic Period warm weather/non-shell midden relationship, Cox investigated the Flye Point-2 site, another regionally contemporary Late Ceramic Period site. There the presence of a shell midden and its cold weather season of occupation (Cox 1983:29) contrasts with the Goddard Site and appears to support the hypothesis.

Of the 200+ pieces of calcined and uncalcined faunal remains recovered in Area A, only two species were positively identified: moose (*Alces alces*) and sturgeon (*Acipenser* sp.). Moose, identified from several fragmentary pieces of tooth enamel (Will, personal communication; 1995), is of no value except as its presence infers the taking of moose as part of the subsistence strategy. However, though limited to a single scute fragment, the remains of sturgeon, a generally warm weather species of anadromous fish, suggests a possible warm weather occupation, at least as it applies to Area A. This conclusion is supported by the presence of sturgeon remains in the sample from the Goddard Site (also a warm weather occupation as noted above (Bourque and Cox 1981:20)), but not at Flye Point 2, a cold weather occupation.

Based on the evidence to date, then, Area A is tentatively considered associated with a summer (or at least, warm weather) season of occupation.

With regard to Area B, though numerous specimens of calcined bone were recovered (n=300), their size and condition preclude their use in any effort to define site seasonality. However, the hypothesized function of Feature 1 as an interior house floor suggests Area B may involve a cold weather occupation. And, being semi-subterranean, Feature 1 suggests its excavation during the non-frozen period of the year. When considered with a model of cold weather occupation, Feature 1 suggests the occupation may have encompassed part, or all, of the fall as well as winter.

41.68A

One of the most interesting, and potentially revealing, aspects of 41.68 (beyond those already stated) is its geographic and temporal contemporaneity with 41.68A (Mitchell 1995). Located approximately 40-50m back from the shore of Ducktrap Harbor, 41.68A is approximately 100m northwest of 41.68 on the opposite side of a large, historically modified wetland/swale.

Cultural involvement at 41.68A includes: pit features with organically enriched soil, an extremely well defined, charcoal enriched soil horizon involving no less than 6²m horizontally and a numerically and spatially limited lithic assemblage (involving only 8m horizontally). No habitation related materials (i.e. faunal remains and/or ceramics) were recovered during excavation at 41.68A.

A two year effort to explore and define 41.68A reveals the site to be a single component Late Ceramic Period activity locus of limited duration. 41.68A's lithic assemblage is the primary evidence for this interpretation. Only 58 pieces of lithic debitage and five fashioned lithic

tools were recovered from the 12²m excavated during 1993 and 1994.

Critical data are: 1) the lack of any cortex on debitage; 2) the presence of 10 visually distinct lithic materials; 3) 20% of all flakes and flake fragments (n=12) exhibit edge modification, i.e., utilization; 4) two pieces of EA-37/38 were recovered within 1m of each other and form a complete biface core (Plate 1, top left); 5) 5 utilized flakes refit EA-37/38; 6) several refitted utilized flakes have clearly been removed from EA-37/38 and utilized after breakage of the core occurred; and, 7) at least one additional biface/core is inferred by additional utilized debitage.

Besides the evidence for production and use of numerous small expedient tools on site, the lithic assemblage is also noteworthy for its fashioned tool assemblage (not represented by debitage). Three unifacial scrapers were recovered during excavation: one square trilaterally retouched uniface, one sub-rectangular bilaterally retouched side scraper and one expedient endscraper exhibiting cortex. Additional tools recovered include a large unifacial flake drill, and a triangular biface.

With regard to the temporal placement of 41.68A, the best indicator is the lithic assemblage. Circumstantial evidence for a Late Ceramic Period placement comes from the unusual diversity of lithic materials represented in 41.68A's assemblage. The suite of ten lithic materials includes: red-brown agate, rose chalcedony, several cherts, (including a highly lustrous, maroon and green Munsungun chert), several rhyolites (including grey and pink Vinalhaven banded rhyolite), quartz and quartzite. This high level of lithic diversity and heavy reliance on exotic lithics is often associated with Late Ceramic Period assemblages (see Ritchie 1969; Robinson and Bolian 1987;

Cox and Kopec 1988; Bourque and Cox 1981; Sanger 1991).

Additional evidence in support of 41.68's Late Ceramic period placement comes from a rose chalcedony triangular biface recovered during excavation (EA-29)(Plate 1, top right). EA-29 is interpreted as a Late Ceramic Period, Madison type isosceles triangle. It is hypothesized that 41.68A is not a "stand alone" site. Rather, 41.68A is part of a broader settlement pattern involving discrete and spatially separated locations relating to specific activities. Three specific lines of evidence are cited:

- 1) the paucity of aboriginal cultural material (with the exception of lithics) suggests 41.68a is not a habitation site itself;
- 2) the spatially limited nature of 41.68a, the presence of primarily a scraping tool kit (including numerous small expedient cutting and scraping tools), the limited nature of debitage, a spatially extensive fire event and the production of pits suggest a specialized activity; and,
- 3) the presence of several large pit features (and their lack of content) suggests a subsistence related activity.

The author believes an immediate temporal and economic relationship may exist between 41.68A and 41.68. Based on diagnostic lithic and ceramic artifacts, both 41.68A and Area A of 41.68 are temporally contemporary. Both were occupied during the late Middle Ceramic or early Late Ceramic period (circa 1150-650B.P.). Beyond that, several lines of circumstantial evidence suggest some form of immediate contemporaneity between the two sites suggesting 41.68A may be a remote work station related to the occupation of Area A at 41.68.

Analysis of the lithic assemblages of both sites indicates that both sites' occupants shared

a preference for the use of exotic lithics, especially those originating from far outside the immediate region. While hardly conclusive, the similarity of lithic materials suggests that both sites' occupants frequented the same areas, if not the same quarries, in an effort to fulfill their lithic procurement strategies.

Also highly suggestive is the conspicuous absence at 41.68A of virtually every element of aboriginal material culture so plentiful in the non-shell midden at 41.68. The author's expectation of a work station includes: a lack of cultural materials, especially those relating to daily habitation, (e.g., ceramics and calcined faunal remains) and an absence of evidence for the disposition of refuse derived from daily habitation (e.g., a midden).

A third line of evidence supporting a possible relationship between the two sites is their seasonality. While limited, the evidence does suggest a like season of occupation. Based on others' models of Late Ceramic Period coastal adaptations, and the presence of warm weather related fish remains, it has already been established that Area A of 41.68 most likely represents a warm weather occupation. While neither line of evidence is applicable to 41.68A, it is clear from the extensive pit construction there that the development and, presumably, use of 41.68A occurred during warm weather when the soil was frost free.

Lastly, 41.68A appears to fulfill the logistical needs of a Late Ceramic Period, non-shellfish related, subsistence economy as hypothesized by Cox (1983) and inferred from Area A of 41.68. As mentioned above, the area of shoreline directly in front of 41.68 is comprised of large, angular bedrock outcrops. This location is not conducive to any tidal related shoreline activity, e.g., procurement of bivalves or fish. However, the shore directly in

front of 41.68A is characterized by extensive (and shallow) tidal sand flats leading directly to deeper water. These sand flats, capable of supporting both fish and the technology required to procure them (fish weirs), constitute an excellent location for procuring substantial amounts of marine resources with little investment of time or energy. The accounts of the current landowners confirm this.

Utilizing suspended net weirs, the current landowners fished the sand flats directly in front of 41.68A well into the 1900's. By all accounts, the capture of large salmon and numerous species of inshore fish during the warm weather portion of the year was a regular and dependable occurrence historically.

CONCLUSION

41.68 appears to be a rare example of an undisturbed single component occupation site offering a narrow window into the period between CP4 and CP5 in West Penobscot Bay. While numerous Ceramic Period shell midden sites have been professionally investigated in and around Penobscot Bay (Belcher 1988; Bourque 1995; Bourque and Cox 1981; Spiess 1983; Sanger 1982, 1989), to the author's knowledge, 41.68's single component, unplowed, non-shell midden is a unique occurrence to date.

At this time, there is no empirical bridge between Area A and Area B such that the two areas' occupations can be considered as having coexisted, i.e., that the midden area belongs to the occupation area. While the ceramic evidence indicates Area A and Area B share very close temporal contemporaneity, several distinct differences are noted. The first relates to the fastidious nature of the occupants of Area A. The breadth of cultural materials, and their mixed depositional state, implies their collection

elsewhere and subsequent deposit in Area A. The presence of such a large refuse pit, and subsequent development of a non-shell midden, suggest a strong desire on the part of the occupants to maintain some level of cleanliness in their living/work area. Additionally, the extremely fine nature of lithic debitage recovered throughout Area A seems to suggest a conscious thoroughness associated with the collection process. This image stands in stark contrast to that of Area B.

Area B appears to represent a spatially concentrated, simultaneous effort at lithic production and habitation. The cultural materials present, though reflecting all the same activities as in Area A, appear to reflect conditions within a confined space rather than refuse disposal over a broad area. Two hypotheses are presented to explain the apparent differences: Area A and Area B reflect different seasons of occupation and temporally separate occupations.

The diversity and spatially concentrated nature of the cultural materials recovered, combined with stratigraphic data, suggests Area B may reflect a cold weather, interior living context, while Area A suggests a warm weather occupation (based on the faunal data present and others' models of Late Ceramic Period, warm weather coastal occupation (Bourque and Cox 1981; Cox 1983)).

The evidence also suggests a temporal separation between Areas A and B lithic samples. Area A's lithic sample is dominated by fine grained siliceous materials, specifically chert. Igneous materials such as rhyolite, while present, are present to a much lesser degree than in Area B. The lack of cortex, suggesting non-local lithic procurement, and the exotic nature of the lithic materials present, strongly suggests an extensive, and perhaps complex, lithic procurement strategy. Such a strategy is often

associated with the Late Ceramic Period.

The lithic assemblage from Area B, however, stands in stark contrast to Area A's. Area B's lithic sample indicates an effort at local lithic procurement and production of lithic tools from felsite and the high incidence of cobble cortex identifies the cobble beach adjacent to 41.68 as the most likely source. Fine grained lithics, i.e. cherts and other non-rhyolites, are in the minority.

An effort to define Area B's temporal association has identified the Casey Site, a late Middle Ceramic Period site dating to 1010+ 50 B.P. (Will 1996:227) as a possible model. Numerous biface preforms, several finished bifaces and thousands of pieces of debitage, all from felsite, were associated with a single sub-surface feature there (Will 1996:227). Additionally, just as in Area B of 41.68, the Casey Site's finished specimens indicate an inclination toward low corner notching, producing "barbs" and convex bases (Will 1996:233, Fig.4; 234). Based solely on similarities with the Casey Site, the author tentatively dates Area B in 41.68 to approximately 1000 B.P.

In addition to lithics, ceramics also support the hypothesis that Area A and Area B represent two closely related occupations, one later and one earlier, respectively. Given the shell temper present in Vessel 2, and the very well developed lineal impressed C.W.S. decorative tradition represented by Vessel 1, ceramics in Area A appear to reflect the very early Late Ceramic Period. However, Vessel 3, from Area B, with its clearly rockered motif, speaks to a tradition more closely related to Middle Ceramic Period rocker decoration.

It is hypothesized that transition in ceramics from CP4 to CP5, a period during which both technological and artistic traditions were

changing radically, might be seen to take place in at least three stages: 1) a change in techno-decorative elements, i.e., a change from a dentate toothed tool to a C.W.S. tool, while still maintaining established design elements, such as a rockered motif; 2) a change from a rockered motif to those involving lineal impressions; and 3) the introduction of shell temper into vessels' paste.

An additional insight relating to the late Ceramic Period is the presence of 41.68A nearby.

41.68A is extremely limited in its spatial extent (only 8m axially east to west) and maintains no habitation related refuse, i.e., ceramics and/or faunal remains. The author hypothesizes that 41.68A is an extension of the same occupation that produced Area A of 41.68. The four lines of evidence in support of this

hypothesis are:

- 1) Late Ceramic period coastal occupations are thought to include warm weather non-shellfish related activities (Cox 1983);
- 2) 41.68 and 41.68A appear to reflect just such activities;

- 3) 41.68A, interpreted as reflecting warm weather activity such as fishing, maintains no habitation aspect but 41.68, a geographically and temporally contemporary warm-weather habitation, lies only 100m to the east; and,

- 4) both 41.68A and 41.68 share a similar investment in (and high percentage of) lithic materials originating far outside the immediate region, possibly from the same quarries.

It is the author's contention that 41.68A most likely represents a remote, subsistence related activity locus (e.g., a fish processing station) directly related to Area A of 41.68.

Although no further work is currently scheduled at 41.68A or 41.68 (given their tremendous potential to

reveal new understandings relating to the bay and the greater Gulf of Maine region) continued efforts to explore and define these sites are essential. It is a given that erosion and human activities will continue to pose a serious threat to these rare sites.

REFERENCES

Belcher, W.R.

1988 Archaeological Investigations at the Knox Site (30-21), East Penobscot Bay, Maine. unpublished M.S. thesis. Institute for Quaternary Studies, University of Maine, Orono.

1989 The Archaeology of the Knox Site, East Penobscot Bay, Maine. *Maine Archaeological Society Bulletin* 29(1):33-46.

Berry, Henry N.

1986 Bedrock Geology of the Camden Hills. unpublished M.A. thesis, Dept. of Anthropology, University of Maine, Orono.

Bourque, Bruce J.

1995 *Diversity and Complexity in Prehistoric Maritime Societies: A Gulf of Maine Perspective*. Plenum Press, New York and London.

Bourque, Bruce J., and Steven L. Cox

1981 Maine State Museum Investigation of the Goddard Site, 1979. *Main in the Northeast*. Number 22:3-27.

Cox, Steven L.

1983 The Blue Hill Bay Survey. *Maine Archaeological Society Bulletin*. 23(2):21-30.

Cox, Steven and Diane Kopec

1988 Archaeological Investigations of the Watson Site, Frenchman's Bay, Maine. *Archaeological Society Bulletin* 28(2):38-45.

Mitchell, Harbour III

1992 A Salvage Effort on the Coast of Maine: The Lehmann Site (40-3). *Maine Archaeological Society Bulletin* 32(2):1-14.

1993 The Carr Site (41.66): A Middle Ceramic Period Site in Northport, Maine. *Maine Archaeological Society Bulletin* 33(2):33-44.

1994 The Edwin Ames Site (41.68A): A Preliminary Report. unpublished manuscript on file, Maine Historic Preservation Commission, Augusta, Maine; and, Camden Public Library, Camden, Maine.

1995 4J.68A: A Late Ceramic Period Activity Locus Along the Shores of Ducktrap Harbor, Northport, Maine. unpublished manuscript on file, Maine Historic Preservation Commission, Augusta, Maine; and, Camden Public Library, Camden, Maine.

Petersen, James B. and David Sanger

1991 An aboriginal Ceramic Sequence for Maine and the Maritimes. in *Prehistoric Archaeology in the Maritimes: Past and Present Research*, edited by Michael Deal and Susan Blair. pp121-178. Council of Maritime Premiers, Maritime Committee on Archaeological Affairs, Fredericton, New Brunswick.

Ritchie, William A.

1969 *The Archaeology of Martha's Vineyard*. Natural History Press, Garden City, New York. Robinson, Brian S. and Charles E. Bolian

1987 A preliminary Report on the Rocks Road Site (Seabrook Station): Late Archaic to Contact Period Occupation in Seabrook, New Hampshire. *The New Hampshire Archaeologist* 28(1):19-51.

Sanger, David

1976 The Earliest Settlements: 900 B.C. to A.D. 1600. in *Maine Forms of American Architecture*. (Deborah Thompson, ed.). Colby Museum of Art, Waterville, Maine; Downeast Magazine, Camden, Maine.

1982 Changing Views Aboriginal Seasonality and Settlement in the Gulf of Maine. *Canadian Journal of Anthropology* (2):195-203.

1989 Insights into Native American Life at Fernald Point in *Bulletin XII: An Island in Time; Three Thousand Years of Cultural Exchange on Mount Desert Island*. Ann McMullen and Diane Kopec (ed.). The Robert Abbe Museum, Bar Harbor, Maine.

The Maine Archaeological Society Bulletin

- 1991 Five Thousand Years of Contact Between Maine and Nova Scotia. *Maine Archaeological Society Bulletin* 31(2):55-61.
- Skinas, David C.
1987 The Todd Site: A Case Study of Shell Midden Formation. unpublished M.S. thesis. The Graduate School, University of Maine, Orono.
- Spiess, Arthur E., and Mark H. Heddon
1983 *Kidder Point and Sears Island in Prehistory*. Occasional Publications in Maine Archaeology; Number 3. Maine Historic Preservation Commission, Augusta.
- Will, Richard T.
1996 An Example of Late Middle Ceramic (Woodland) Period Biface Production Technology from Moosehead Lake, Maine. *Archaeology of Eastern North America*.
Volume 24:227-23