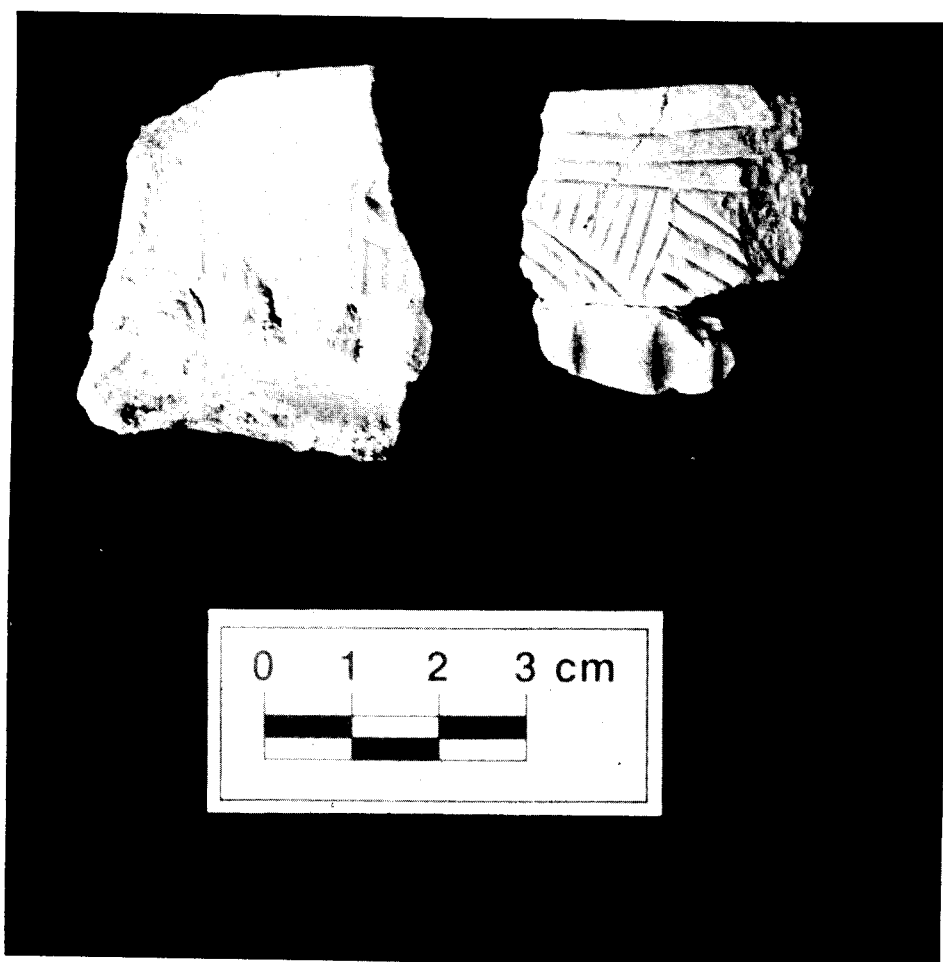


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THE MAINE ARCHAEOLOGICAL SOCIETY BULLETIN

CONTENTS
VOLUME 39 NUMBER 2
FALL 1999

Native American Ceramic Manufacture at the Tracy Farm Site in the Central
Kennebec River Valley, Maine

Ellen R. Cowie and James B. Petersen1

Late Paleoindian Occupation at the Waterville-Winslow Bridge

Arthur Spiess and Mark Hedden43

Native American Ceramic Manufacture at the Tracy Farm Site in the Central Kennebec River Valley, Maine

Ellen R. Cowie and James B. Petersen

Archaeological testing and phase III data recovery field work at the Tracy Farm site (69-11 ME) was conducted by the University of Maine at Farmington Archaeology Research Center in the early and mid 1990s. The majority of this work was conducted by UMF for Central Maine Power Company in advance of the hydroelectric relicensing of the Weston Project by the Federal Energy Regulatory Commission (Cowie et al. 1999). The Tracy Farm site is located in the central Kennebec River drainage just north of the confluence of the Kennebec and Sandy rivers (Figure 1). The site is situated on a high, non-depositional landform on the west bank of the Kennebec River in the town of Starks, Maine (Figure 2). The site was inhabited possibly as early as the Early or Middle Archaic period, ca. 7000-4000 B.C., and unequivocal aboriginal remains indicate it was certainly occupied from the Late Archaic period, ca. 4000-1000 B.C., onward throughout the remaining periods of prehistory and into the historic period. Based on archaeological and ethnohistorical data, the most significant cultural deposits can be attributed to the Contact period, ca. A.D. 1550-17650 and are attributable to the Abenaki people known specifically as the settlement of Norridgewock in the 1600s.

Aboriginal ceramics represent one of the more significant artifact classes recovered from the Tracy Farm site. Native American populations occupied the Tracy Farm site landform throughout the time span generally recognized as the Woodland period in the broad Northeast, and in Maine and the Maritime region as the Ceramic Period. This recurrent occupation has resulted in an aboriginal ceramic sample that includes examples of ceramics from all the major subdivisions of the Ceramic Period (Ceramic Periods 1-7) in Maine as defined by Petersen and Sanger (1991). Some of the

Ceramic Period subdivisions are better represented than others; for instance, the largest number of temporally diagnostic sherds can be attributed to Ceramic Periods 2/3, while the majority of recognized vessels are attributed to Ceramic Period 6/7. Aboriginal ceramics made during Ceramic Period 2/3 were commonly decorated over a larger portion of the vessel body than during later centuries, when the application of decorative motifs were applied over less surface area of the vessel. As a result of these decorative patterns, Ceramic Period 2/3 sherds are more likely to be identified, given their greater extent of distinctive decoration covering a larger part of the vessel (excluding CP1 and CP5, when distinctive surface treatment and/or temper, respectively, can be sometimes easily recognized from a single sherd or fragment). On the basis of defined vessels, the majority can be assigned to Ceramic Period 6/7, that is after ca. 650 B.P., or A.D. 1300. As such, the Tracy Farm site aboriginal ceramic sample includes a relatively large assemblage of ceramics that can be assigned to the last few centuries of Native American ceramic manufacture in the Kennebec River Valley region of central Maine and elsewhere in the broad region.

A total of 6129 aboriginal ceramic specimens were recovered during the combined phase I/II and phase III work, and the more recent surface collection conducted in the spring of 1998 (Tables 1 and 2). An additional 24 specimens from the Kenny Wing Collection were analyzed and are included in the following discussion. The ceramic specimens recovered from the archaeological phase I survey work were analyzed by James B. Petersen, those recovered during the phase II testing study were analyzed by Laurie LaBar Kidd and James B. Petersen, and the ceramics recovered during the phase III data recovery project and subsequent surface collection were analyzed by Ellen R. Cowie

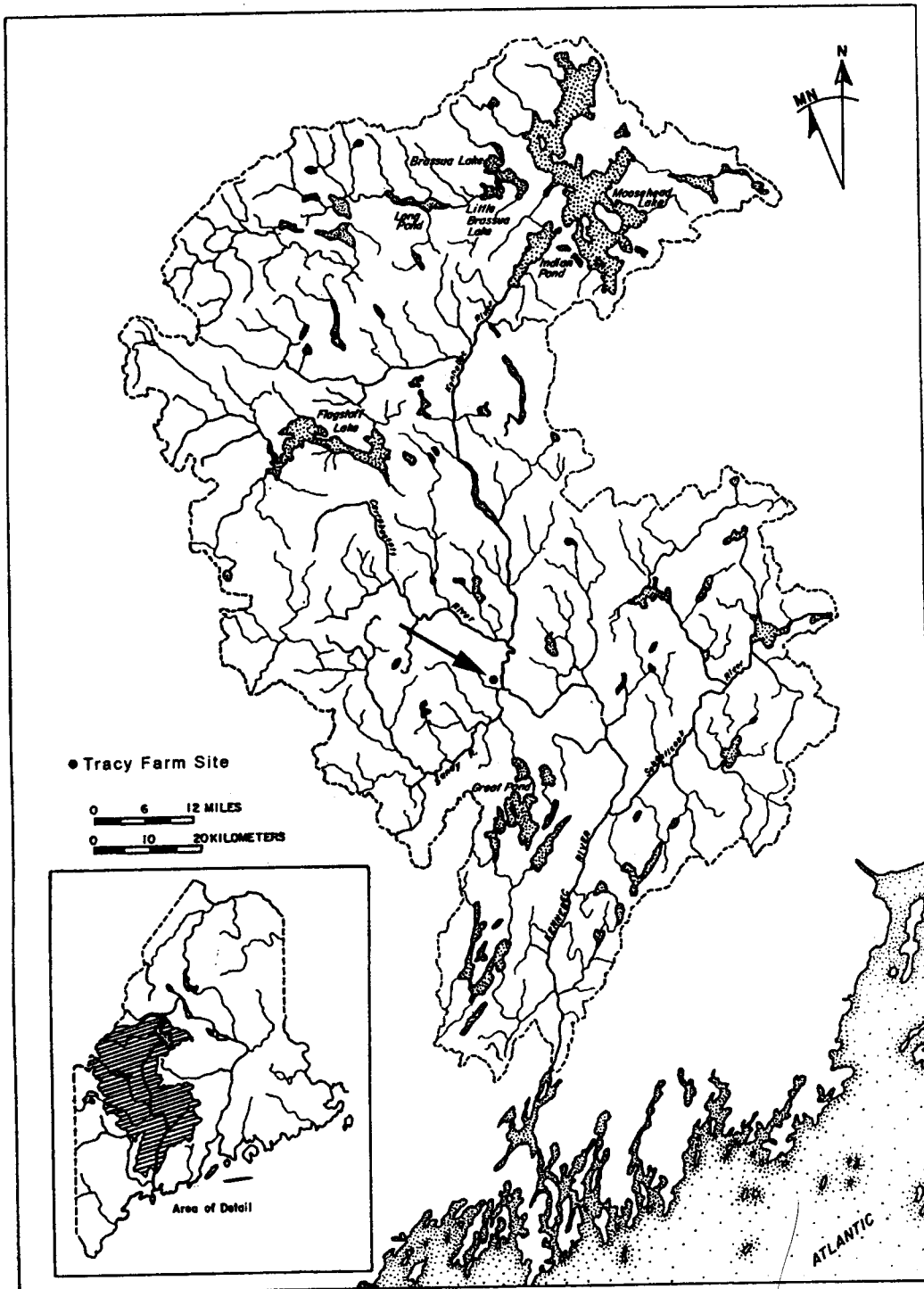


Figure 1. General map of the Kennebec River drainage basin of west central Maine. Note the location of the Tracy Farm site area in the central portion of the broader drainage basin.



Figure 1
Tracy Farm site in center right of photograph.

Kennebec

and James B. Petersen. All of the analytical ceramic data from all episodes of field work conducted by UMF are combined and summarized here. Methods of analysis include a systematic consideration of particular ceramic attributes, as well as an analysis by vessel lot implemented and described previously (Petersen 1980; Petersen and Power 1983, 1985).

All ceramic specimens including sherds and fragments recovered from 6.4 mm (1/4 in) screen were analyzed with consideration of temper characteristics, vessel type, vessel portion, decoration, surface treatment, lip treatment, fabric weft slant and/or cordage twist and ceramic period assignment. Vessel lot analysis was conducted on all rim sherds and rim fragments, as well as sherds

and fragments measuring greater than 1 cm in size that exhibited either surface treatment, decoration, distinctive temper and/or distinctive paste characteristics. Vessel lot analysis allows definition of the minimum number of individual ceramic vessels represented in a given sample and further provides detailed data to document these vessels and to allow subsequent comparison.

The results of the ceramic analysis are described below, first in general terms as far as the sample as a whole and then a consideration of the various ceramic assemblages by individual ceramic period is presented.

Of the 6153 aboriginal ceramic specimens now known from the Tracy Farm site, 1776 (29%) have been assigned to one or another of the seven sub-

The Maine Archaeological Society Bulletin

CP	Attributes	NO PROVENIENCE	KENNY WING COLLECTION	EXCAVATED	SURFACE '86	SURFAC '88	TOTAL
1-1	Paddled			41	8		49
	Paddled, Smoothed			4			4
1-1 Total				45	8		53
2-2	Smoothed, Dentate Rocked			1			1
	Smoothed, Pseudo-Scallop shell			19			19
2-2 Total				20			20
2-3	Dentate Rocked			1			1
	Paddled, Smoothed						0
	Smoothed		1	12			13
	Smoothed, Dentate Dragged			1			1
	Smoothed, Dentate Impressed			10	1		11
	Smoothed, Dentate Rocked			302	8		308
	Smoothed, Dentate Rocked, Dentate Impressed			8			8
	Smoothed, Dentate Rocked, Incised			4			4
	Smoothed, Dentate Rocked, Punctate			7			7
	Smoothed, Incised			7			7
	Smoothed, Punctate			7			7
	Smoothed, Punctate, Dentate Rocked			1			1
	No Attributes			1			1
2-3 Total			1	353	7		361
4-4	Smoothed, Cord Wrapped Stick			22			22
	No Attributes						0
4-4 Total				22			22
4-5	Paddled, Smoothed, Cord Wrapped Stick			1			1
	Smoothed						0
	Smoothed, Cord Wrapped Stick		1	3			4
	No Attributes			1			1
4-5 Total			1	5			6
4-7	Cord Wrapped Stick			1			1
	Smoothed, Cord Wrapped Stick			4			4
	Smoothed, Incised		1				1
4-7 Total			1	5			6
5-5	Paddled			1			1
	Paddled, Smoothed			1			1
	Smoothed			8			8
	Smoothed, Punctate			3			3
	No Attributes			1			1
5-5 Total				14			14
5-6	Paddled, Smoothed			2			2
	Smoothed				8		8
	No Attributes			9			9
5-6 Total				11	8		19
5-7	Cord Wrapped Stick			1			1
	Paddled			26	1	1	28
	Paddled, Scraped			2			2
	Paddled, Smoothed			145			145
	Paddled, Smoothed, Cord Wrapped Stick			3	2		5
	Smoothed		1	5			6
	Smoothed, Cord Wrapped Stick			6			6
5-7 Total			1	188	3	1	193
6-7	Incised, Punctate			1			1
	Incised, Punctate, Smoothed			1			1
	Paddled	2	8	7	5		22
	Paddled, Cord Wrapped Stick			1	1		2
	Paddled, Incised			1			1
	Paddled, Punctate, Smoothed			3			3
	Paddled, Smoothed			70	5	2	77
	Paddled, Smoothed, Cord Wrapped Stick			1			1
	Punctate			1			1
	Punctate, Smoothed			1			1
	Smoothed			244	1		245
	Smoothed, Cord Wrapped Stick			21	1		22
	Smoothed, Cord Wrapped Stick, Punctate			1			1
	Smoothed, Incised		1	58		1	60
	Smoothed, Incised, Punctate			7			7
	Smoothed, Punctate		1	27		1	29
	Smoothed, Punctate, Incised			1	1		2
	No Attributes			5			5
6-7 Total		2	10	451	14	4	481
No CP	Paddled			59	7	1	67
	Paddled, Smoothed			30	18	1	49
	Smoothed		7	1128	30	6	1171
	Smoothed, Punctate			2			2
	No Attributes		3	2486	8	18	2515
No CP Total			10	3705	63	26	3804
Grand Total		2	24	4819	103	31	4979

Table 1. Aboriginal Ceramics from the Kenny Wing Collection, Excavations, and Surface Collections Recovered during Archaeological Testing at the Tracy Farm Site.

periods defined for the Woodland (Ceramic) period. These periods with their associated temporal span are summarized in the table below. Of those ceramic specimens with temporally recognizable attributes, 54 are associated with CP1, 21 with CP2, 866 with CP2/3, 42 with CP4, seven with CP4-5, seven with CP4-7, 19 with CP5, 20 with CP5-6, 203 with CP5-7, and 537 with CP6-7 (see Tables 1 and 2).

From the available ceramic sample recovered from the Tracy Farm site, 6,123 ceramic specimens were designated as attributable to a specific vessel/pot form, 11 were attributed to a pipe form and 19 specimens were designated as manufacture scraps. As noted above, an assessment of the minimum number of vessels represented by this ceramic sample was conducted on all rim sherds or fragments, as well as sherds or fragments measuring 1 cm or larger that exhibited some distinctive attribute of temper, surface treatment and/or decoration. A total of 209 vessels and eight pipes were defined (Table 3). The defined ceramic vessels and pipes are summarized below in terms of identified attributes and counts associated with any given vessel lot number. The vessels and pipes have been attributed to nearly every recognized subdivision of the Woodland (Ceramic) period as follows: CP1 (n=12, or 6% of defined vessels); CP2 (n=3, or 1.5%); CP2/3 (n=29, or 14%); CP4 (n=3, or 1.5%); CP4/5 (n=3, or 1.5%); CP5 (n=8, or 4%); CP 5/6 (n=3, or 1.5%); CP5/7 (n=17, or 8%); CP6/7 (n=131 vessels, or 62%) and eight pipes (see Table 3).

The following discussion is organized by temporal periods recognized within the overall span of the Woodland (Ceramic) period. The summary includes comment on the overall ceramic assemblage, vessel lot analysis and horizontal distribution of the assemblage across the site. This discussion will begin with Ceramic Period 1, the earliest period of ceramic manufacture in the Northeast, and conclude with Ceramic Period 6/7, the final era of traditional ceramic manufacture in the Northeast.

CERAMIC PERIOD 1

The first recognized subdivision of the Woodland (Ceramic) period in Maine, designated Ceramic Period 1, has a date range of ca., 3050-2150 B.P., and exhibits significant similarities with Early Woodland period manifestations in New York and the Northeast in general (Petersen and Sanger 1991). Based on excavations and surface collections conducted at the Tracy Farm site, site occupation clearly occurred during this long period, representing the first ceramic manufacture in the region.

A total of 54 of the 6,153 ceramic specimens now available from the Tracy Farm site have been assigned to Ceramic Period 1 (see Tables 1 and 2). These 54 ceramic specimens range in size from less than 1 cm to over 5 cm in size, with the majority ranging between 1-3 cm in overall size, and they total 133.91 grams in weight. As with the overall site ceramic sample, these 54 specimens are on the small size, reflecting extensive post-depositional disturbances there.

The clearest defining attribute of CP1 ceramics is fabric paddling on both the exterior and interior surfaces of these 54 specimens; 33 exhibit fabric paddling on both surfaces, while the remaining specimens exhibit exterior fabric paddling with the interior paddling partially smoothed over. All of the CP1 specimens exhibit grit temper and, although not specifically quantified, the size range of grit temper exhibited among these few sherds and fragments varies from less than 1 mm in size to 3-4 mm in size. Although one rim sherd and one shoulder sherd have been identified, most of the specimens are the body sherds from cylindrical vessels.

The majority of the CP1 ceramics (n=40) were recovered from stratum I, the plow zone. A total of six ceramic specimens were recovered from the stratum I/II interface, while the remaining specimens (n=8) were recovered from stratum II. Only one sherd was recovered from the context of a feature and this ceramic inclusion illustrates the difficulties with assigning temporal attributions to non-temporally diagnostic artifacts at a multi-

Native American Ceramic Manufacture at Tracy Farm

Table 3. Vessel Lot Assignments for Aboriginal Ceramics Recovered during Archaeological Testing at the Tracy Farm Site.

CP	VESSEL LOT	FRAGMENT TYPE	PORTION	TEMPER	EXTERIOR FINISH	EXTERIOR DEC (primary)	EXTERIOR DEC (secondary)	INTERIOR FINISH	INTERIOR DEC	LIP	TW/BT	COUNT	WT (g)		
1	1	Sherd	Body/Bowl	Grit	PAD						S	5	15.95		
	2	Sherd	Body/Bowl	Grit	PAD						S	2	20.52		
	3	Sherd	Body/Bowl	Grit	PAD						S	1	4.09		
	22	Sherd	Body/Bowl	Grit	PAD							S	1	2.71	
		Sherd	Body/Bowl	Grit	PAD, SMO							S	1	3.00	
	55	Sherd	Body/Bowl	Grit	PAD						S	1	3.96		
	64	Sherd	Body/Bowl	Grit	PAD				PAD				1	1	
		Sherd	Body/Bowl	Grit	PAD				PAD			S	1	1.1	
		Sherd	Rim	Grit	PAD				PAD		PAD	S	1	2	
	65	Fragment Exterior	Body/Bowl	Grit	PAD							S	2	1.1	
		Sherd	Body/Bowl	Grit	PAD				PAD				2	3.2	
	66	Sherd	Body/Bowl	Grit	PAD				PAD			S	1	1.3	
		Sherd	Body/Bowl	Grit	PAD				PAD			Z	1	1.2	
	67	Sherd	Body/Bowl	Grit	PAD				PAD				1	0.7	
	68	Sherd	Body/Bowl	Grit	PAD				PAD				2	2.3	
		Fragment Exterior	Body/Bowl	Grit	PAD							Z	2	1.7	
	69	Sherd	Body/Bowl	Grit	PAD				PAD				8	14.9	
		Sherd	Body/Bowl	Grit	PAD				PAD			S	5	18.2	
		Sherd	Body/Bowl	Grit	PAD				PAD			Z	6	13	
		Sherd	Shoulder	Grit	PAD				PAD				1	3.9	
Sherd		Body/Bowl	Grit	PAD				PAD				1	2.7		
2	70	Sherd	Body/Bowl	Grit	PAD			PAD				1	2.7		
	24	Fragment Exterior	Body/Bowl	Grit	SMO	PSS							1	1.19	
		Sherd	Body/Bowl	Grit	SMO	PSS							1	2.23	
	58	Fragment Exterior	Body/Bowl	Grit	SMO	PSS							2	3.1	
		Sherd	Body/Bowl	Grit	PAD				SMO				1	2.7	
		Sherd	Body/Bowl	Grit	SMO								3	16.04	
		Sherd	Body/Bowl	Grit	SMO	PSS			SMO				13	111.4	
	76	Fragment Exterior	Body/Bowl	Grit	SMO	DNR							1	1.6	
		Fragment Exterior	Body/Bowl	Grit	SMO	PSS			SMO				1	2.2	
	2-3	4	Sherd	Neck	Grit	SMO	DNR						1	3.32	
23		Fragment Exterior	Body/Bowl	Grit	SMO	DNR							6	4.06	
		Fragment Interior	Body/Bowl	Grit									1	0.53	
		Sherd	Body/Bowl	Grit	SMO	DNR	DI						2	14.06	
24		Sherd	Rim	Grit	SMO	DNR	DI					SMO	3	14.86	
		Sherd	Rim	Grit	SMO	DD						SMO	1	0.39	
25		Sherd	Rim	Grit	SMO	DD					SMO	1	2.03		
26		Sherd	Rim	Grit	SMO								19	7.99	
56		Fragment Exterior	Body/Bowl	Grit	SMO								211	170.46	
		Fragment Exterior	Body/Bowl	Grit	SMO	DNR						X	1	0.76	
		Fragment Exterior	Body/Bowl	Grit	SMO	DNR							5	12.54	
		Fragment Exterior	Collar	Grit	SMO	PUN	DNR						4	5.41	
		Fragment Exterior	Neck	Grit	SMO	DNR							1	0.98	
		Fragment Exterior	Rim	Grit	SMO							DNI	1	0.35	
		Fragment Exterior	Rim	Grit	SMO	DNR						DNI	1	4.44	
		Fragment Exterior	Rim	Grit	SMO	PUN	DNR					DNI	2	10.18	
		Fragment Exterior	Rim	Grit	SMO	PUN	DNR							81	63.59
		Fragment Interior	Body/Bowl	Grit										4	2.55
		Fragment Interior	Neck	Grit										53	5.15
		Fragment No Surfaces	Body/Bowl	Grit										66	359.49
	Sherd	Body/Bowl	Grit	SMO	DNR								6	39.89	
	Sherd	Neck	Grit	SMO	DNR								1	12.98	
	Sherd	Neck, Body/Bowl	Grit	SMO	DNR								9	109.23	
Sherd	Neck, Body/Bowl	Grit	SMO	PUN	DNR							1	2.48		
Sherd	Rim, Collar	Grit	SMO	PUN	DNR						DNI	11	177.74		
Sherd	Rim, Collar	Grit	SMO	PUN	DNR						DNI	2	24.89		
57	Fragment Exterior	Collar	Grit	SMO	PUN							2	1.27		
	Sherd	Body/Bowl	Grit	SMO	PUN							1	12.28		
59	Fragment Exterior	Body/Bowl	Grit	SMO	DNR							1	1.44		
	Sherd	Body/Bowl	Grit	SMO	DNR							1	7.43		
71	Sherd	Rim	Grit	SMO	DNR			SMO				1	3.6		
	Sherd	Body/Bowl	Grit	SMO	DNR			SMO				3	6.6		
72	Sherd	Rim	Grit	SMO	DNR	PUN		SMO				1	4		
	Sherd	Rim	Grit	SMO	DNR							3	1.7		
73	Fragment Interior	Body/Bowl	Grit					SMO							
	Sherd	Body/Bowl	Grit	SMO	DNR			SMO				2	4.5		
	Sherd	Rim	Grit	SMO				SMO				1	0.2		
74	Sherd	Rim	Grit	SMO	PUN			SMO			PUN	1	3.3		
	Sherd	Rim	Grit	SMO	DNI			SMO	DNI	DNI		1	3.3		
75	Sherd	Rim	Grit	SMO	DNR			SMO			DNR	1	1		
	Sherd	Rim	Grit	SMO	DNR			SMO				1	2.7		
77	Sherd	Rim	Grit	SMO	PUN			SMO			PUN	1	1.6		
	Sherd	Rim	Grit	SMO	PUN			SMO				1	1.6		

Table 3
(cont.)

CP	VESSEL LOT	FRAGMENT TYPE	PORTION	TEMPER	EXTERIOR FINISH	EXTERIOR DEC. (primary)	EXTERIOR DEC. (secondary)	INTERIOR FINISH	INTERIOR DEC.	LIP	TWIST	COUNT	WT (g)	
2-3	78	Shard	Body/Bowl	Grit	SNO	DNR		SNO				2	14.81	
		Shard	Rim	Grit	SNO	DNR		SNO		PUN		1	4.6	
	79	Shard	Body/Bowl	Grit	SNO	DNR		SNO				3	21.2	
		Shard	Rim	Grit	SNO	DNR	PUN	SNO				1	14.3	
	80	Fragment Exterior	Body/Bowl	Grit	SNO	DNR							5	5.4
		Shard	Body/Bowl	Grit	SNO	DNR		SNO					2	9.7
	81	Fragment Exterior	Body/Bowl	Grit	SNO	DNR							13	12.7
		Fragment Exterior	Body/Bowl	Grit	SNO	DNR		SNO					1	1.3
		Fragment General	Body/Bowl	Grit	SNO	DNR		SNO					1	0.6
		Shard	Body/Bowl	Grit	SNO	DNR		SNO					7	26.4
	82	Fragment Exterior	Body/Bowl	Grit	SNO	DNR							2	7
		Shard	Body/Bowl	Grit	SNO	DNR		SNO					7	38.8
	83	Shard	Rim	Grit	SNO	PUN		SNO				1	1	
	84	Fragment Exterior	Body/Bowl	Grit	SNO	DNR							4	5.7
		Shard	Body/Bowl	Grit	SNO	DNR		SNO					2	13
	85	Shard	Body/Bowl	Grit	SNO	DNR		SNO					1	3
		Shard	Body/Bowl	Grit	SNO	DNR	PUN	SNO					2	15.4
	86	Fragment Exterior	Body/Bowl	Grit	SNO	DNR							1	2.8
		Shard	Body/Bowl	Grit	SNO	DNR		SNO					1	3.5
	87	Fragment Exterior	Body/Bowl	Grit	SNO	DNR		SNO					2	9.6
		Shard	Body/Bowl	Grit	SNO	DNR		SNO					1	33
		Shard	Body/Bowl	Grit	SNO	DNR		SNO					3	22.4
	88	Fragment Exterior	Body/Bowl	Grit	SNO	DNR		SNO					1	3.3
		Fragment Exterior	Body/Bowl	Grit	SNO	DNR							7	13.8
		Fragment Exterior	Body/Bowl	Grit	SNO	INC							6	11.5
		Shard	Body/Bowl	Grit	SNO	DNR		SNO					4	34.3
	89	Shard	Body/Bowl	Grit	SNO	DNR		SNO					1	2.6
		Fragment Exterior	Body/Bowl	Grit	SNO	DNR							4	2.2
	90	Fragment Exterior	Body/Bowl	Grit	SNO	DNR		SNO					1	0.7
		Shard	Body/Bowl	Grit	SNO	DNR		SNO					1	1.6
102	Fragment Exterior	Body/Bowl	Grit	SNO	DNR	INC						1	26.4	
103	Shard	Rim	Grit	SNO	DNR		SNO					2	5.6	
208	Shard	Body/Bowl	Grit	SNO	DNR		SNO					3	13.9	
4	91	Fragment Exterior	Body/Bowl	Grit	SNO	CWS						1	1.2	
		Shard	Body/Bowl	Grit	SNO	CWS		SNO			S	5	28.6	
		Shard	Body/Bowl	Grit	SNO	CWS		SNO			Z	1	2.6	
		Shard	Rim	Grit	SNO	CWS		SNO			S	1	2.3	
	92	Fragment Exterior	Body/Bowl	Grit	SNO	CWS						10	36	
93	Shard	Body/Bowl	Grit	SNO	CWS		SNO					2	2.2	
	Shard	Body/Bowl	Grit	SNO	CWS		SNO			S		1	3.6	
4-5	27	Shard	Body/Bowl	Grit	SNO	CWS						1	4.4	
	44	Shard	Body/Bowl	Grit	PAD, SNO	CWS					Z	1	1.21	
	60	Shard	Body/Bowl	Grit	SNO	CWS					S	1	1.78	
5	16	Shard	Body/Bowl	Shell	SNO			SNO				1	0.8	
		Shard	Body/Bowl	Shell	SNO	PUN						2	2.4	
	94	Shard	Body/Bowl	Shell	SNO			SNO				1	0.6	
	95	Shard	Body/Bowl	Shell	SNO			SNO				1	1.7	
	96	Shard	Body/Bowl	Shell	SNO			SNO				1	2.9	
	97	Shard	Body/Bowl	Shell	SNO			SNO				1	1	
	98	Shard	Body/Bowl	Shell	SNO			SNO				1	1	
	100	Fragment General	Body/Bowl	Shell									1	0.7
		Fragment Interior	Body/Bowl	Shell					SNO				3	4.1
		Shard	Body/Bowl	Shell	PAD				SNO				3	13.1
Shard		Body/Bowl	Shell	SNO				SNO				2	2.4	
187	Shard	Body/Bowl	Shell	SNO	PUN		SNO			S	1	1.9		
5-6	16	Shard	Body/Bowl	Shell	SNO							4	4.3	
	21	Shard	Rim	Shell	SNO					SNO		1	0.68	
	29	Shard	Body/Bowl	Shell	PAD, SNO							2	3.66	
5-7	5	Shard	Neck	Grit	PAD, SNO	CWS			CWS		Z	1	6.07	
	9	Shard	Neck	Grit	PAD						Z	1	4.89	
	10	Shard	Body/Bowl	Grit	PAD, SNO	CWS						1	2.89	
	28	Shard	Body/Bowl	Grit	PAD, SNO	CWS						2	4.69	
	30	Shard	Body/Bowl	Grit	PAD, SNO						Z	1	2.15	
	Shard	Rim	Grit	PAD, SNO	CWS				CWS	CWS	Z	1	2.98	
	40	Shard	Neck	Grit	PAD, SNO						S	1	2.14	
	41	Shard	Body/Bowl	Grit	SNO	CWS					Z	1	1.61	
	99	Shard	Body/Bowl	Grit	PAD			SNO			Z	1	1.3	
	130	Shard	Rim	Grit	PAD			SNO		S		1	2.9	
	158	Shard	Rim	Grit	SNO			SNO				1	2	
189	Shard	Body/Bowl	Grit	SNO	CWS		SNO			Z	2	6.9		
191	Shard	Rim	Grit	SNO	CWS		SNO		CWS	Z	1	0.9		

Native American Ceramic Manufacture at Tracy Farm

Table 3
(cont.)

CP	VESSEL LOT	FRAGMENT TYPE	PORTION	TEMPER	EXTERIOR FINISH	EXTERIOR DEC (primary)	EXTERIOR DEC (secondary)	INTERIOR FINISH	INTERIOR DEC.	LIP	TWIST	COUNT	WT (g)	
5-7	192	Sherd	Body/Bowl	Grit		CWS					S	1	2.5	
	193	Sherd	Body/Bowl	Grit	SMD	CWS		SMD				1	1.7	
	198	Sherd	Body/Bowl	Grit	PAD								3	10.5
		Sherd	Body/Bowl	Grit	PAD				SMD				2	8.2
	200	Sherd	Body/Bowl	Grit	PAD				SMD			Z	4	20.4
		Sherd	Body/Bowl	Grit	PAD				SMD			Z	1	3.1
	201	Sherd	Body/Bowl	Grit	PAD				SCR				1	3.2
		Sherd	Body/Bowl	Grit	PAD				SMD				3	13.5
		Sherd	Body/Bowl	Grit	PAD				SMD			S	3	12.3
	6-7	6	Sherd	Rim	Grit	SMD							1	1.99
7		Fragment Exterior	Collar	Grit		INC	PUN						1	1.5
		Sherd	Rim, Collar, Neck	Grit	SMD	PUN	INC			INC	SMD		1	19.68
8		Sherd	Rim, Body/Bowl	Grit	SMD	CWS					PUN		1	1.82
11		Sherd	Body/Bowl	Grit	PAD						Z		1	5.23
12		Sherd	Body/Bowl	Grit	PAD						Z		1	5.64
13		Sherd	Body/Bowl	Grit	PAD						Z		1	5.19
14		Sherd	Body/Bowl	Grit	PAD						S		2	4.15
15		Sherd	Body/Bowl	Grit	PAD	CWS					Z		1	1.76
17		Sherd	Body/Bowl	Grit	PAD						S		1	1.56
	Sherd	Body/Bowl	Grit	PAD, SMD						Z		2	7.1	
18	Sherd	Body/Bowl	Grit	PAD, SMD						Z		1	2.77	
19	Sherd	Body/Bowl	Grit	PAD						Z		1	1.24	
20	Sherd	Body/Bowl	Grit	PAD						S		1	2.17	
31	Sherd	Rim	Grit	SMD	INC				INC	SMD		1	1.26	
32	Sherd	Rim	Grit	SMD	INC					SMD		1	2.64	
33	Sherd	Collar	Grit	SMD	INC							1	2.11	
33	Sherd	Rim	Grit	SMD	INC				INC	SMD		1	1.05	
34	Sherd	Rim	Grit	SMD	PUN	INC				PUN		1	2.87	
35	Sherd	Rim	Grit	PAD						SMD		1	0.63	
36	Sherd	Rim	Grit	SMD						SMD		1	0.71	
37	Sherd	Body/Bowl	Grit	PAD, SMD							Z	2	1.52	
	Sherd	Rim, Collar, Body/Bowl	Grit	PAD	CWS					Z		1	2.43	
38	Sherd	Rim	Grit	PAD, SMD						SMD		1	1.52	
39	Sherd	Body/Bowl	Grit	PAD, SMD						Z		6	13.33	
42	Sherd	Body/Bowl	Grit	PAD						Z		1	0.96	
43	Sherd	Body/Bowl	Grit	PAD, SMD						Z		1	2.51	
45	Sherd	Body/Bowl	Grit	PAD						Z		1	0.94	
46	Sherd	Body/Bowl	Grit	PAD, SMD						S		1	0.86	
47	Sherd	Neck	Grit	SMD								1	2.56	
48	Sherd	Body/Bowl	Grit	PAD, SMD								1	0.51	
49	Sherd	Body/Bowl	Grit	PAD, SMD						S		1	1.2	
50	Sherd	Body/Bowl	Grit	PAD						Z		1	4.3	
51	Sherd	Body/Bowl	Grit	SMD						S		2	2.82	
52	Sherd	Body/Bowl	Grit	PAD, SMD								1	3.37	
53	Sherd	Body/Bowl	Grit	PAD						Z		2	4.52	
54	Sherd	Neck, Body/Bowl	Grit	SMD								3	1.11	
	Sherd	Rim	Grit	SMD						SMD		1	0.2	
61	Sherd	Body/Bowl	Grit	PAD, SMD						Z		2	3.18	
62	Sherd	Body/Bowl	Grit	PAD, SMD								1	1.65	
63	Sherd	Body/Bowl	Grit	PAD						Z		1	1.55	
104	Sherd	Rim	Grit	SMD				SMD				1	0.2	
105	Fragment Exterior	Collar	Grit	SMD	INC	PUN						1	1.4	
	Sherd	Rim	Grit	SMD	INC			SMD				2	3.2	
106	Sherd	Collar	Grit	SMD	INC			SMD				1	2.1	
	Sherd	Rim	Grit	SMD	INC			SMD				2	5.2	
	Sherd	Rim	Grit	SMD	INC	PUN		SMD				1	0.8	
107	Fragment Exterior	Collar	Grit	SMD	PUN							2	1.9	
	Fragment Exterior	Rim	Grit	SMD	INC							2	3.9	
108	Sherd	Body/Bowl	Grit	SMD	INC							1	1.5	
	Sherd	Rim	Grit	SMD	INC			SMD				1	4.3	
109	Sherd	Rim	Grit	SMD						INC		1	0.8	
110	Sherd	Collar	Grit	SMD	INC			SMD				1	2.6	
	Sherd	Rim	Grit	SMD	INC			SMD				1	2.1	
111	Fragment Exterior	Collar	Grit	SMD	INC							1	0.4	
112	Fragment Exterior	Body/Bowl	Grit	SMD	PUN							1	0.4	
113	Sherd	Rim	Grit	SMD	INC			SMD				1	0.8	
114	Sherd	Rim	Grit	SMD	INC							1	1.3	
115	Fragment Exterior	Rim	Grit	SMD	INC					PUN		1	1.4	
116	Sherd	Rim	Grit	SMD	INC			SMD				1	1.7	
117	Sherd	Rim	Grit	SMD	INC	PUN		SMD				1	1.8	

Table 3
(cont.)

CP	VESSEL LOT	FRAGMENT TYPE	PORTION	TEMPER	EXTERIOR FINISH	EXTERIOR DEC. (primary)	EXTERIOR DEC. (secondary)	INTERIOR FINISH	INTERIOR DEC.	LIP	TWIST	COUNT	WT (g)
6-7		118	Shard	Collar	Grit	SMD	INC	SMD				1	1.5
		119	Shard	Rim	Grit	SMD	INC	SMD				1	0.6
		120	Shard	Rim	Grit	SMD	INC	SMD				1	0.3
		122	Shard	Collar	Grit	SMD	INC	SMD				1	2.6
		123	Shard	Rim	Grit	SMD		SMD				1	0.5
		124	Shard	Rim	Grit	SMD	INC	SMD				1	1.8
		125	Shard	Rim	Grit	SMD		SMD				1	0.3
		126	Fragment General	Rim	Grit		PUN					1	2.1
		127	Shard	Collar	Grit	PAD	PUN	SMD		S		3	6.5
			Shard	Collar	Grit	SMD	PUN	SMD				1	0.9
			Shard	Rim	Grit	SMD	CWS	SMD				1	2.5
		128	Shard	Rim	Grit	SMD	CWS	SMD				1	1.2
		129	Shard	Rim	Grit	SMD	CWS	SMD				1	1.9
			Shard	Rim	Grit	SMD	CWS	SMD		S		1	1.2
		131	Shard	Rim	Grit	SMD		SMD				1	1.1
		132	Shard	Rim	Grit	SMD	PUN	SMD				2	3.1
		133	Shard	Rim	Grit	SMD	INC	SMD				1	0.9
		134	Shard	Rim	Grit		PUN	SMD				1	0.5
		135	Shard	Rim	Grit	SMD	PUN	SMD				1	2.2
		136	Shard	Body/Bowl	Grit	SMD	CWS	SMD		Z		1	1.2
			Shard	Rim	Grit	SMD	CWS	SMD				1	1.4
		137	Shard	Rim	Grit	PAD, SMD	CWS	SMD		CWS		1	4.8
		138	Shard	Body/Bowl	Grit	SMD	PUN	SMD				2	2.2
			Shard	Neck	Grit	SMD	PUN	SMD				1	1.1
			Shard	Shoulder	Grit	SMD	PUN	SMD				1	1.8
		139	Shard	Rim	Grit	SMD		SMD		SMD		1	1.2
		140	Fragment Exterior	Rim	Grit	SMD		SMD				1	1.7
			Shard	Rim	Grit	SMD	CWS	SMD		CWS		1	3.3
		141	Shard	Body/Bowl	Grit	SMD		SMD				3	3.7
			Shard	Neck	Grit	SMD		SMD				1	1.3
			Shard	Rim	Grit	SMD		SMD				1	1.3
		142	Shard	Rim	Grit	SMD		SMD				1	0.6
		143	Fragment Interior	Rim	Grit			SMD				1	1.5
		144	Shard	Body/Bowl	Grit	SMD	CWS	SMD				1	2
		145	Shard	Rim	Grit	SMD	CWS	SMD				1	2
		146	Fragment Exterior	Rim	Grit	SMD	CWS					1	0.5
		147	Shard	Body/Bowl	Grit	SMD	INC	SMD				1	1.5
		148	Shard	Rim	Grit	SMD	PUN	SMD				1	0.3
		149	Shard	Rim	Grit	SMD	PUN	SMD				1	0.5
		150	Shard	Rim	Grit	SMD		SMD			S	5	5.4
		151	Shard	Rim	Grit	SMD		SMD		SMD		1	7.4
		152	Shard	Rim	Grit	SMD	INC	SMD				1	1.5
		153	Shard	Rim	Grit	SMD		SMD				1	1.7
		154	Shard	Rim	Grit	SMD		SMD				1	1.2
		155	Shard	Rim	Grit	SMD	CWS			Z		1	0.8
		156	Shard	Rim	Grit	SMD	CWS	SMD				1	1.8
		157	Shard	Rim	Grit	SMD	CWS	SMD				1	0.8
		159	Shard	Collar	Grit	SMD	INC	SMD				1	1.5
		160	Shard	Rim	Grit	SMD		SMD				1	0.9
		161	Shard	Rim	Grit	SMD	CWS	SMD		CWS		1	0.9
		162	Shard	Rim	Grit	SMD	INC	SMD				1	0.4
		163	Shard	Rim	Grit	SMD		SMD				1	2.8
		164	Fragment Exterior	Rim	Grit	SMD				INC		1	1
		165	Shard	Rim	Grit	SMD	PUN	SMD				1	0.7
		166	Shard	Rim	Grit	SMD		SMD				1	1.7
		167	Shard	Rim	Grit	SMD	PUN	SMD				1	1.8
		168	Shard	Rim	Grit	SMD		SMD				1	1
		169	Fragment Exterior	Collar	Grit	SMD	INC					1	1.5
		170	Fragment	Collar	Grit	SMD	INC					1	1.1
		171	Shard	Collar	Grit	SMD	INC	SMD				1	2.4
		172	Fragment Exterior	Collar	Grit	SMD	INC	SMD		SMD		1	1.4
		173	Shard	Collar	Grit	SMD	PUN	SMD				1	4
		174	Fragment Exterior	Collar	Grit	SMD	INC					1	0.2
		175	Shard	Rim	Grit	SMD	INC					1	1.4
		176	Fragment Exterior	Body/Bowl	Grit	SMD	INC			PUN		1	1.4
		177	Fragment Interior	Rim	Grit			SMD				1	1.6
		178	Shard	Neck	Grit	SMD	PUN	SMD				1	2.9
		179	Shard	Body/Bowl	Grit	SMD	INC	SMD				1	1.8
		180	Fragment Exterior	Collar	Grit	PAD	INC					1	1.2
		181	Fragment General	Collar	Grit	SMD	INC			PUN		1	0.7

Table 3
(cont.)

CP	VESSEL LOT	FRAGMENT TYPE	PORTION	TEMPER	EXTERIOR FINISH	EXTERIOR DEC (primary)	EXTERIOR DEC (secondary)	INTERIOR FINISH	INTERIOR DEC.	LIP	TWIST	COUNT	WT (g)
6-7	182	Sherd	Neck	Grit	SMO			SMO				1	1
	183	Fragment Exterior	Collar	Grit	SMO	INC						1	1.5
	184	Fragment Exterior	Collar	Grit	SMO	INC						1	0.6
	185	Sherd	Rim	Grit	SMO			SMO				1	0.8
	186	Fragment Exterior	Collar	Grit	SMO	INC						1	0.7
	188	Fragment Interior	Rim	Grit				SMO				1	1.3
	190	Sherd	Body/Bowl	Grit	SMO	CWS		SMO				1	1.4
	190	Sherd	Neck	Grit	SMO	CWS		SMO				1	1.2
	194	Sherd	Collar, Neck, Shoulder	Grit	SMO			SMO				1	8.6
	195	Sherd	Body/Bowl	Grit	SMO	CWS		SMO				1	0.8
	196	Fragment Exterior	Rim	Grit	SMO	INC		SMO				1	0.4
	199	Sherd	Body/Bowl	Grit	PAD			SMO				2	6.2
	202	Sherd	Body/Bowl	Grit	PAD			SMO				1	5.4
	203	Sherd	Rim	Grit, Shell	SMO	INC		SMO				1	2.1
	204	Sherd	Rim	Grit		INC	PUN	SMO		PUN		1	2.6
	205	Sherd	Collar	Grit	SMO	PUN		SMO				1	1.2
	206	Sherd	Rim	Grit	SMO	PUN		SMO		PUN		1	1.6
	207	Sherd	Rim	Grit	SMO	PUN		SMO		PUN		1	1.8
	209	Sherd	Rim	Grit	SMO	PUN		SMO				1	1.8
	P1	Sherd	Body/Bowl	Grit	SMO							1	0.25
		Sherd	Rim	Grit	SMO							1	0.41
	P2	Sherd	Rim	Grit	SMO							1	0.42
	P3	Sherd	Body/Bowl	Grit	SMO							1	0.35
		Sherd	Rim	Grit	SMO					INC		1	0.38
	P4	Sherd	Body/Bowl	Grit	SMO							1	0.51
	P5	Sherd	Rim	Grit	SMO	INC		SMO				1	1.5
	P6	Sherd	Rim	Grit	SMO	INC		SMO				1	1.5
	P7	Sherd	Body/Bowl	Grit	SMO			SMO				2	2.4
P8	Sherd	Body/Bowl	Grit	SMO			SMO				1	0.4	
TOTAL												949	2318.12

component site such as Tracy Farm. One CP1 ceramic sherd was recovered from the feature sediment of a Contact Period storage/refuse pit (F3) located in the very southeastern site area. Clearly this sherd is an incidental inclusion in this feature related to the original construction or infilling of the storage pit.

The horizontal distribution of CP1 ceramics at the site extends from the southern portion of the landform to grid line N130. These early ceramics are clearly clustered toward the southeastern area of the landform. Although a small number of sherds were recovered during the two episodes of systematic surface collection, the majority were recovered from the large hand-excavated block located in the southeastern area between grid coordinates N69-99 E202-218. Even within this relatively small area, there is evidence of clustering of CP1 ceramics. The most dense distribution of

CP1 ceramics occurs between excavation units N70-82 E214-215 (Figure 3). Although this area exhibits relatively dense cultural features, none have been attributed to the Early Woodland (Ceramic) period. In fact, no cultural features from the Tracy Farm site have been definitively assigned to this period.

It is likely that some or many of the cultural features of unknown temporal attribution are related to this time period, particularly those in the general area of the CP1 ceramics and associated artifacts. However, without temporally diagnostic artifacts or radiocarbon dates, it is difficult to determine their precise attribution, as noted above.

The vessel lot analysis considered all ceramic specimens assigned to CP1 and resulted in the definition of 12 unique vessels, including vessel numbers V1, V2, V3, V22, V55, V64, V65, V66, V67, V68, V69 and V70, on the basis of 46 ceramic

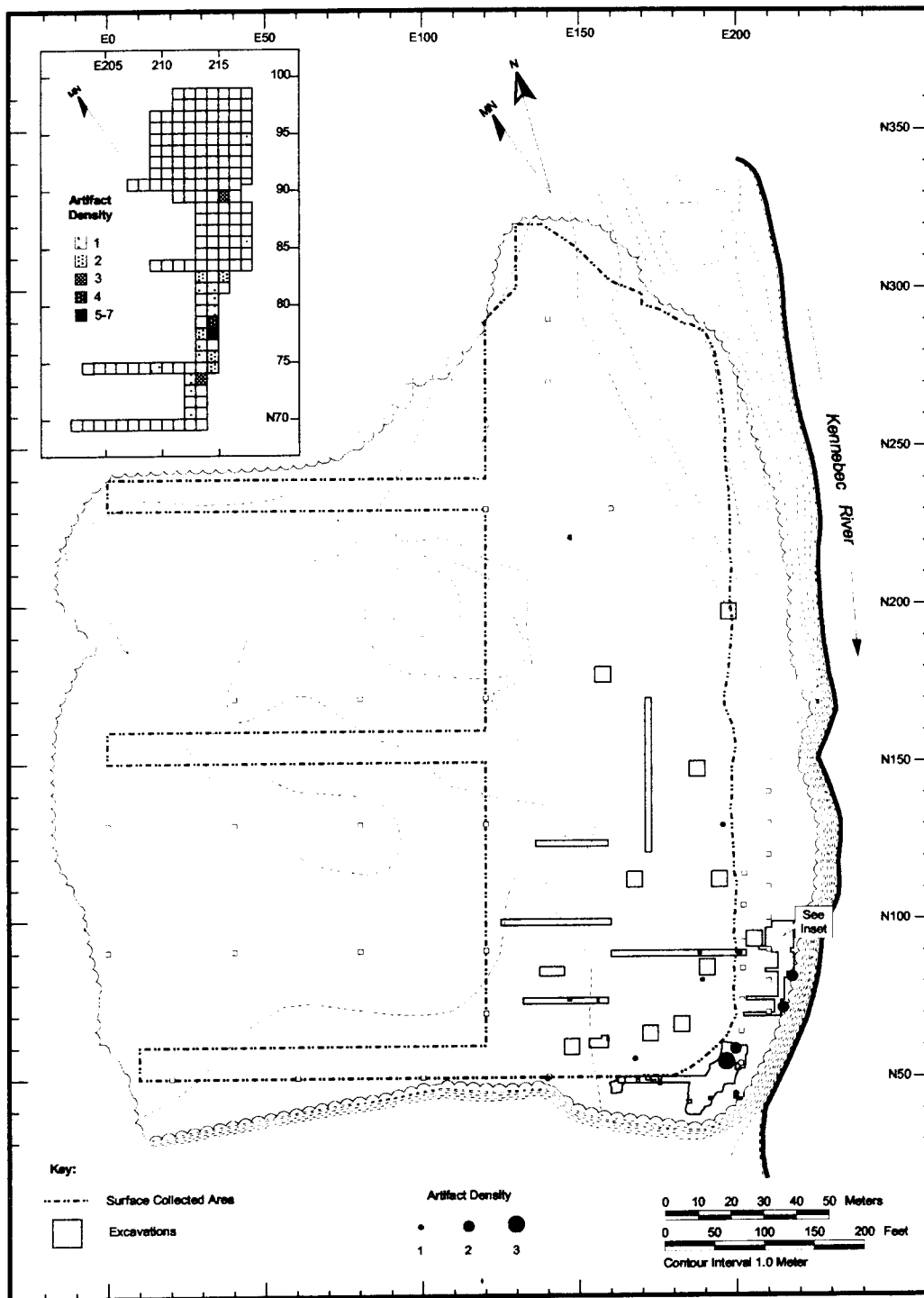


Figure 3. Plan view map of the distribution of Ceramic Period 1 specimens recovered during archaeological testing at the Tracy Farm site.

Native American Ceramic Manufacture at Tracy Farm

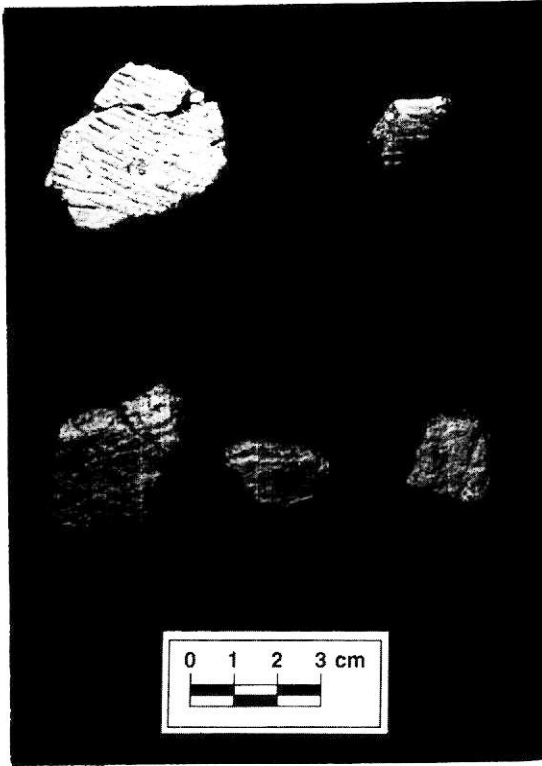


Figure 4. Ceramic Period 1 specimens recovered during archaeological testing at the Tracy Farm site. Top left: pn 4066 41-1, v.2; top right: pn 6505 v.65; bottom left: 4061 41-1, v.1; bottom center pn 1532; bottom right: pn 4063.

specimens (Figure 4). These vessels were defined largely on the basis of temper type and the overall ceramic paste characteristics (see Table 3).

With fabric paddling one of the defining attributes of CP1 ceramics, cordage twist and fabric weft slant can often be preserved and analyzed. As noted above, all of the CP1 ceramics from the Tracy Farm site exhibit fabric paddling, while 32 (60%) preserve evidence of cordage twist and/or weft slant. Among the 32 ceramic specimens that preserve evidence of twist, 28 (88%) exhibit S-twist and four (12%) exhibit Z-twist.

The Early Woodland (Ceramic) period

ceramics from the Tracy Farm site indicate the presence of a small occupation during some portion of this period. Although no radiocarbon dates are available for this Early Woodland (Ceramic) period occupation, the nearby Starks Rip site (69-27 ME) contains evidence of an Early Woodland (Ceramic) period occupation in the form of a radiocarbon dated cultural feature. Feature 8 at the Starks Rip site represents the remains of a discrete hearth feature and wood charcoal returned a radiocarbon date of 2480 \pm 50 years B.P., or 530 B.C. (Cowie and Petersen 1992). Although no ceramics were associated with this hearth feature, it may well be related to the Early Woodland (Ceramic) period occupation at Tracy Farm.

Other nearby sites with Early Woodland (Ceramic) period occupations include the Flamm I site (69-8 ME), directly across the river from the Tracy Farm site, the Flamm II site (69-31 ME), located just downstream from the Flamm I site (69-8 ME) on the east side of the Kennebec River and the Clark site (52-16 ME), located on the east, or north side of the Kennebec River in the village of Norridgewock, also downstream from the Tracy Farm site. The CP1 ceramics recovered from the Flamm II site (69-31 ME) appear to be stratigraphically associated with a buried soil radiocarbon dated to 390 B.C. The Clark site (52-16 ME) includes an Early Woodland (Ceramic) period occupation with associated ceramics that has been radiocarbon dated to 2220 \pm 70 B.P., or 270 B.C. (Cowie and Petersen 1992). The ceramics associated with feature 1 at the Clark site are quite unlike those at the Tracy Farm site, the most distinctive difference being the relative thickness of the ceramics from these sites. The Clark site ceramic specimens are uncommonly thin for this period (Cowie and Petersen 1992).

Taken together, these sites suggest that this portion of the Kennebec River was clearly occupied during the Early Woodland (Ceramic) period. Radiocarbon dates available from these various sites indicate occupations ranging from 530 B.C. to 270 B.C. in age and include a number of CP1 ceramic specimens.

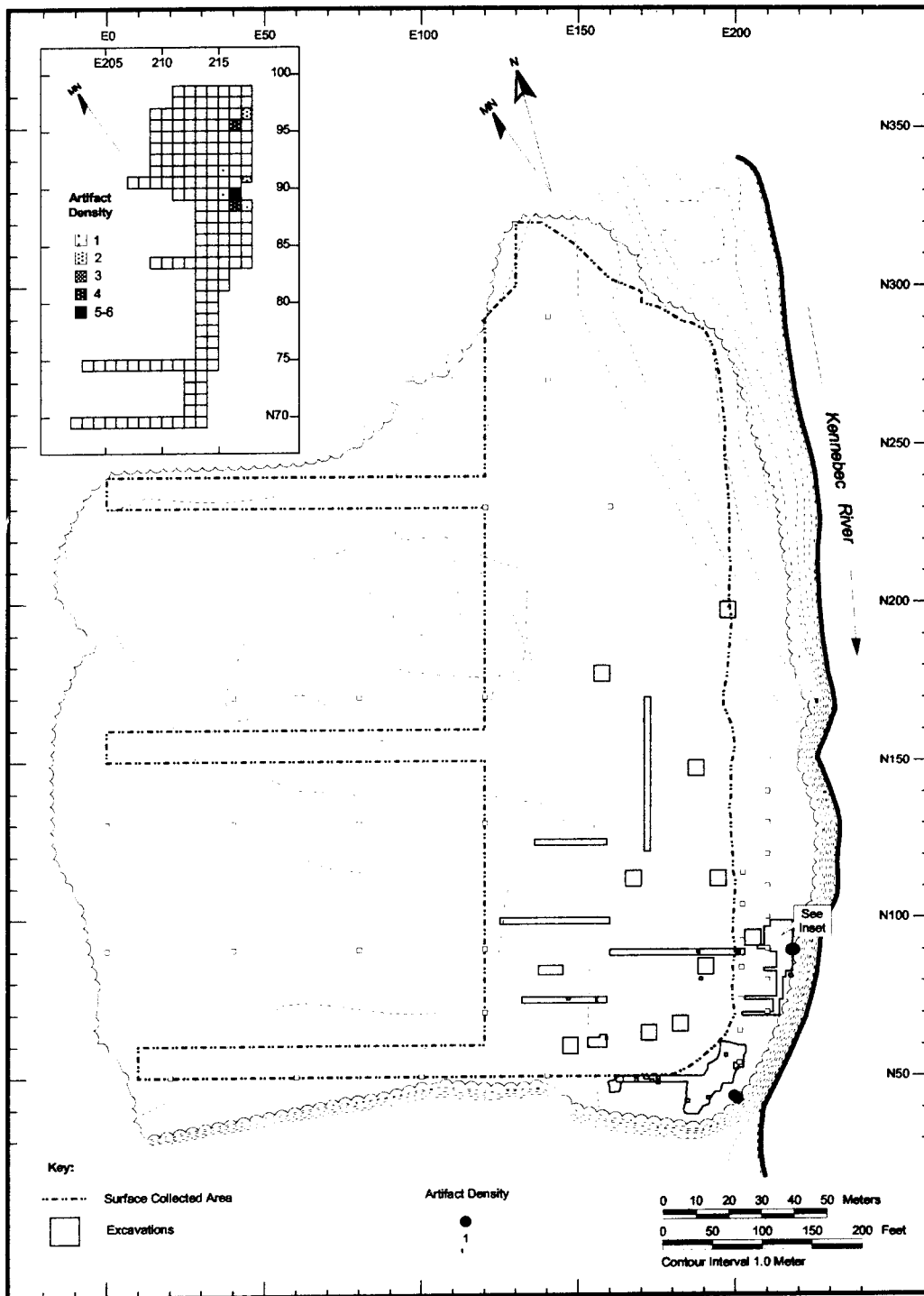


Figure 5. Plan view map of the distribution of Ceramic Period 2 specimens recovered during archaeological testing at the Tracy Farm site.

CERAMIC PERIOD 2

The early Middle Woodland (Ceramic) period, or Ceramic Period 2, has a temporal range of 2150-1650 B.P., with characteristic attributes including extensive decoration on exterior surfaces and a recognized peak in technological proficiency of overall ceramic manufactures. Diagnostic decorative motifs during Ceramic Period 2 included a variety of simple and rocked dentate patterns, pseudo-scallop shell patterns and various occurrences of scraping and channeling on both surfaces (Petersen and Sanger 1991). Among the Tracy Farm site ceramic sample, a small assemblage can be confidently associated with the early Middle Woodland (Ceramic) period. Although some of the dentate decorated ceramics common at the Tracy Farm site could well be assigned to the early Middle Woodland (Ceramic) period, the majority of those few ceramic specimens assigned to CP2 exhibit pseudo-scallop shell decoration.

A total of 21 of the 6153 ceramic specimens available from the Tracy Farm site have been unequivocally assigned to CP2, while others described below are assigned to CP2/3 (see Tables 1 and 2). These 21 ceramic specimens range from 1.0 to 5.0 cm in size, with the majority ranging between 1-3 cm in overall sherd size, and they total 123.79 grams in weight.

The vertical provenience of the unequivocal CP2 ceramics ranges from stratum I (the plow zone) to stratum II (the upper B horizon). Five sherds were recovered from stratum I, 14 sherds were recovered from the interface between stratum I and II, and two sherds were found within the upper portion of stratum II. The CP2 ceramic specimens are horizontally clustered in the southeastern portion of the Tracy Farm site, generally similar to the distribution of CP1 ceramics. The majority of the CP2 ceramics were found in a relatively small area between N89-97 E216-219 within the large hand-excavated block (Figure 5). No CP2 ceramics were recovered during surface collection of the plowed field.

None of the CP2 ceramic specimens were

recovered from cultural features, although cultural features occurred in the area where the majority of these ceramic specimens were recovered. Some of these features apparently represent hearth remnants preserved below the plow zone and they may be attributed to the early Middle Woodland (Ceramic) period. One cultural feature, F40, located in the large hand-excavated block returned a radiocarbon date of 2150±50 B.P., or 200 B.C. (Beta 10479), which falls at the very beginning of the estimated range of the Middle Woodland (Ceramic) period. However, this particular feature contained ceramic sherds with rocker-dentate decoration designated as CP2/3, since such pottery was made during both periods.

The CP2 ceramic specimens include 21 specimens all designated as body sherds. Of the 21 specimens, 20 exhibit rocker pseudo-scallop shell decoration, while one sherd exhibits rocker-dentate decoration. The pseudo-scallop decoration is poorly preserved and is not the most obvious example of this form of decorative technique. In fact, without close examination of these specimens, they could easily be misidentified as rocker-dentate decorated examples. All the CP2 ceramic specimens exhibit decoration on the exterior surface with smooth interior surfaces. The CP2 ceramics in general appear much like the CP1 ceramics from the Tracy Farm site in paste color and overall morphology.

The vessel lot analysis was conducted using all CP2 ceramics identified and resulted in the identification of three unique vessels, including V24, V58 and V76 (see Table 3). A total of 12 specimens were assigned to vessel 58, while two sherds were assigned to vessel 24 and just one sherd defines vessel 76 (Figure 6). The horizontal distribution of ceramic specimens assigned to vessel 58 indicates a tight cluster covering only six adjacent square meters between N89-91 E217-218.

From the available ceramic assemblage, it is clear that there was likely a small and short-term occupation dating to the early Middle Woodland (Ceramic) period, ca. 2150-1650 B.P., or 200 B.C.-A.D. 300, at the Tracy Farm site. The horizontal

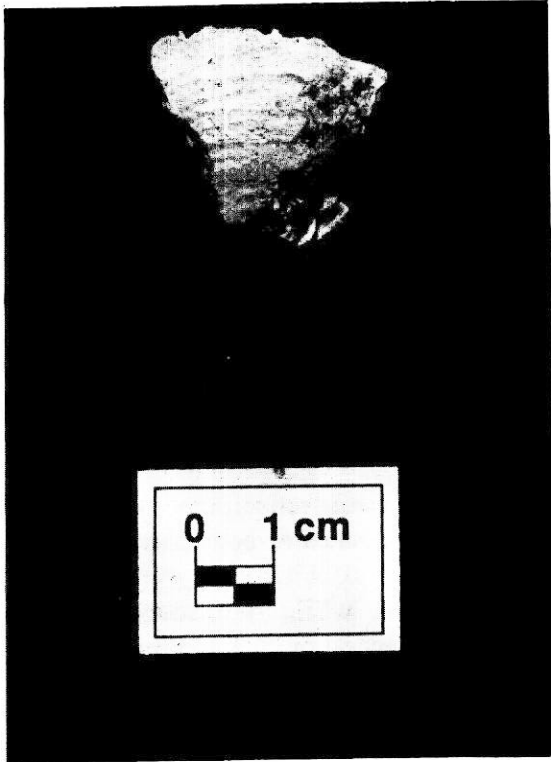


Figure 6. Ceramic Period 2 specimen recovered during archaeological testing at the Tracy Farm site. pn 6894 41-3, v.58.

distribution of the ceramic specimens indicates the southeastern portion of the landform was favored. As noted above, it is quite possible that there are specimens dated to the early portion of the Middle Woodland (Ceramic) period among those assigned to CP2/3. Given the generally small size of the overall ceramic sample from the Tracy Farm site, the distinction between CP2 and CP3 ceramics becomes more difficult and only when the more diagnostic examples of CP2 are present, such as pseudo scallop shell decoration, or obvious examples of rocker-dentate distinctive of CP2, can this portion of the Woodland (Ceramic) period be confidently identified.

Other sites in the area with definitive CP2 ceramics include the Flamm I site (69-8 ME),

located across the river from the Tracy farm site, the Sandy River site (69-24A ME), located on the upstream landform at the confluence of the Kennebec and Sandy rivers, and the Bombazee Rips site (52-12 ME), located downstream from Tracy Farm on the south bank of the river adjacent to a set of rapids. Although only a few ceramic specimens attributed to the early Middle Woodland (Ceramic) period are known from each of these sites, they do document local occupation during this period.

CERAMIC PERIOD 2/3

The third subdivision of the Woodland (Ceramic) period, Ceramic Period 3, has a temporal range from ca. 1650-1350 B.P., or A.D. 300-600. Ceramics attributable to Ceramic Period 3 can be differentiated from the earlier portion of the Middle Woodland (Ceramic) period (CP2) by a slight increase in overall thickness of ceramic vessel walls in the body and rim portions, an increase in the tooth size of the dentate tools and overall, less standardization in the application of decorative motifs. The common decorative technique during CP3 includes various forms of dentate stamping, including both simple and rocker dentate techniques. The ceramic sample from the Tracy Farm site with its relative small average sherd size is relatively difficult to distinguish in terms of those rocker dentate specimens that are clearly CP3 and not CP2 in attribution. Given this difficulty, the majority of early Middle Woodland (Ceramic) and middle Middle Woodland (Ceramic) period ceramics from the Tracy Farm site have been designated as CP2/3, with a few exceptions as noted above.

The available ceramic sample from the Tracy Farm site of 6153 ceramic specimens includes 866 that have been assigned to CP2/3 (see Tables 1 and 2). This represents approximately 14% of the available sample. In fact, more ceramic specimens have been assigned to CP2/3 than to any other ceramic period.

As mentioned above, Ceramic Period 2/3 ceramics are more likely to be identified within a

sample that includes examples from the full span of the Woodland (Ceramic) period in Maine and the Maritimes, largely due to overall decorative characteristics common during CP2/3. Again, more of any one vessel was typically decorated than during any other time period. A broken vessel with rocker dentate decoration on roughly two-thirds of the vessel body once fragmented will include more decorated sherds and fragments than those less decorated and thus, it is more easily recognizable.

With that in mind, 866 ceramic specimens were assigned to CP2/3 from the Tracy Farm sample. Of the available sample that was analyzed for size, approximately 11% are less than 1 cm in overall size, 83% measure between 1-3 cm in overall size, 5% are between 3-5 cm in overall size and one sherd, less than 1%, measures greater than 5 cm in overall size. The 866 ceramic specimens assigned to CP2/3 include a combined weight of 1,787.72 grams.

The stratigraphic provenience of the CP2/3 ceramics indicates that the majority of these specimens were recovered from sub-plow contexts. Of the 866 ceramic specimens recovered, 526 (61%) were found within stratum II (the "B" horizon), 88 (10%) were recovered at the stratum I/II interface and the remaining 252 (29%) ceramic specimens were recovered from stratum I (the plow zone). Although over 500 ceramic specimens were found within stratum II, the majority of these are attributed to one crushed vessel (V56) (n=486), as recovered within feature F30 located just beneath the plow zone in the southeastern portion of the site. A small number of other ceramic specimens were recovered from feature F40 and are discussed in more detail below. The remaining ceramic specimens were recovered from various cultural features identified at the site and in at least several cases they are apparently incidental inclusions and do not likely represent *in situ* artifacts, in contrast to those ceramics associated with features F30 and F40. Other features that contained CP2/3 ceramics and may be attributed to this period include features F47 and F57.

The horizontal provenience of CP2/3 ceramics reveals a similar pattern when compared to the two ceramic periods previously discussed. On the basis of ceramic distribution, the CP2/3 horizontal provenience indicates that human occupation during this time was confined to the southeastern portion of the landform (Figure 7). Although it appears that the extent of this occupation may have increased during the span of CP2/3, the location of occupation at the site remained the same as it had been in previous centuries. In the area of the hand-excavated block at N69-99 E202-218, there appears to be horizontal clustering of CP2/3 ceramics along the eastern half of the block as compared to the western half. Based on this distribution and the distribution of the CP2/3 ceramics in other areas of the southeastern site area, occupation was clearly oriented towards the extreme edge of the terrace landform.

The 866 ceramic specimens assigned to CP2/3 include both sherds (n=222) and fragments (n=644) and have been attributed to various vessel portions. The majority of specimens are body sherds (n=784), with the remaining specimens assigned to rim (n=40), neck (n=35) and collar (n=7) areas.

All CP2/3 ceramic specimens exhibit grit temper and smoothed interior and exterior surfaces. Various decorative techniques are exhibited on the CP2/3 specimens including three techniques of dentate decoration: rocker dentate, simple dentate and drag dentate, along with various punctate applications and incision decoration. The most prevalent form of decoration consists of rocker-dentate decorated ceramics with secondary decorative forms of either linear punctate or less common, incision decoration.

While the dentate decoration is commonly applied to the upper-third to upper-half of the vessel, examples of punctate and linear punctate are usually confined to the collar, neck and rim portions. The majority of the vessel lips show only smoothing, although several examples of lip decoration are evident in this sample and include incision, punctate and dentate impressed forms. Rim profiles exhibit a tendency toward straight to

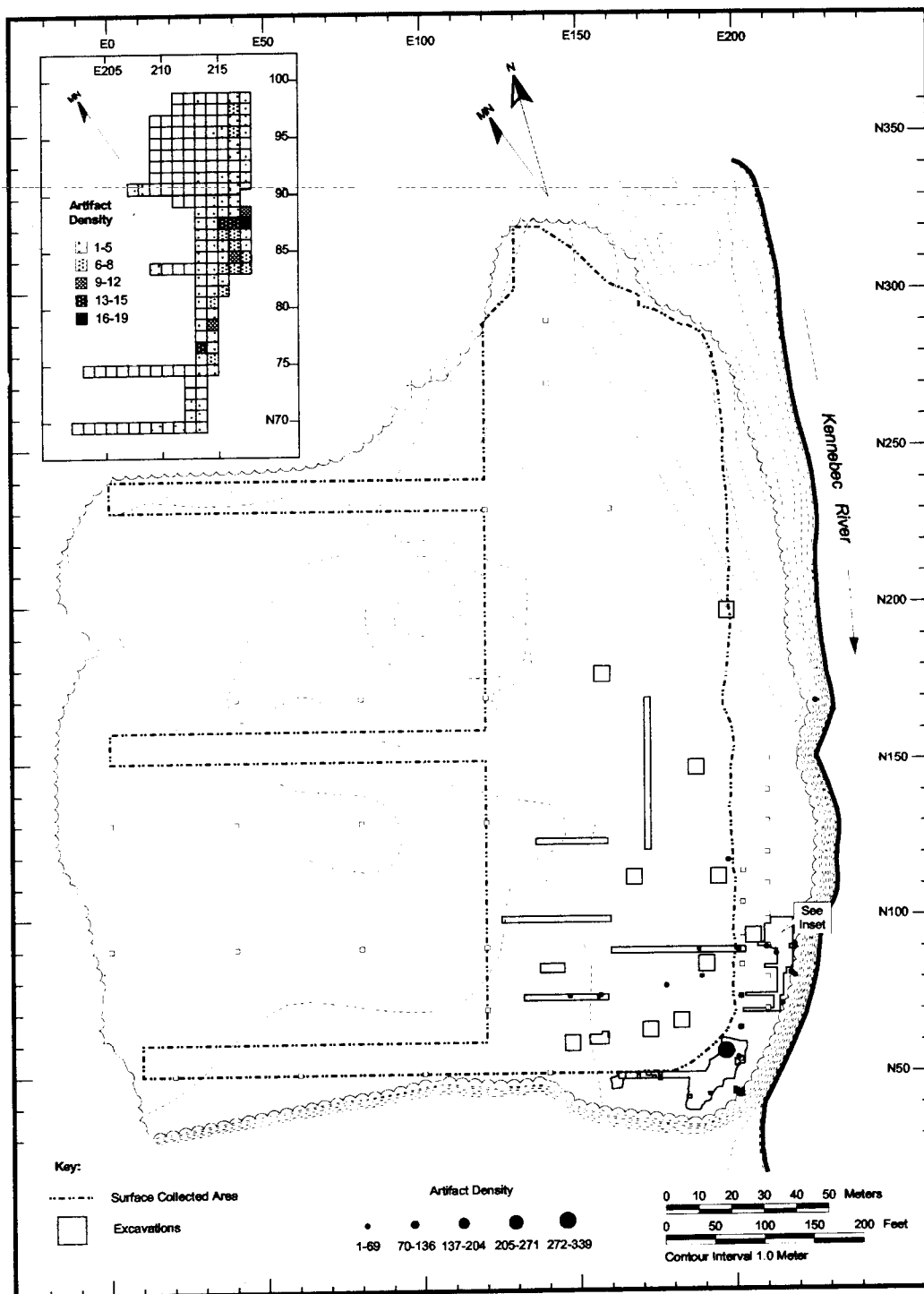


Figure 7. Plan view map of the distribution of Ceramic Period 2/3 ceramics recovered during archaeological testing at the Tracy Farm site.

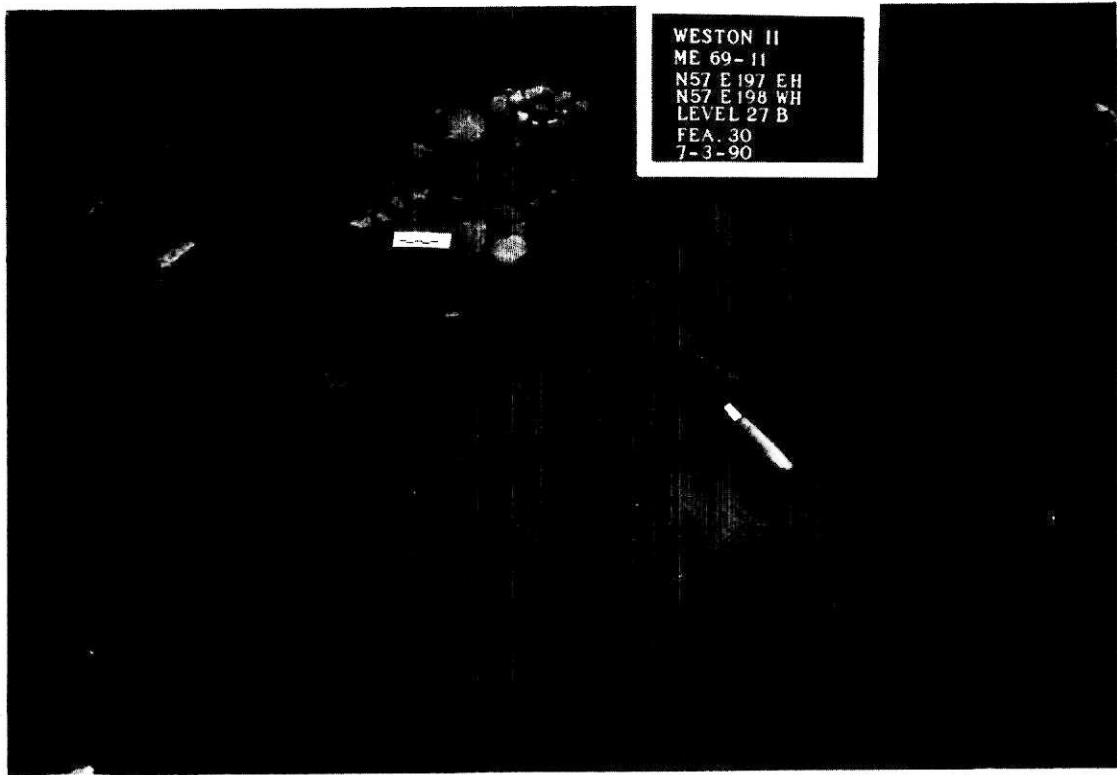


Figure 8. In situ photograph of feature 30 crushed Ceramic Period 2/3 vessel 56 excavated during archaeological testing at the Tracy Farm site.

excurvate forms.

Little information on cordage or fabric twist is available for the CP2/3 ceramic specimens from the Tracy Farm site. This may be reflective of extensive smoothing as a form of surface treatment as well as the tendency to have much of the exterior surface of a CP2/3 vessel covered with some form of dentate decoration. These factors may serve to obscure and obliterate whatever fabric impressions may once have been present on CP2/3 vessels. Alternately, fabric padding may not have been employed during these periods.

A total of 29 unique ceramic vessels from the available CP2/3 sample have been defined on the basis of 610 ceramic specimens (V4, V23, V25, V26, V56, V57, V59, V71, V72-V75, V77-V90, V102, V103, and V208) (see Table 3). The number of individual ceramic specimens assigned to any one unique CP2/3 vessel ranges from 1-479, with

V56 having the most individual specimens assigned. Of the 29 ceramic vessels defined, nine include portions of the rim alone, five include rim/body portions, one is a neck portion, one is a collar/body portion and 13 are based solely on body sherds.

Based on the distribution of individual specimens assigned to specific CP2/3 vessels, all are relatively clustered horizontally, with most specimens recovered within 2-5 meters of any other specimen assigned to a particular vessel. As with all CP2/3 ceramics, this clustering occurs in the southeastern site area.

Of particular note is vessel 56 recovered during the phase II testing. This vessel was found in association with a cultural feature (F30), likely representing a hearth, located in the very southeastern portion of the landform at grid coordinates N57 E197-198 (Figure 8). This vessel

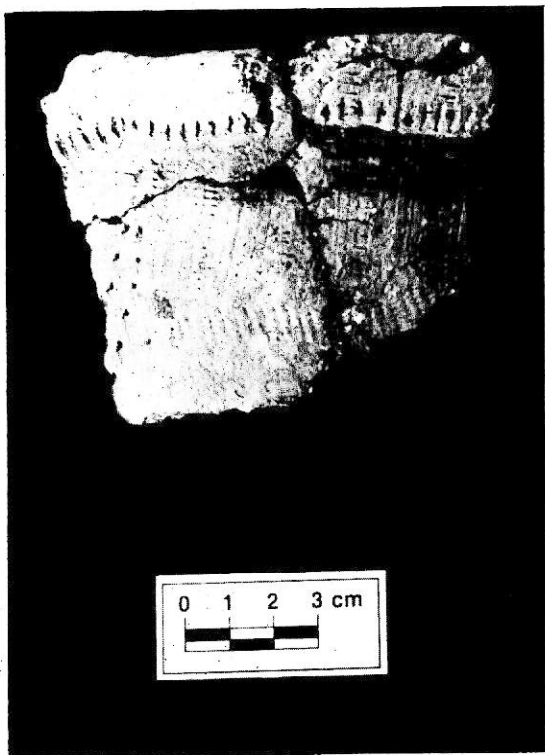


Figure 9. Ceramic Period 2/3 specimens recovered during archaeological testing at the Tracy Farm site. Top: pn 4084 41-1, 3, 4, v.56; bottom pn 4084 41-11, v.56.

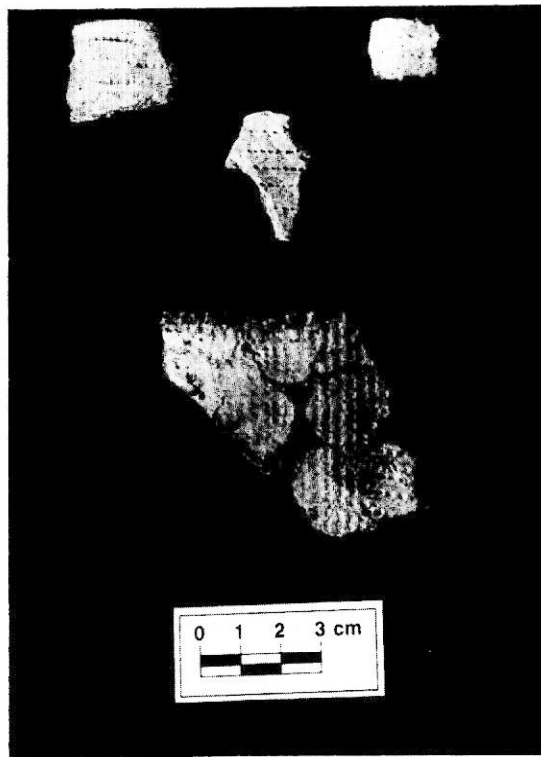


Figure 10. Ceramic Period 2/3 specimens exhibiting simple dentate decoration recovered during archaeological testing at the Tracy Farm site. Top left: pn 6050 41-1, v.73; top right: pn 6270 41-1 v.75; center: pn 6310 41-2, v.101; bottom: pn 422 41-3, v.23.

appears to have been crushed in place and can be characterized as a rocker-dentate and linear punctate decorated vessel with an applied low collar (Figure 9). At the base of the applied collar, linear punctate decorations were applied. Wood charcoal recovered in association with the vessel was radiocarbon dated to 1840 \pm 80 B.P., or A.D. 110 (Beta-43971) (Cowie and Petersen 1992).

Feature 40 represents the other radiocarbon-dated feature containing CP2/3 ceramics. This feature was excavated during phase III data recovery and represents the remains of a hearth. One rocker-dentate impressed body sherd was recovered from the feature sediments and wood charcoal from this feature returned a date of

2150 \pm 50 B.P., or 200 B.C. (Beta-104793). If the date accurately depicts the age of the ceramic sherds, it may represent a very early example of rocker-dentate decorated ceramics when compared to other available dates for similar ceramics (Petersen and Sanger 1991).

Undated examples of CP2/3 ceramics illustrative of typical characteristics of this ceramic period include vessel lots V23, V73, V75 and V101, representing portions of simple dentate decorated vessels (Figure 10). Other examples include vessels V71, V74, V77, V78, V79 and V103, showing linear punctate decoration on the lip portion of the

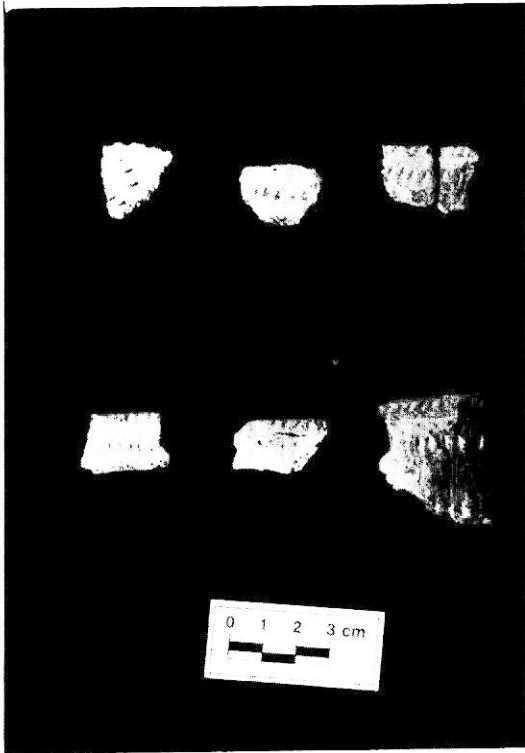


Figure 11. Ceramic Period 2/3 specimens exhibiting linear punctate decoration recovered during archaeological testing at the Tracy Farm site. Top left: pn 6082 41-1, v.74; top center: pn 6894 41-1, v.103; top right: pn 6232 41-2, 3, v.77; bottom left: pn 6080 41-1, v.78; bottom center pn 6318 41-3, v.71; bottom right: pn 6076 41-1, v.79.

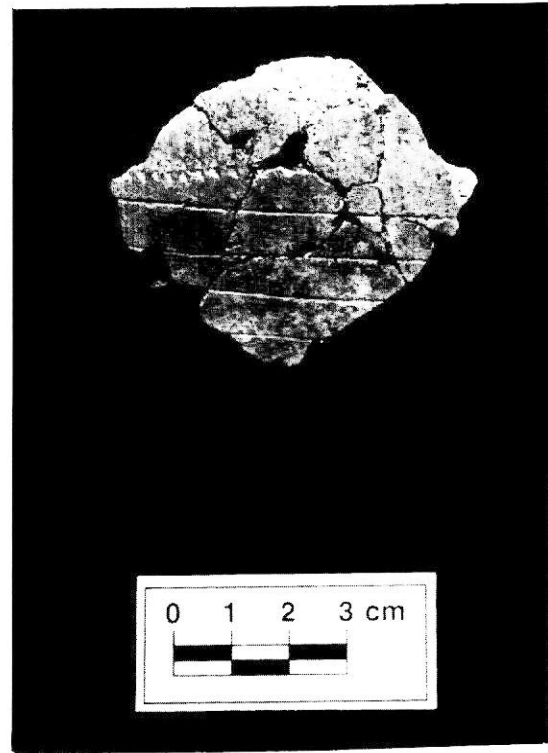


Figure 12. Ceramic Period 2/3 specimen exhibiting rocker-dentate and incision decoration recovered during archaeological testing at the Tracy Farm site. pn 6617 41-1, v.102.

vessels (Figure 11), as well as vessel 102, exhibiting an example of rocker-dentate with incision decoration (Figure 12).

Other nearby sites that preserve evidence of occupation during Ceramic Period 2/3 include the Starks Rip site (69-27 ME), located on an adjacent landform just north of the Tracy Farm site, as well as the Flamm II site (69-31 ME) located on the Old Point Formation. At the Starks Rip site, dentate-decorated ceramics associated with a cultural feature were radiocarbon dated to 2070

B.P., or 120 B.C. (Beta 44219) (Cowie and Petersen 1992). At the Flamm II site, the large majority of a rocker-dentate decorated ceramic vessel was associated with an undated buried surface. The vessel was stratigraphically positioned between a buried surface radiocarbon dated to 390 B.C. and a cultural feature radiocarbon dated to A.D. 930 (Cowie and Petersen 1992).

When comparing the overall ceramic sample available from Tracy Farm, the CP2/3 ceramic assemblage suggests that these ceramics are representative of the second most archaeologically visible human occupation of the site, the first being the Late Woodland (Ceramic)/Contact period

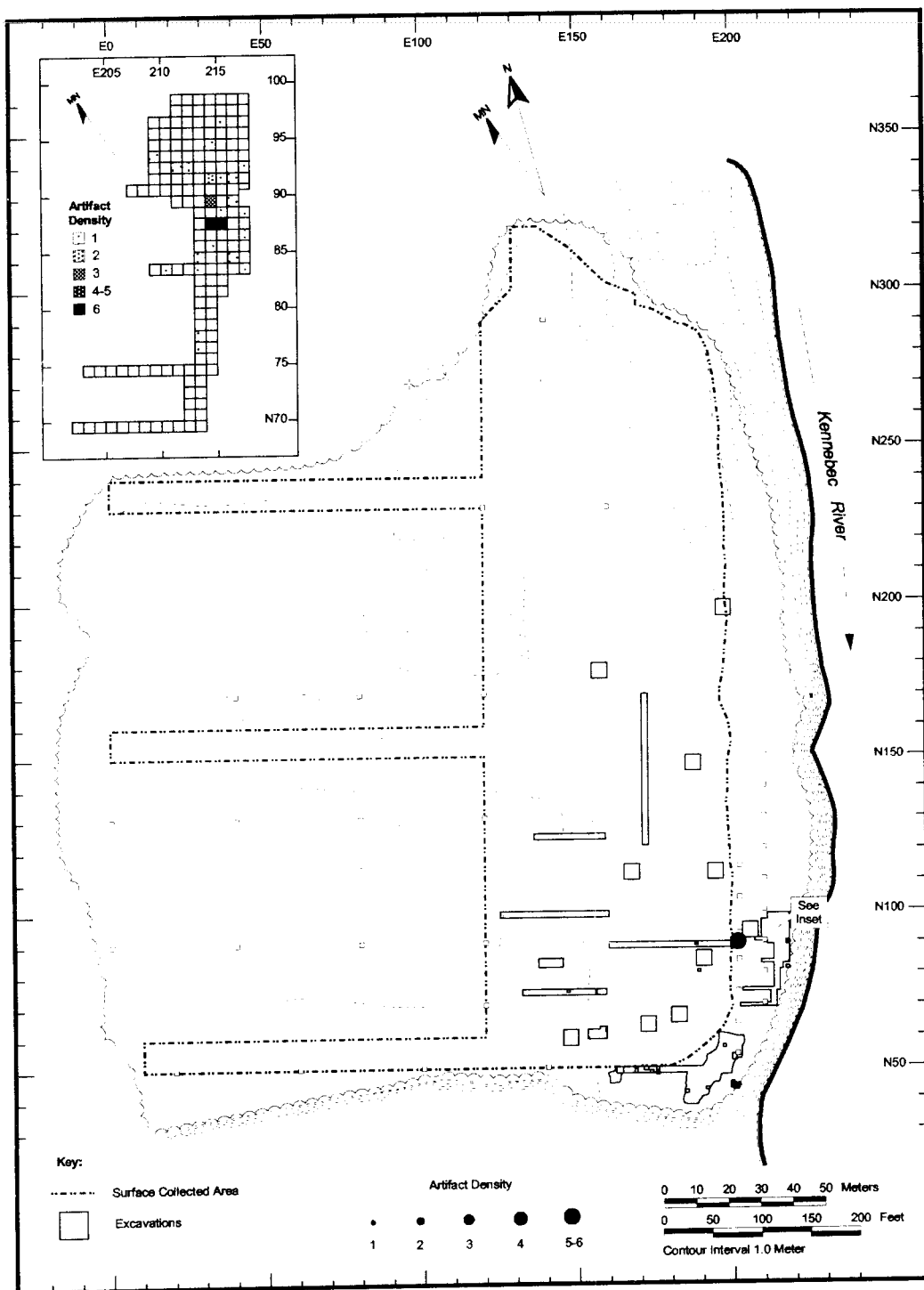


Figure 13. Plan view of the distribution of Ceramic Period 4/5 specimens recovered during archaeological testing at the Tracy Farm site.

occupation. This difference is reflected by the number of individual ceramic vessels by period, with 29 vessels defined for the CP2/3 sample and 129 for the CP6/7 sample. However, as has been noted, when considering the number of temporally assigned individual ceramic specimens, the CP2/3 ceramic assemblage from the site would apparently dominate. This situation confirms the utility of performing vessel lot analysis when studying ceramic samples.

CERAMIC PERIOD 4/5

The middle to late Middle Woodland (Ceramic) and early Late Woodland (Ceramic) period, or Ceramic Period 4/5, has a temporal range of ca. 1350-650 B.P., or A.D. 600-1300. The defining characteristic of CP4 ceramics includes the appearance of cord-wrapped stick decoration that replaces earlier forms of dentate decoration, as well as the continued use of punctate decoration commonly applied in cylindrical forms. Grit temper persists as in previous ceramic periods and vessel forms continue to be conoidal (Petersen and Sanger 1991:142). A small number of ceramic specimens have been assigned to the combined grouping of CP4/5 on the basis of cord-wrapped stick decoration. During Ceramic Period 5, the most significant changes occur in temper type, with shell temper dominating in most samples, especially those on the coast. Other changes also occurred but are perhaps more subtle and not always evident and/or well preserved. For example, CP4 ceramics exhibiting cord-wrapped stick decoration often show evidence of horizontal application of the cord-wrapped stick decorative element. In contrast, during CP5 the cord-wrapped stick element is more typically applied in a vertical alignment and the overall size of the cord-wrap stick tool is slightly reduced. Other changes between CP4 and CP5 include the reemergence of fabric paddling as a form of surface treatment. This slight variation between CP4 and CP5 ceramics makes attribution to one or the other period difficult when the ceramics are grit tempered, small in size, and lack definitive characteristics of cord-wrap stick

attributes. In any case, given the small sample of both CP4 and CP4/5 ceramics from the Tracy Farm site, they are discussed together under the overall heading of CP4/5.

Among the overall Tracy Farm site ceramic assemblage, a total of 49 specimens are associated with Ceramic Period 4/5 (see Tables 1 and 2). The majority of these 49 specimens range from 1-3 cm in overall size, with two specimens measuring less than 1 cm in size and five specimens measuring over 3 cm in size. The sample of CP4/5 ceramics has a combined weight of 129.76 grams.

The vertical provenience of the CP4/5 ceramics ranges from stratum I (the plow zone) to stratum II (the upper B horizon) and the interface between these two major stratigraphic units. Twenty ceramic specimens were recovered from stratum I, four specimens from the stratum I/II interface, and 25 ceramic specimens from stratum II.

The horizontal distribution of CP4/5 ceramics is relatively clustered, again in the southeastern site area, with the large majority between grid coordinates N76-97 E202-218 and three specimens from the area of N45-E200 (Figure 13). One ceramic specimen was recorded from the Kenny Wing Collection. However, no CP4/5 ceramics were recovered during the various episodes of surface collections conducted at the site by the UMF ARC.

Of the 49 CP4/5 ceramic specimens, 21 were recovered from the varied contexts of cultural features. For example, two CP4/5 ceramic specimens were recovered from the sediment of feature F44, a Late Woodland (Ceramic)/Contact period storage pit that also contained a variety of artifacts and ecofacts as well as CP5 and CP6/7 ceramic specimens. In addition, three other Late Woodland (Ceramic)/Contact period storage pit features, F66, F68, and F107, also contained CP4/5 ceramics (see Table 2). Perhaps the only example of *in situ* CP4/5 ceramics from a cultural feature were those recovered from feature F51, a probable hearth that contained 11 cord-wrapped stick decorated ceramics. This feature may be attributable to the late Middle Woodland (Ceramic)

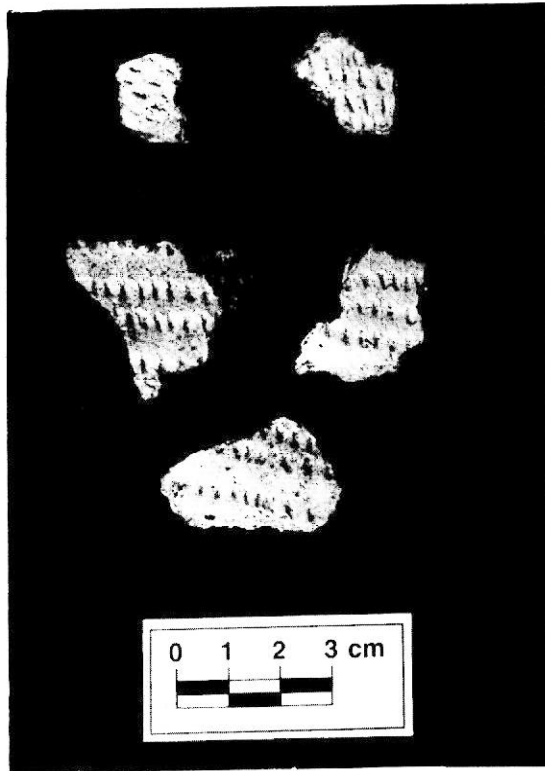


Figure 14. Ceramic Period 4/5 specimens exhibiting cord-wrapped stick decoration recovered during archaeological testing at the Tracy Farm site. Top left: pn 6060 41-1, v.91; top right: pn 6722 41-1, v.91; center left: pn 6717 41-1, v.91; center right: pn 6722 41-1, v.91; bottom: pn 6720 41-1, v.91.

period.

Of the 49 ceramic specimens assigned to CP4/5, 47 are body sherds, while two are rim sherds. In terms of decoration, the majority (n=44) exhibit cord-wrapped stick decoration and, although cylindrical punctate decoration is characteristic of this ceramic period, the available sample of CP4/5 ceramics do not preserve any evidence of this decoration. All of the CP4/5 specimens exhibit smoothed interior and exterior surfaces when those surfaces are present.

Examination of the 49 CP4/5 ceramic

specimens resulted in the identification of six unique vessels, including V27, V44, V60, V91, V92 and V93 (Figure 14; see Table 3). Vessels 27, 44 and 60 were all defined on the basis of one ceramic specimen; each attributed to the body portion of the vessel. Vessel 91 was defined on the basis of eight ceramic specimens, including both body and rim sherds, while the definition of vessel 92 was based on ten ceramic specimens from the body portion and vessel 93 was defined on the basis of three sherds characterized as body fragments. All vessels have cord-wrapped stick decoration. The few rim examples reflect the straight to excurvate forms generally typical of this period.

Given the prevalence of cord-wrapped stick decoration during Ceramic Period 4/5, cordage twist is often preserved on the decorative impressions. A total of 16 (33%) of the 49 CP4/5 ceramic specimens preserve evidence of cordage twist, with 13 (81%) exhibiting S-twist and 3 (19%) exhibiting Z-twist cordage. Although admittedly a small sample, this is generally in line with the patterns of cordage twist and/or weft slant known for this time period (Petersen and Sanger 1991), and matches the preferential pattern of CP1.

Archaeological sites in the general vicinity of the Tracy Farm site that also contain occupations attributable to the late Middle Woodland (Ceramic) and early Late Woodland (Ceramic) period include the Flamm II site (69-31 ME), located on the Old Point Formation, with two radiocarbon dated features attributable to the late Middle Woodland (Ceramic) period, F6 at A.D. 580, and F8 at A.D. 930; however, neither feature contained aboriginal ceramics (Cowie and Petersen 1992). Also located on the Old Point Formation and containing a middle to late Middle Woodland (Ceramic) period occupation is the Moore II site (69-34 ME), where feature 3 returned a radiocarbon date of A.D. 820 (Cowie and Petersen 1992).

Based on the available ceramic sample from the Tracy Farm site, evidence of site occupation during the late Middle Woodland (Ceramic) and early Late Woodland (Ceramic) period is quite

minimal. The reasons behind this apparently diminished use of the site are unknown and are worthy of further focused research.

CERAMIC PERIOD 5/6

Ceramic Period 5 has a temporal range of ca. 950-650 B.P., or ca. A.D. 1000-1300, while Ceramic Period 6 has an estimated temporal range of 650-400 B.P., or ca. A.D. 1300-1550 (Petersen and Sanger 1991). As with the previous ceramic period discussions, we have chosen to combine Ceramic Periods 5 and 6 due to the difficulties inherent in distinguishing some forms extant over this span, especially on the basis of small specimens. In all cases, the ceramics assigned to CP5/6 exhibit shell as the major form of temper inclusion, a characteristic which first commonly emerged among aboriginal ceramics of the Maine-Maritimes region in Ceramic Period 5. However, it persisted into Ceramic Period 6, and lacking other definitive CP6 characteristics, such as overall thinning of vessels walls or globular shape vessel forms, it has been difficult to confidently assign the shell-tempered ceramic specimens from the Tracy Farm site to one or another of these two periods, hence they are combined in the present discussion.

Overall, only a small sample of CP5/6 ceramics was recovered from the Tracy Farm site. A total of 39 ceramic specimens exhibiting shell temper have been defined (see Tables 1 and 2). These represent approximately 0.6% of the overall ceramic sample. The CP5/6 ceramic specimens, like all others from the site, are quite small in size, with the majority ranging between 1 cm to 3 cm in overall size; the combined weight of the CP5/6 ceramics is only 48.38 grams.

Stratigraphic provenience of the CP5/6 ceramics suggests a distribution throughout the upper strata at the site. Stratum I, the plow zone, contained 23 of the ceramic specimens and the interface between stratum I and II contained three such ceramics. The remaining 13 shell-tempered ceramics were recovered from stratum II.

The horizontal provenience of the CP5/6

ceramics is confined to the southeastern site area, as for all older ceramics. Horizontally, CP5/6 ceramics were recovered between grid coordinates N45-92 E174-218, with the majority clustering between N75-N92 E213-218 (Figure 15). Of the 13 ceramic specimens recovered from stratum II, the B horizon, five of these were recovered from the context of cultural features. These include F44, a Late Woodland (Ceramic)/Contact period storage pit, which also contained ceramics attributable to CP4/5 and CP6/7; F45, a probable Late Woodland (Ceramic)/Contact period hearth that also contained CP6/7 ceramics; F50, a structural feature of possible Late Woodland (Ceramic)/Contact period age and also containing CP2/3 and CP6/7 ceramics; and F69, a probable storage pit of Contact period age. In all cases, it appears the inclusions of shell-tempered ceramics represented within these variable features are incidental, either due to movement of artifacts down through the stratigraphic profile into older contexts, such as with F45 and possibly F50, or inclusion through disturbance of older archaeological deposits, particularly during the original construction of the various storage pits by the Tracy Farm occupants.

The 39 ceramic specimens assigned to CP5/6 include both sherds (n=18) and fragments (n=21), and have been assigned to various portions of the vessel. The majority of the specimens (n=38) are body sherds and fragments, with only one rim sherd identified in this sample. The small, fragmentary nature of this CP5/6 sample is not surprising given the relative delicate and friable characteristics of CP5/6 ceramics overall and the post-depositional processes ongoing at Tracy Farm.

All CP5/6 ceramics exhibit smoothed surfaces, while smoothed over fabric paddling is evident on six of the specimens. Although cord-wrapped stick decoration is typical of shell-tempered ceramics, none of the CP5/6 ceramics from the Tracy Farm site preserve evidence of this. The only form of preserved decoration is punctation, which was noted on only three individual sherds.

Given the lack of cord-wrapped stick decoration and the overall smoothing of the few examples

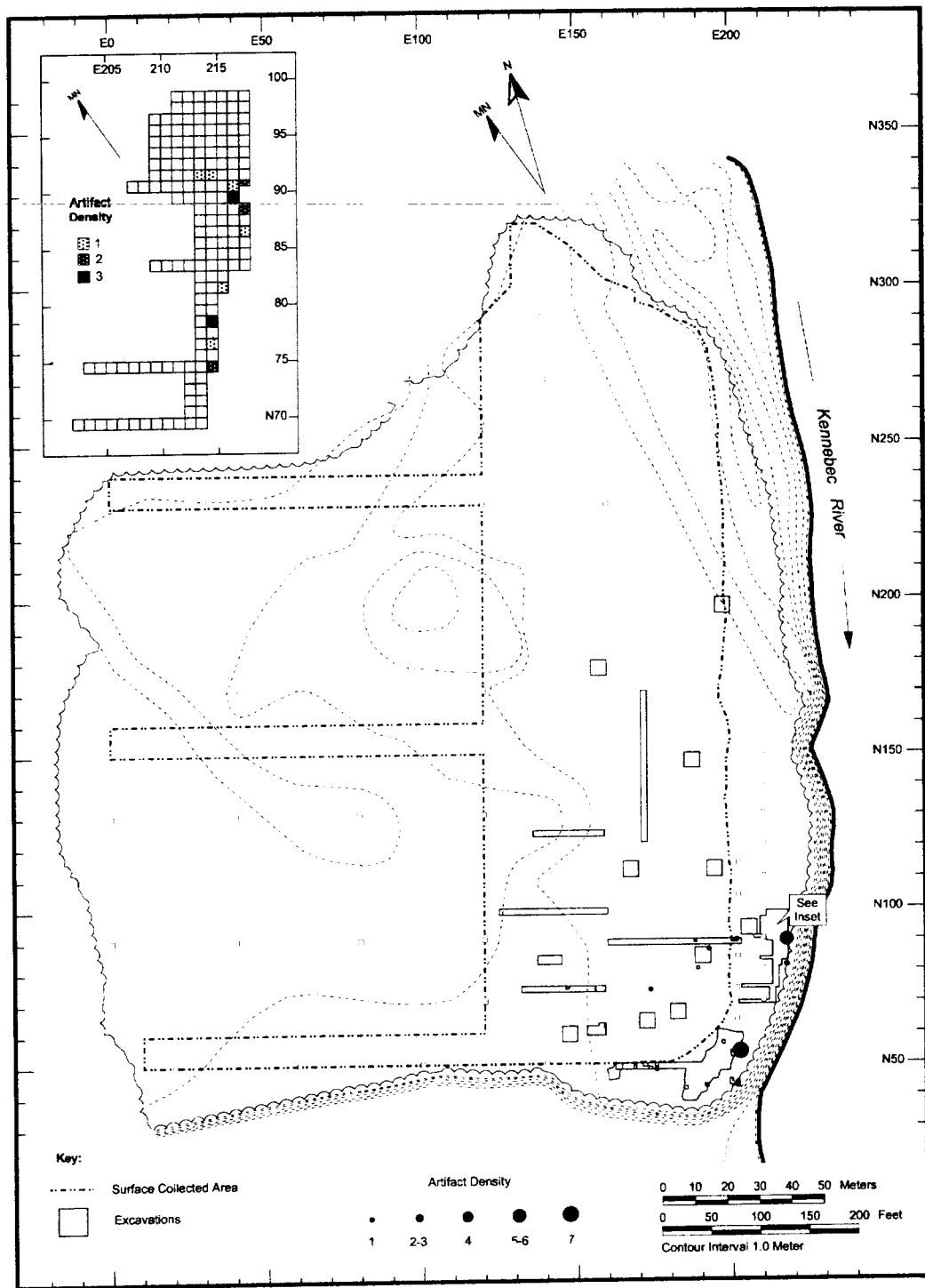


Figure 15. Plan view map of the distribution of Ceramic Period 5/6 ceramics recovered during archaeological testing at the Tracy Farm site.

Native American Ceramic Manufacture at Tracy Farm

and lacks a clear collar, although only a small portion of the rim is preserved. In general, the rim appears similar to other CP5 ceramics.

The entire sample of shell-tempered ceramics was included in the overall vessel lot analysis for this ceramic sample and a total of 10 unique vessels were defined. These include vessels V16, V21, V29, V94, V95, V96, V97, V98, V100 and V187 (Figure 16; see Table 3). Over 60% of the CP5/6 ceramics were assigned to one or another of these 10 vessels. This is a very high percentage as compared to the other ceramic samples from the site. A variety of distinguishing characteristics differentiate ceramic specimens made from these assignments possible.

Other sites in the area that preserve shell-tempered ceramics include the Backwater site (69-40 ME), located on a late Holocene alluvial landform directly adjacent to the southern edge of the Tracy Farm site; one vessel was defined on the basis of a single shell-tempered sherd (Cowie and Petersen 1992). The Moore II site (69-34 ME), located on the downstream portion of the Old Point Formation, contained portions of one shell-tempered vessel with 58 ceramic specimens. Further downstream on the Kennebec River are the Bombazee West (52-10 ME) and Gilman (70-25 ME) sites, each having one shell-tempered vessel defined on the basis of one sherd each (Cowie and Petersen 1992).

The paucity of shell-tempered ceramics at the Tracy Farm site is rather curious, given the overall use of the site throughout prehistory. Several factors could, in part, account for this pattern: 1) shell-tempered ceramics are quite fragile and, in concert with the destructive post-depositional processes at the site, the numbers recovered from the Tracy Farm site may not be an accurate reflection of occupation during this period; 2) perhaps the use of shell-tempering was less common in this area of the Kennebec River, as may well be the case in interior settings generally, and other grit tempered ceramics were made but are not easily distinguishable from later CP6/7 varieties; and/or 3) a shift of settlement away from

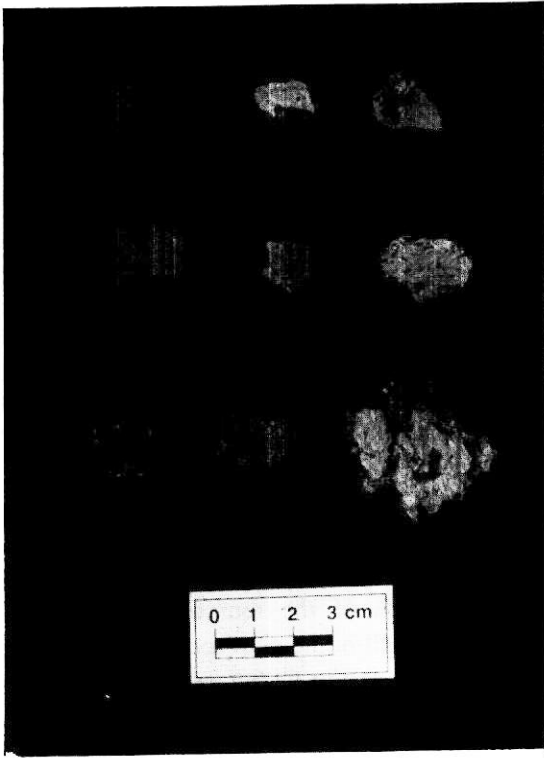


Figure 16. Ceramic Period 5/6 specimens exhibiting shell-temper and smooth exterior surfaces recovered during archaeological testing at the Tracy Farm site. Top left: pn 6826 41-2, v.95; top center: pn 6237 41-2, v.98; top right: pn 6321 41-4, v.94; middle right: pn 5019, v.19; middle center: pn 6715 41-3, v.99; middle right: pn 6724 41-1, v.97; bottom left: pn 6312 41-6, v.187; bottom center: pn 6233 pn 41-7, v.96; bottom right: pn 6897 41-1, v.100.

exhibiting fabric padding, little information on cordage twist and/or weft slant is available from this small sample. One example of cordage twist is preserved and appears to represent S-twist, not typical of shell-tempered ceramics from this region (Petersen and Sanger 1991).

The one rim sherd available for the CP5/6 sample exhibits a slightly excurvate rim profile

the high landforms in favor of lower alluvial landforms perhaps occurred at this time.

CERAMIC PERIOD 6/7

The temporal range of Ceramic Periods 6/7, representing the late Late Woodland (Ceramic) and Contact periods, was ca. 650-200 B.P., or A.D. 1300-1750. The date of ca. A.D. 1550 marks the onset of the period of European contact, although the actual date obviously varies depending on geographic location, among other factors. The major differences between CP5 and CP6 ceramics include an overall thinning of vessel walls in the body, neck and rim areas, a transition toward globular-shaped vessels with accompanying neck and collars portions, and a reduction in the use of shell-tempering as the dominant type of temper material. Fabric paddling as a form of exterior surface treatment continued from CP5 and decorative techniques such as cord-wrapped stick and the use of punctations continued as well. Various forms of incision decoration became prevalent and were often apparently modeled after Iroquoian examples (Petersen and Sanger 1991). Collars have been found to be both low (perhaps only 1-2 cm in height) to quite substantial in size, measuring over 5 cm. The collar became the main focus of decorative applications, with punctations prevalent on the lip of the rim, the base of the collar and the shoulder areas of the vessel.

Changes in ceramic manufacture from CP6 to CP7 are few and some evidence suggests the addition of new vessel types modeled after European examples as the major change between CP6 and CP7. The designation between CP6 and CP7 represents more of an end of a long history of native ceramic manufacture than actual technological or morphological changes. The ceramic assemblage from the Tracy Farm site has one of the best known samples attributable to CP6/7 when compared to other known sites in the Kennebec River Valley and elsewhere in Maine. It thus offers a rare glimpse at the last few centuries of aboriginal ceramic manufacture in this area.

In addition to the ceramics clearly assigned to

the late Late Woodland (Ceramic) period CP6, those ceramic specimens more generally assigned to CP5-7, combined ca. A.D. 1000-1750, are also included in this discussion. These ceramics exhibit the general characteristics of these periods, but they lack definitive attributes enabling more precise assignment. In particular, the ceramics designated as CP5-7 exhibit grit temper with some form of fabric paddling on the exterior surfaces and/or cord-wrapped stick decoration.

In the overall ceramic sample, 537 ceramic specimens (8.6% of the overall ceramic sample and 29% of the identifiable ceramic sample) were attributed to CP6/7 on the basis of morphology, decoration, wall thickness, and/or surface treatment (see Tables 1 and 2). A total of 203 ceramic specimens are attributable to the combined periods CP5-7, representing 3.5% of the overall site ceramic sample and 11% of the temporally diagnostic ceramics known from the site (see Tables 1 and 2). The overall size of the CP6/7 ceramic specimens range from less than 1 cm to between 3 to 5 cm in overall size. As with most other ceramics from the site, the majority of both the ceramics attributed to CP6/7 and CP5-7 range between 1 cm and 3 cm in size. The 537 CP6/7 ceramic specimens have a combined weight of 769.02 grams, while the 203 ceramic specimens attributed to CP5-7 have a combined weight of 383.12 grams.

Stratigraphically, the majority of CP6/7 ceramics were recovered in association with stratum I, the plow zone, (n=402, or 75%), 60 (11%) with the interface of stratum I and II, and 71 (13%) with stratum II, the B horizon. Similarly, the majority (n=158, or 79%) of the CP5-7 ceramics were associated with stratum I, with the remaining specimens distributed between the interface of stratum I and II (n=33, or 16%) and stratum II (n=12, or 5%). Of the CP6/7 and CP5-7 ceramics recovered within stratum II, 66 (79%) were associated with various cultural features. Ceramic Period 6/7 ceramics were recovered from 20 cultural features, 18 of which can be confidently attributed to the Late Woodland (Ceramic)/Contact period on the basis of other associated temporally

diagnostic artifacts. Ceramic specimens attributed to CP5-7 were recovered from seven cultural features, of which five can be attributed to the Late Woodland (Ceramic)/Contact period. The significance of these associations is discussed in more detail below.

The horizontal distribution of the CP6/7 and CP5-7 ceramics indicates a much broader use of the overall site landform than was characteristic during any of the previous periods of the Woodland (Ceramic) period and even the Archaic period. Ceramic Period CP6/7 ceramics were recovered from an extensive area of the Tracy Farm site landform, extending from the very southern areas of the site in the region of grid coordinate N45 all the way to N250, with the east/west distribution extending from approximately E140-E219 (Figure 17). The densest clustering of CP6/7 ceramics again occurs in the southeastern site area. However, this may be, in part, a reflection of the intensity of archaeological investigations in this area, particularly in terms of the level of sediment screening. Although this may bias the apparent distribution of CP6/7 ceramics, it does not seem to have been a factor in our understanding of the overall distribution of the ceramics attributable to the previous periods of the Woodland (Ceramic) period. The extensive surface collections and the more limited excavations conducted over the extent of the Tracy Farm site landform would have been as likely to pick up evidence of these earlier Woodland (Ceramic) periods as the CP6/7 ceramics. In contrast to the distribution of CP6/7 ceramics, the horizontal distribution of the ceramic specimens designated as CP5-7 more closely mirrors the previous ceramic periods in overall horizontal distribution (Figure 18). In any case, it is clear that based on the horizontal distribution of CP6/7 ceramics across the site landform, more people occupied a larger area of the site than in any previous time in prehistory.

The CP6/7 ceramic sample includes 480 specimens designated as sherds and 57 specimens designated as fragments that lack one or more surfaces. The CP5-7 ceramics include 186 sherds

and 17 fragments. Vessel portions identified among the CP6/7 ceramics include 383 that are body sherds and fragments, 95 rim specimens, 35 collar specimens, 7 shoulder specimens, 7 assigned to the rim/collar/neck portion and the remaining 10 specimens assigned to variable configurations of rim, collar, neck, shoulder and body portions. Among the CP5-7 ceramics, 196 have been assigned to the body/bowl portion, four are rim portions and three are neck portions.

A variety of decorative motifs are exhibited in the CP6/7 ceramic sample, including cord-wrapped stick, incision and punctate decoration with variable combinations of two or more of these techniques exhibited on any one ceramic vessel. As is common for CP6/7 ceramics, decoration, when present, is largely confined to the collar portion of the vessel or the upper area of the rim portion. For example, among the Tracy Farm site sample, when incision decoration occurs, it is always on the rim and/or collar portion of the vessel. Among the CP6/7 ceramics, cord-wrapped stick decoration (CWS) is found mainly on the collar and/or rim portions, with some CWS evident as lip treatment. In contrast, punctate decoration is evident on the rim and/or collar and, perhaps, is more frequent on the base of the collar or shoulder area of collared vessels and less frequent on the main portion of the collar. All three decorative techniques, CWS, incision and punctate, occur in a few cases as decoration on the lip area of the rim. Incision decoration on the CP6/7 ceramics includes a variety of geometric applications that has vertical and diagonal orientations. Horizontal incisions were apparently used to separate diagonal incision zones of decoration, particularly on vessels that are collared. The few CP5-7 ceramic specimens that exhibit decoration include cord-wrapped stick elements.

Among the available sample of CP6/7 rim profiles, the collared vessels tend to exhibit straight profiles, while non-collared examples range from both straight to excurvate. Given the overall small size of the sherds from the Tracy Farm site, the oral opening was not routinely measured among

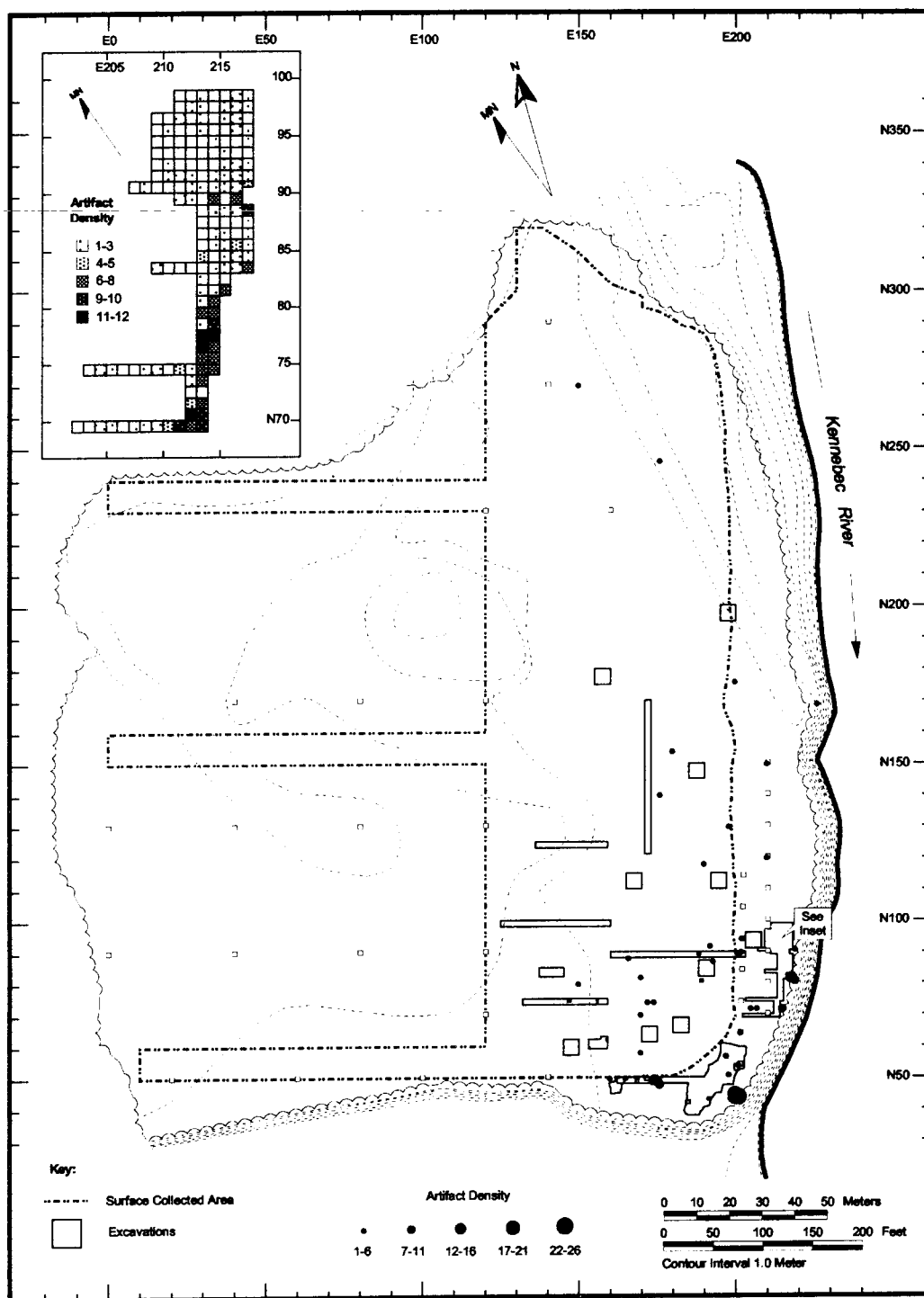


Figure 17. Plan view of the distribution of Ceramic Period 6/7 specimens recovered during archaeological testing at the Tracy Farm site.

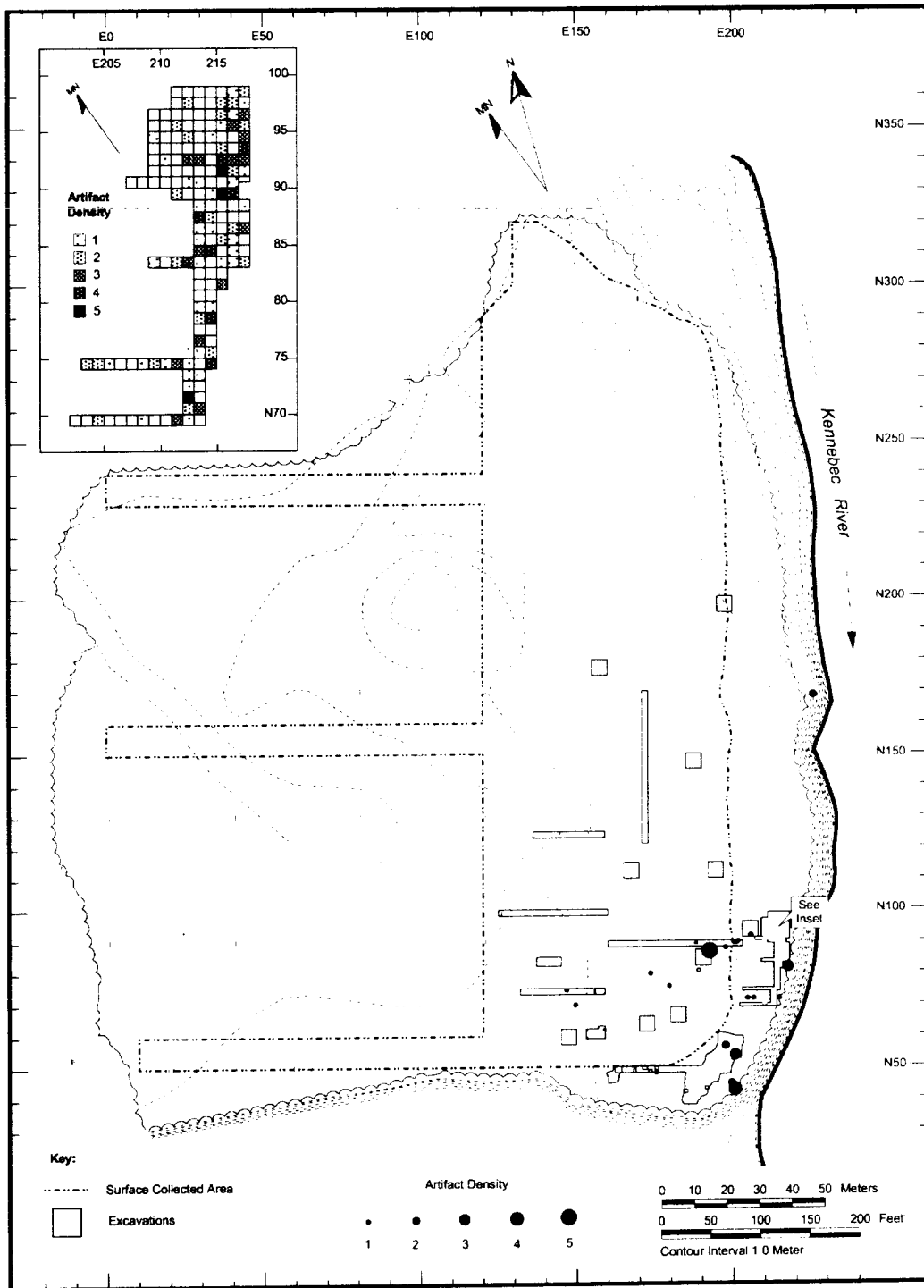


Figure 18. Plan view of the distribution of Ceramic Period 5-7 specimens recovered during archaeological testing at the Tracy Farm site.

the ceramics. General observations among the CP6/7 ceramics indicate a wide range in overall size of vessels, however, possibly reflective of the more variable functions of the vessels as compared to any of the previous portions of the Woodland (Ceramic) period. Some rim sherds exhibit very small oral openings, perhaps in the range of 10 cm or smaller. These very small vessels may be indicative of individual eating vessels, and resemble some examples known from the Goddard site on the coast (Bourque and Cox 1981).

Surface treatment exhibited on the CP6/7 specimens, as well as the CP5-7 ceramics, includes smoothed interior and exterior surfaces, and often smoothed or partially smoothed over fabric paddling (Figure 19). Among the 203 ceramic specimens designated as CP5-7, 62 exhibit fabric paddling with discernable cordage twist and/or weft slant. Of these 62 specimens, 17 exhibit S cordage twist and/or weft slant, while the remaining 45 show evidence of Z twist and/or weft slant. Of the 533 ceramic specimens attributed to CP6/7, 77 preserve identifiable twist characteristics, including 20 that exhibit S twist cordage and/or weft slant and 52 that exhibit Z twist and/or weft slant. This contrasts to the expectation that coastal ceramics exhibited Z twist and interior sites exhibited S twist, although this pattern broke down during late prehistory (Petersen and Sanger 1991). However, in the case of the Tracy Farm site, it may well be indicative of more extensive social networks and/or a more diverse population occupying the Tracy Farm site, particularly during the early Contact Period, ca. 1550-1675, when regional conflict associated with the arrival of Europeans resulted in more fluid social ties and increased variability in the overall makeup of the community. Other evidence of coastal-interior interaction may include the previously mentioned shell temper.

A total of 131 unique vessels, encompassing 178 specimens, have been defined for the CP6/7 ceramics including vessels 6-8, 11-15, 17-20, 31-39, 42-43, 45-54, 61-63, 104-120, 122-129, 131-157, 159-186, 188, 190, 194-196, 199, 202-207, and 209 (see Table 3). The majority of these



Figure 19. Ceramic Period 6/7 specimens exhibiting exterior fabric-paddling recovered during archaeological testing at the Tracy Farm site (ME 69-11). Top left, pn 351-41; top right, pn 5009-41; middle row left, pn 598 41; middle row center, pn 481-41; middle row right, pn 406-41; bottom row left, pn 4033-41; bottom row center, pn 383-41; bottom row right, pn 388-41.

vessels are represented by one sherd or fragment, while the largest number of individual specimens assigned to any one particular vessel is six in the case of V39. No crushed vessel or significant portion of any one vessel was recovered during any phase of field work. This is important for understanding the process involved with, and the timing of, the ultimate abandonment of traditional ceramic manufacture among this community.

Of the 131 unique vessels attributed to CP6/7,

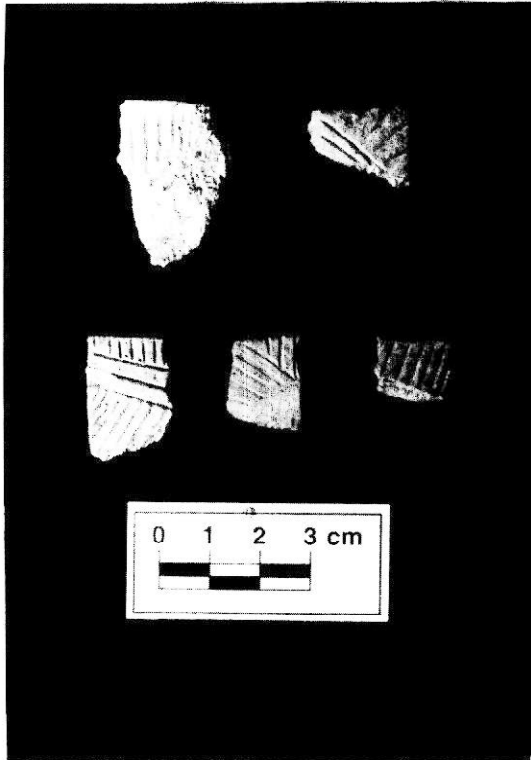


Figure 20. Ceramic Period 6/7 "Iroquois-like" rim specimens exhibiting incised decoration recovered during archaeological testing at the Tracy Farm site. Top left: pn 6310 41-5, v.106; top right: pn 313 41-2, v.32; bottom left: pn 351 41-4,5, v.33; bottom center: pn 6044 41-1, v.116; bottom right: pn 313 41-1, v.33.

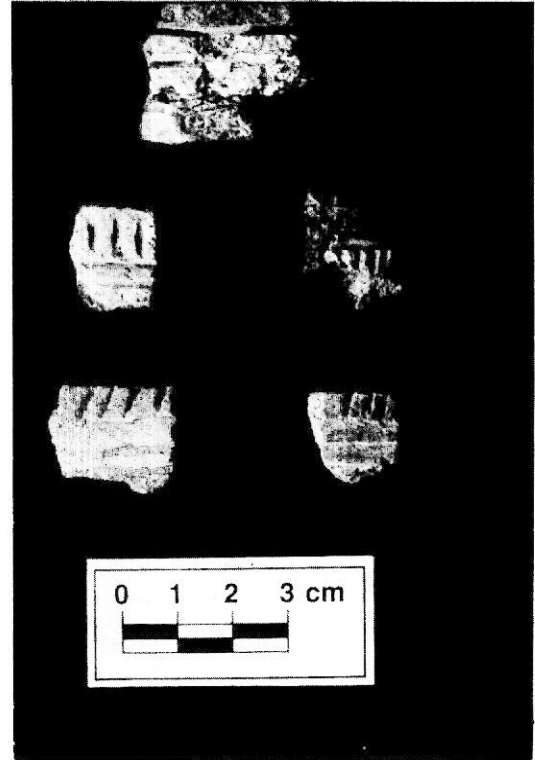


Figure 21. Ceramic Period 6/7 "Iroquois-like" rim specimens exhibiting incised decoration recovered during archaeological testing at the Tracy Farm site. Top: pn 6842, v.108; middle left: pn 6253, v.204; middle right: pn 6048 41-1, v.203; bottom left: pn 6400 41-1, v.105; bottom right: pn 6235 41-3, v.105.

a variety of decorative motifs and combinations thereof are exhibited. These include incised decoration (n=33), incised with secondary punctate decoration (n=11), cord-wrapped stick (n=18), punctate (n=16), and cord-wrapped stick with secondary application of punctate decoration (n=1). The remaining 52 vessels are represented by undecorated specimens and exhibit both smoothed (n=28) and fabric paddled (n=24) exterior surfaces (Figures 20-27).

It is interesting to note that, based on the available specimens, incised decoration does not

occur with cord-wrapped stick decoration and it is found in conjunction with punctate decoration in only one case. Obviously, this sample is not necessarily fully representative of any one of the defined vessels, given the very limited portion of any one vessel recovered and/or identified. However, as has been noted, most decoration during CP6/7 was focused on the collar, neck and shoulder portion of the vessel, with little, if any, decoration applied to the main portion of the vessel body. This pattern holds for those CP6/7 ceramic specimens not assigned to any unique vessel as

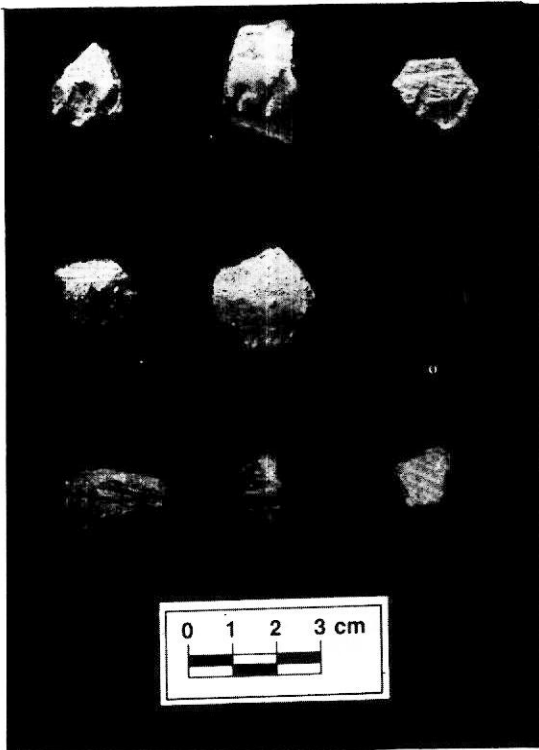


Figure 22. Ceramic Period 6/7 "Iroquois-like" collar specimens exhibiting incised and punctate decoration recovered during archaeological testing at the Tracy Farm site. Top left: pn 6321 41-6, v.7; top center: pn 6032, v.173; top right: pn 6255 41-6, v.180; middle left: pn 6217 41-1, v.118; middle center: pn 6330 41-1, v.178; middle right: pn 6331 41-2, v.117; bottom left: pn 6715 41-1, v.179; bottom center: pn 6173 41-2, v.179; bottom right: pn 626 41-1, v.183.

well.

A small number of native made ceramic pipes have been defined in the ceramic assemblage, largely on the basis of size and wall thickness; they have been designated as pipes 1-8 (see Table 3). The eight pipes are represented by five rim sherds and three bowl sherds and, based on the size of the sherds, apparently represented very small

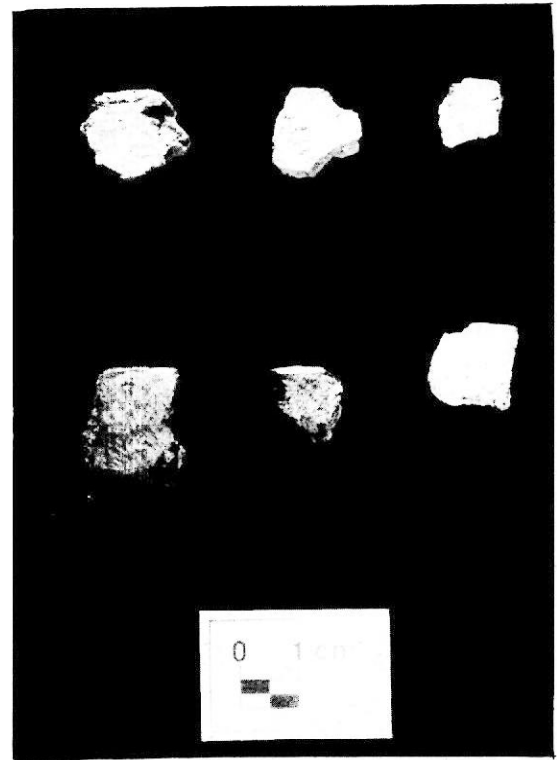


Figure 23. Ceramic Period 6/7 rim specimens exhibiting vertically applied cord-wrapped stick decoration recovered during archaeological testing at the Tracy Farm site. Top left: pn 6235 41-2, v.129; top center: pn 6127 41-1, v.129; top right: pn 6211 41-1, v.146; bottom left: pn 451 41-3, v.30; bottom center: pn 6314 41-9, v.161; bottom right: pn 6433 41-1, v.128.

smoking pipes. All but pipes P5 and P6 are undecorated based on the preserved portions (Figure 28). Pipes P5 and P6 exhibit small incised decoration on the small collared rims.

Many of the collared ceramics can be characterized as "Iroquois-like" and represent examples of a widespread horizon style in northern New England and a larger region. These ceramics are considered analogous to various Iroquoian examples from the Late Woodland and early

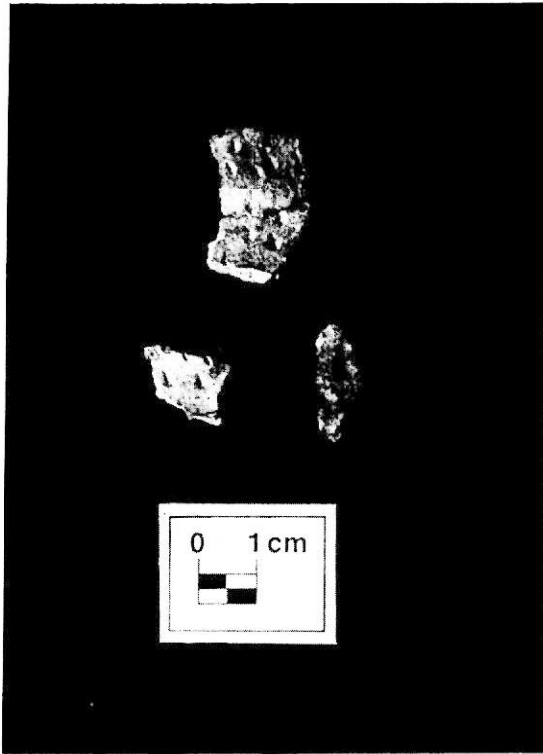


Figure 24. Ceramic Period 6/7 specimens exhibiting punctate decoration on small vessel recovered during archaeological testing at the Tracy Farm site. Top: pn 6225 41-1, v.138; bottom left: pn 6198 41-1, v.138; bottom right: pn 6303 41-1, v.138.

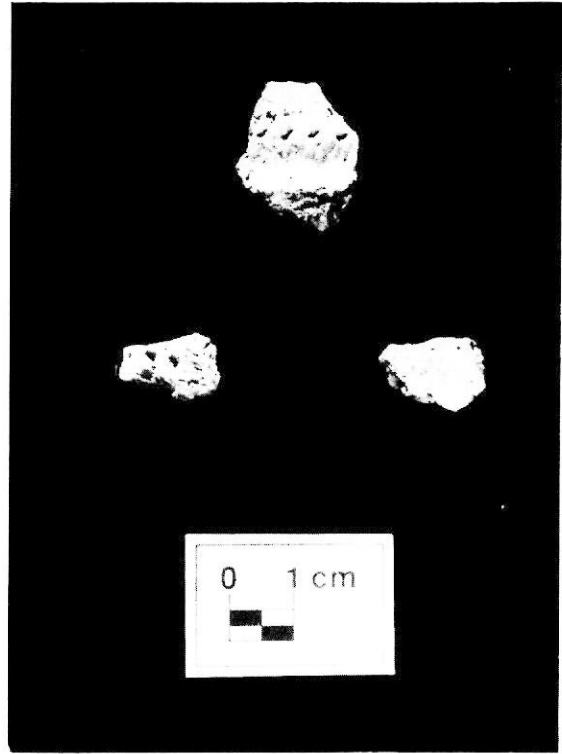


Figure 25. Ceramic Period 6/7 specimens exhibiting punctate (porcupine quill?) decoration on small vessel recovered during archaeological testing at the Tracy Farm site. Top: pn 6178 41-1, v.127; bottom left: pn 6310 41-12, v.127; bottom right: pn 6312 41-7, v.127.

Contact period of the broader Northeast in that they exhibit general similarities to actual Iroquoian vessels (Petersen 1990). Specific attributes include the overall vessel form of collared, globular-shaped vessel, with various decorative motifs such as horizontal and diagonal incision and punctate (fingernail, linear) as the most characteristic.

In contrast to the ubiquitous examples of Iroquois-like ceramics at Tracy Farm and other Late Woodland (Ceramic) period sites in Maine and northern New England, rare examples of actual St. Lawrence Iroquoian ceramics occur in two areas of northern New England, the Lake Champlain

drainage and north-central Maine (Petersen 1990). More recent discoveries of actual St. Lawrence Iroquoian ceramics have been made in the central Kennebec River region at the Tracy Farm site and particularly at two other nearby sites, Sandy River (69-24A ME) and Flamm II (69-31 ME) (Cowie and Petersen 1992). At the Tracy Farm site, examples of possible St. Lawrence Iroquois ceramics include a rim sherd and collar fragments that exhibit open circle punctate decoration typical of actual St. Lawrence ceramics (Figures 29-30).

The presence of actual St. Lawrence Iroquois

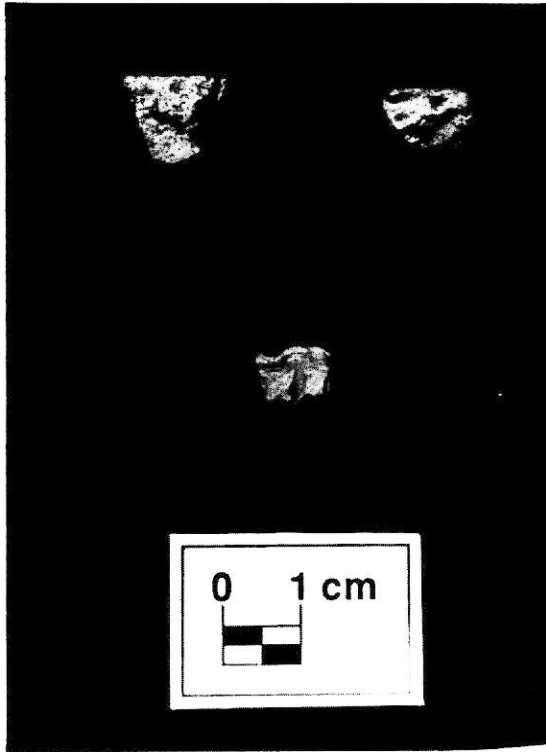


Figure 26. Ceramic Period 6/7 specimens exhibiting punctate decoration on very small vessels recovered during archaeological testing at the Tracy Farm site. Top left: pn 6200 41-7, v.149; top right: pn 6551 41-3, v.148; bottom: pn 6012 41-1, v.123.

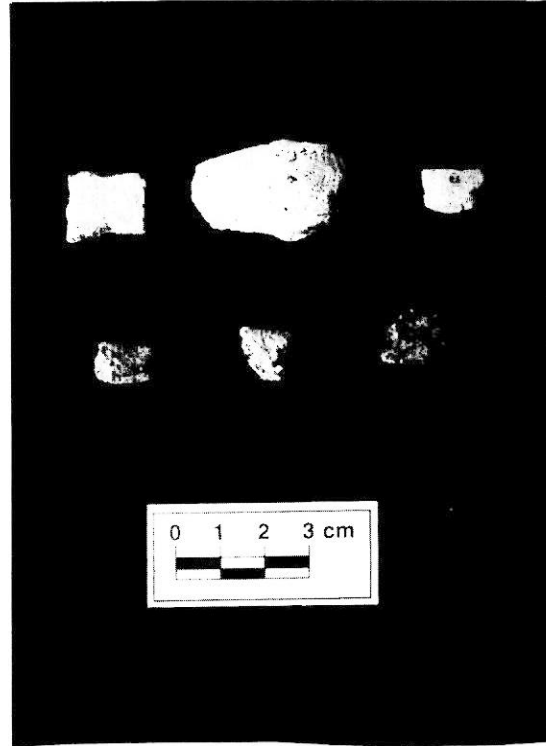


Figure 27. Ceramic Period 6/7 small, undecorated vessels recovered during archaeological testing at the Tracy Farm site. Top left: pn 6078 41-1, v.163; top center: pn 6258 41-1, v.151; top right: pn 6338 41-1, v.154; bottom left: pn 6253 41-1, v.150; bottom center: pn 6403 41-1, v.150; bottom right: pn 6324 41-1, v.150.

ceramics at Tracy Farm and other nearby sites in the confluence area is one of the most intriguing aspects of the available ceramics from the confluence area. Several hypotheses have been suggested to account for these ceramics locally, including population movement through intermarriage, trade, and/or actual local Iroquoian residence (Petersen 1990). Perhaps the destruction and displacement of the St. Lawrence Iroquoians during the late sixteenth century led to their partial immigration to Maine.

A total of 17 unique vessels, including 34 specimens, have been attributed to Ceramic Periods

CP5-7 including vessels 5, 9-10, 20, 30, 40-41, 99, 130, 158, 189, 191-193, 198, 200 and 201 (see Table 3). These specimens include fabric paddling and/or smoothed surfaces, but they lack additional attributes such as particularly thin wall thickness, indications of collared or globular vessel shape, or very small vessel size, which are all indications of CP6/7 ceramics. Given this lack of specific temporal attributes other than exterior fabric paddling, a more general temporal attribution has been assigned to them. Specifically, these vessels

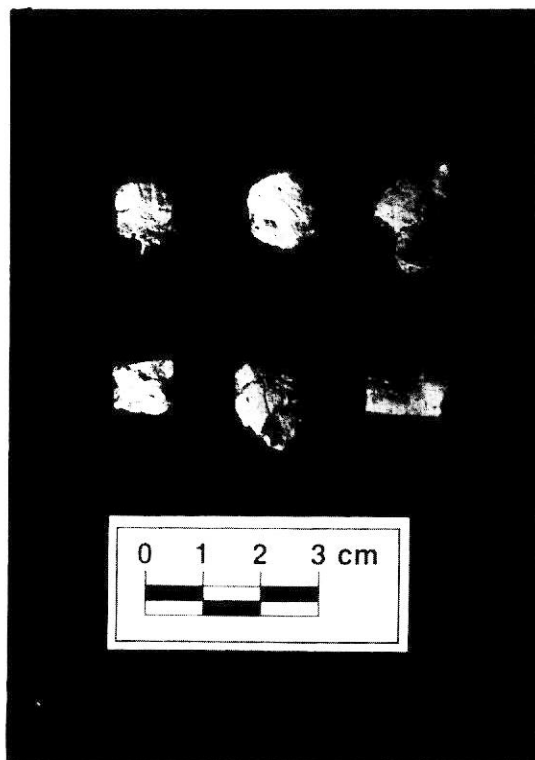


Figure 28. Ceramic Period 6/7 undecorated pipe fragments recovered during archaeological testing at the Tracy Farm site. Top left: pn 4011 41-1, p.1; top center: pn 4011 41-3, p.2; top right: pn 4040 41-1, p.3; bottom left: pn 470 41-1, p.4; bottom center: pn 6109 42-1, p.7; bottom right: pn 6322 42-1, p.8.

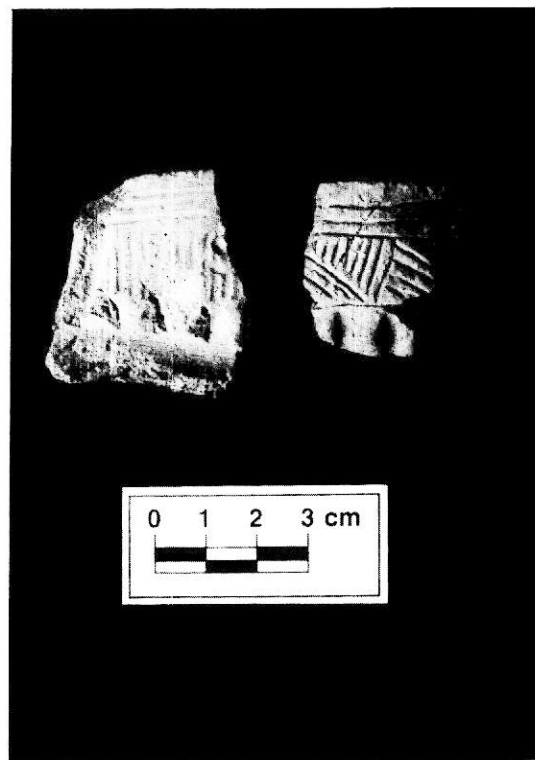


Figure 29. Ceramic Period 6/7 probable St. Lawrence Iroquois rim sections recovered during archaeological testing at the Tracy Farm site. Left: pn 1152 41-1, v.7; right: pn 6331 41-1,5, v.107.

exh cord-wrapped decoration, the remaining specimens exhibit smoothed over fabric paddling on extant exterior surfaces.

The various contexts from which CP6/7 ceramics were recovered at the Tracy Farm site is significant in terms of understanding the nature and timing of the ultimate abandonment of native ceramic manufacture. Of the 23 cultural features attributable to the Late Woodland/Contact period, 19 contain one or more ceramic specimens assignable to CP6/7. Given several factors, such

as the size of the overall CP6/7 ceramic sample and the relatively small number of individual CP6/7 ceramics found within cultural features, it is possible that Native Americans occupying the Tracy Farm site abandoned ceramic manufacture some time in the mid 1600s, although elsewhere in New England ceramics were apparently made at least through the 1600s (e.g., Thomas 1979).

When the Native Americans moved from Tracy Farm to the east side of the Kennebec River at the site of the Norridgewock Mission in 1699, no traditional ceramics were brought over to Old Point and clearly none were made or used on-site after this relocation. Not one aboriginal ceramic sherd

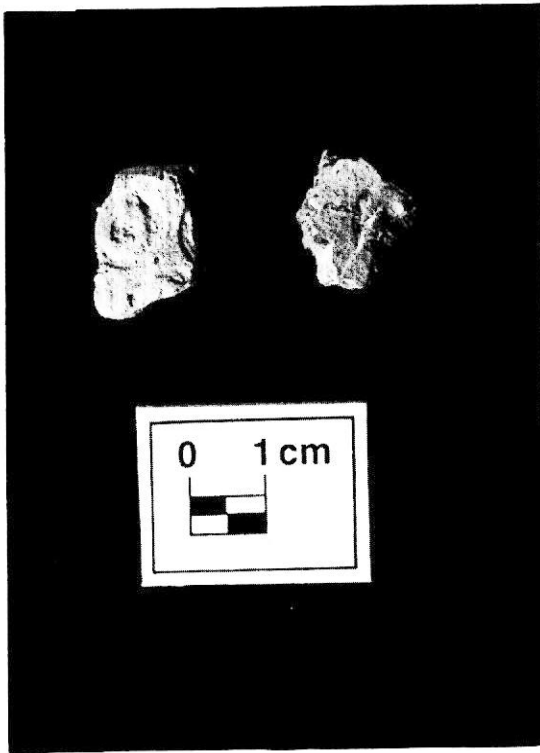


Figure 30. Ceramic Period 6/7 probable St. Lawrence Iroquois rim and collar sections exhibiting open-circle punctate recovered during archaeological testing at the Tracy Farm site. Left: pn 6252 41-3, v.124; right: pn 6330 41-2.

attributable to Ceramic Periods 5 through 7 has been recovered at the Norridgewock Mission site. In fact, the total sample of aboriginal ceramics recovered from this site number less than 10 and is all attributable to the early Middle Woodland period (CP2/3).

Much can be said in regards to the Tracy Farm site and the other nearby related sites in terms of Native American ceramic manufacture and the process of incorporation of European goods into Native American material culture. Traditional ceramic manufactures were recovered in significant quantities from Tracy Farm and manufacture scraps

among the ceramic inventory attest to its likely manufacture on-site. In place of these traditional manufactures it is likely that a combination of copper kettles and a continuation of traditional bark containers were employed for food processing and consumption. Considerably more sheet copper has been recovered from the Norridgewock Mission site than at Tracy Farm. Very few items of traditional manufacture are present among the cultural deposits at Old Point as compared to Tracy Farm and the Sandy River site.

If Native Americans at Tracy Farm were still using and/or manufacturing traditional ceramics when the various cultural features were in use (and these include cooking hearths and storage pits/refuse pits), one would certainly expect to recover more ceramic specimens and much larger portions of vessels than those that have been recovered in the pit features. The majority of cultural features known to contain CP6/7 ceramics at the site also contain European trade items. Given these factors, the majority of CP6/7 ceramics recovered from cultural features likely represent incidental inclusions of older, thoroughly trampled ceramics, and may not represent secondary refuse temporally associated with activities represented by the features themselves. This reasoning raises the question: where are the features associated with the occupation(s) represented by the CP6/7 ceramics? Many other questions emerge as well when considering the significance of the context(s) of the CP6/7 ceramics, the answers to which may inform us on cultural patterns of the Late Woodland (Ceramic)-Early Contact period. For instance, if the CP6/7 occupation evident at the Tracy Farm site cannot be associated with the several dozen storage pit features identified, does this suggest that the makers and users of these pots were not involved with maize horticulture? Nearly all storage pits contain some evidence of maize and some pits contain other cultigens as well, including beans and squash. The lack of clearly Late Woodland (Ceramic) period storage pits (based on an absence of European trade items, there may be up to six pre-contact pits) at the Tracy Farm site

may suggest that the introduction of maize horticulture in this area of the Kennebec River Valley was a Contact period phenomena, or, perhaps more likely, settlement was focused on different settings than Tracy Farm during the latter portion of the Late Woodland (Ceramic) period (such as at settings like the nearby Sandy River site [69-24A ME]).

Archaeological evidence from other Native American sites in the broader region can inform us about the abandonment of traditional ceramic manufacture and in general, the dates from these areas cluster in the middle to the late seventeenth century. Excavations at the English trading post at Cushnoc, constructed in 1628, produced a portion of a CP 6/7 vessel (Cranmer 1990). At the Contact period component at the coastal Allen's Island site, thought to date after A.D. 1676, a mixed assemblage of Native American ceramics and European trade goods was documented (Spiess 1995). At the nearby Hodgdon site adjacent to the Embden petroglyphs, an association between very thin-walled ceramics, likely attributable to Ceramic Period 6/7, and early eighteenth-century European artifacts is potentially suggestive of very late examples of native made ceramics (Lahti et al. 1981).

At Fort Hill, a Native American village located in the Connecticut River drainage in Hinsdale, New Hampshire, a thriving ceramic industry is evident from the archaeological record and dated through historic accounts to 1663-1664 (Thomas 1979). Among the Mohawks in the Mohawk River valley, traditional ceramic manufacture drops out of the archaeological record at least by the middle of the seventeenth century (Snow 1995). In southern New England, traditional ceramic manufacture was likely abandoned by A.D. 1675 based on the material recovered from the Wampanoag cemetery site at Burr's Hill in Rhode Island (Gibson 1980).

As is the case with other Native American sites containing Contact period components, it is apparent that a gradual shift towards incorporation of European goods took place over time. New materials were used within already established

technological craft traditions; this is particularly evident with the use of copper and iron materials that were likely prized more for their utility as sources of raw material rather than their original functions (Bradley 1987; Moreau 1998; Thomas 1979). At Tracy Farm, the apparent use of an iron adze as a probable digging tool, or hoe, and the obvious recycled sheet copper artifacts fashioned into a number of ornaments provides additional evidence that the Abenaki worked various European items into native forms and then used them within their own native traditions.

It is clear that the ceramic assemblage assignable to CP6/7 lends itself to the examination of a host of issues, in themselves not directly related to ceramics at all. The CP6/7 ceramics represent a wide variety of vessel forms and stylistic decorative attributes. If the assemblage as a whole may be related more to the early Contact period, rather than the Late Woodland (Ceramic) period, the evidence available from examination of cordage twist and/or weft slant may suggest that the site was host to a variety of ethnic groups. In any case, the ceramics from the site indicate that a significant population occupied the site landform during the Late Woodland (Ceramic)/early Contact period. As noted above, the horizontal distribution of CP6/7 ceramics extends over the entire north-south extent of the site landform along the eastern quarter of the open field area designated as the Tracy Farm site. This ceramic sample is one of the larger such samples now known from an interior riverine setting in Maine and has much research potential, of which only some of the issues are presented here.

Nearby sites that also contain CP6/7 ceramic samples include the Starks Rip site (69-27 ME), located at the northern end of the Tracy Farm site landform. Perhaps the most significant CP6/7 ceramic sample is available from the nearby Sandy River site (69-24A ME) where actual St. Lawrence Iroquois ceramics have been recovered, as well as Iroquois-like ceramics like those noted above. One small sherd recovered from the Flamm I site (69-31 ME) also has been designated as actual St.

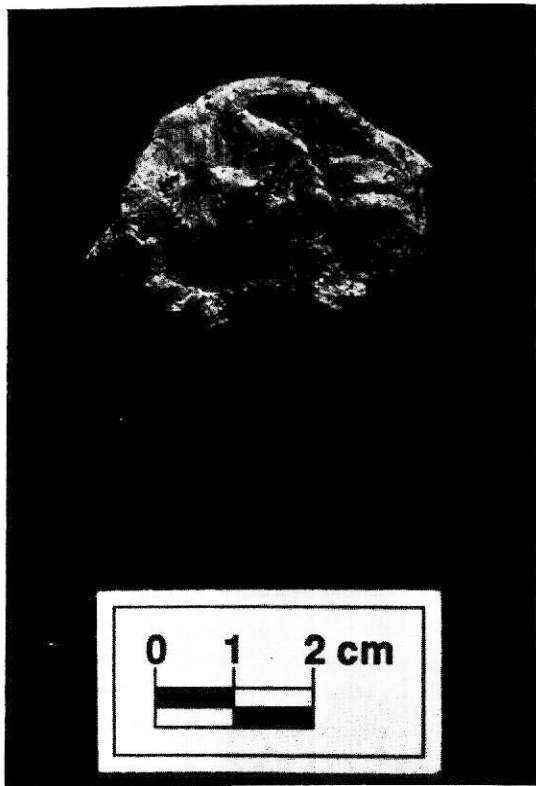


Figure 31. Ceramic manufacture scrap recovered during archaeological testing at the Tracy Farm site.

Lawrence Iroquois in origin. In addition, another significant sample of Iroquois-like ceramics has been recovered from the Moore site (69-20 ME), located at the downstream end of the Old Point Formation. Lastly, CP6/7 ceramics are also known from the Gilman site (70-25 ME) located near the Weston Dam.

Ceramic specimens not attributable to any specific subdivision of the overall Woodland (Ceramic) period include 4,397 ceramic specimens. Of these, 19 have been designated as manufacture scraps. These specimens represent largely unformed fragments of tempered clay that were likely fired inadvertently. Some retain the characteristics of a formed coil, while most are unformed scraps of fired clay. One specimen in

particular is worthy of mention and illustration given its large size (Figure 31). These few specimens suggest that ceramic manufacture was an activity that took place on-site, at least during some periods of the overall Woodland (Ceramic) period. Nearby outcrops of clay are available upstream along the banks of the Sandy River just minutes by canoe from the Tracy Farm site.

In summary, the combined aboriginal ceramic assemblage now available from the Tracy Farm site suggests that, this landform was a favored location for human habitation throughout the Woodland (Ceramic) period. This ceramic sample contains examples from every recognized Ceramic Period subdivision and provides a dataset to look at changes in ceramic manufacture over time, from its first introduction in the Early Woodland (Ceramic) period to its final abandonment some time during the Contact period.

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LATE PALEOINDIAN OCCUPATION AT THE WATERVILLE-WINSLOW BRIDGE

Arthur Spiess and Mark Hedden

INTRODUCTION

Archaeological data recovery at site 53.38 during the 1991 and 1992 field seasons ended archaeological work that had begun in the fall of 1987 as part of the planning for a new road and bridge connecting Kennedy Memorial Drive in Waterville with Route 201 in Winslow (Hedden 1994, Hedden and Spiess 1991, Spiess 1988, Spiess et al. 1990). The work at site 53.38 completed the definition and excavation of an early Susquehanna tradition occupation associated with artifacts of the preceding Moorehead phase and/or Laurentian tradition as a small site overlooking Messalonski stream. The excavations enabled us to complete mapping of concentrations of Susquehanna tradition stone artifacts around several features including fire-hearths that may have defined one or more lodge structures. Paleoindian artifacts and flaking debris were located on the edge of the Susquehanna tradition occupation, with a single Late Paleoindian point found 130 meters away. This report is rewritten from Hedden (1994), with the perspective that five additional years of research on lithic materials and Paleoindian technology have given us.

Data recovery field work ran from June 18th to August 9th, 1991 and from May 4th to the conclusion on June 2nd, 1992. Laboratory analysis and preliminary report drafting was principally completed during the winter of 1992-93, and final report preparation occurred in the late winter and spring of 1994.

This paper contains a description of the site and reports the Late Paleoindian material from it. A subsequent paper will focus on the Susquehanna tradition activity areas.

ENVIRONMENTAL SETTING AND SITE LOCATION

The site (53.38) is (was) located near the west

bank of the Kennebec River, on a high terrace overlooking Messalonskee Stream, a major tributary of the Kennebec River (Figures 1 and 2), (Present tense is used for site description in much of the report, even through the site no longer exists.)

Through Messalonskee Lake, Messalonskee Stream drains the combined outflow of the Belgrade Lakes and joins the Kennebec River approximately 1.2 km below site 53.38. A series of four hydroelectric dams are located along the 15.8 km stretch of Messalonskee Stream between Messalonskee Lake and the confluence with the Kennebec River with a total vertical descent of about 63 meters (206 ft). The normal water level of Messalonskee Stream below the lowest (Union Gas) dam, above which sits site 53.38, is about 12 m (40 ft) above M.S.L. The terrace on which 53.38 is located is between 30.5 m and 33.5 m (100 to 110 ft above M.S.L.) above the Kennebec river, and drops steeply more than 18 m (60 ft) to Messalonskee Stream.

The hills on either side of the Kennebec River in the area rise rapidly to 150 feet elevation, and extend east and west as rolling uplands. The river valley above the 50 foot elevation, and the uplands in the project area, are covered with glacio-marine deposits of the Presumpscot formation. These deposits are generally fine sandy silts or sandy silty clays, although there are localized deposits of coarser materials generally characterized as medium sand, such as around site 53.38.

RESEARCH BACKGROUND

Modern professional archaeological work in the Waterville-Winslow area began in the mid-1980's with an archaeological survey for the Benton Falls hydroelectric project on the Sebasticook River (Bradstreet and Duffy 1985), and a small test of site 53.20 by Bradstreet and Spiess on the Kennebec River (Spiess 1988 and Spiess et al 1990). Site



Figure 2. Enlargement of an aerial photograph of the project area, circa 1980. North is at the top. Note the nested rectangular layout of the cemetery. The site was located between the dam and the southwest corner of the cemetery. The dirt access road runs along the west side of the cemetery toward the dam, then swings east through the woods where it is visible as a trackway.

Fort Halifax; and by the end of 1989 Phase I testing had been completed where called for at the four new sites (53.36, 53.37, 53.38 and 53.39) located in the project area (Spiess et al 1990). Site 53.38 included the Late Paleoindian component reported here, and a Susquehanna tradition occupation that yielded several completely excavated activity areas, including a possible house or hut. Investigations at other sites turned up a scatter of non-diagnostic materials along abandoned high channels of the east bank of the Kennebec River (53.39 and 53.37)

as well as the large deeply stratified but sparsely occupied Ceramic period site with excellent contextual preservation of features on the present levee of the east bank of the Kennebec (53.36).

In the summer of 1989, a professional survey behind four dams on the Messalonskee system was initiated by the University of Maine at Farmington (Ferreira and Petersen 1990). The Messalonskee survey was completed during the 1990 season and located 33 previously unknown sites. Phase II excavations in 1990 and 1991 established a series

of single component occupations beginning in the Early or Middle Archaic (ca. 7000 to 4000 B.C. through the Late Ceramic or Contact periods (A.D.1000 -A.D.1750 [Crock 1992:53]). For some reason, Archaic occupations were more prominently represented than those of the Ceramic period. Crock suggests that the higher water levels resulting from dam construction may have drowned later (Ceramic) sites while restoring the Messalonskee to stream levels approximating heights current during the Archaic periods.

A Phase I survey of the Edwards Dam impoundment between Waterville and Augusta identified 41 sites with Late Archaic and Ceramic period cultural material on the immediate riverbank, some with indications of intact occupations on higher terraces, as well as 4 sites in the impact area that have or may have intact remains (Will 1992). The minimum cultural period span of the sites in the Edwards impoundment is from the Late Archaic (ca 5000 BP) through the Contact period. All of the site surveys cited contribute material evidence to trace back in time and fill out the historic reports of extensive aboriginal activity along this section of the Kennebec River Valley (Will 1992:11).

Late Paleoindian material and sites are rare in Maine. The Paleoindian period in Maine, ended about 10,050 B.P. (uncalibrated radiocarbon years ago) with sites of the Nicholas phase, characterized by minimally fluted point analogous to the Holcombe point in the Great Lakes region (Spiess et al. 1998). The subsequent Late Paleoindian period is marked by a number of point styles, many of them with stylistically similar (although not identical) analogues as far away as the High Plains (Doyle et al. 1985, Spiess 1992). Although point styles changed, the accompanying tool kit of endscrapers, sidescrapers, graters, etc. maintained a Paleoindian character, however. The last Late Paleoindian culture in the area is marked by parallel-flaked, parallel sided points. The Varney Farm is the only known single component site of this time in New England, and it may date between 9000 and 8400 B.P. (Cox and Petersen 1997;

Petersen personal communication 1998).

The nearest Late Paleoindian material to site 53.38 is a Hell Gap point made of brown quartzite from Sydney (described in detail in Spiess 1992). The Sydney point, and site 53.38 demonstrate use of the margins of the Kennebec River valley through much of the Late Paleoindian period.

AREA DESCRIPTION AND PHASE III EXCAVATION PLAN

Site 53.38 is located on wooded, sandy, terrace-like landforms perched 50 to 60 feet (16 to 19 meters) above the level of Messalonskee Stream. The Union Gas Works dam and powerhouse is located immediately below the site location in the stream valley bottom. The inland margin of the site is truncated by a narrow gravel and cinder roadbed, and by a rise of 10 to 12 feet (3-4 m) to the elevation of the surface of the Pine Grove Cemetery. Now, of course, the site is destroyed and the area incorporated into the western approach road to the Carter bridge.

Most of site 53.38 is located on a relatively flat ("1m relief) surface at about 105 feet (33m) elevation. The low relief on this surface, however, is organized into a series of northeast-southwesterly trending ridges. During the spring melt, the low spots between these ridges are wet with standing water, and they are noticeably less well drained than the ridge tops after a heavy rain. We guess that these low, regular ridges are sand dunes, built and vegetated sometime during the terminal Pleistocene. Both the Late Paleoindian and the main Susquehanna occupation have concentrated on top of these low sand ridges. The low portions between the ridges are culturally sterile.

The southwestern edge of the Susquehanna occupation landform is a steep (50% slope) drop of about 60 feet (about 20 m) to the stream below. This slope, as well as the rest of site 53.38 is (was) covered with a mature pine forest with a scattered under story of pine, oak and a few other tree and bush species. Several seasons of cutting pine in the general site vicinity had opened up the forest canopy and left piles of slash and brush about. The

Late Paleoindian Occupation at the Waterville-Winslow Bridge

steep slope down to Messalonskee Stream is stabilized, and not visibly eroding.

Easterly and southeasterly of the main Susquehanna area the land surface rises rapidly another 10-12 ft (3-4 m) to a higher sandy plateau. This small rise merges southerly with the steep drop to Messalonskee Stream, making the total drop nearly 80 feet (25 m). A much less intense occupation (a scattering of flakes), possibly related to the main Susquehanna occupation, was perched on the terrace edge where this little rise merges with the steep drop into the valley below. Further southeast, the land rises in a series of similar steps to a devegetated sand dune system along the crest of the hill.

Pine Grove Cemetery is located on the higher plateau, 10-12 feet above the main Susquehanna occupation. Fill, mostly sand and probably from the excavation of graves, has been dumped over the edge of the scarp to form an artificially steepened rise. This artificial rise bounds the landform of the main Susquehanna occupation on the northeast. Two sterile testpits (N110W126 SWq and N110W136 SWq) indicate that none of the Susquehanna occupation extends under the cemetery fill.

The elevation, landforms and soils of site 53.38 indicates that substantial soil depth buildup since the terminal Pleistocene are unlikely. All cultural material deposited on the surface of the ground can be expected in the active soil zone (A and B layers), with the exception of any item that fell down a rodent hole or washed into a hollow created by a fallen tree, or was placed in a pit dug by prehistoric inhabitants. This situation applies, in fact, to 99% of all cultural material (with the exception of a few pieces of debitage and FCR). Therefore, depth information was regarded as carrying little chronological meaning. Horizontal patterning, however, proved much more meaningful.

FIELD AND LABORATORY METHODS

Our strategy during data recovery (Phase III) was to complete excavation of all clusters of

cultural material located during the Phase I and II field investigations in 1988. This work involved extensive testing and excavation within a 20m radius of the find spots of the Late Paleoindian point fragments to determine if other Paleoindian materials might be associated, or if the locus contained only one isolated point. Our major focus, assuming no further lithics were identified around the Paleoindian point locus, was to complete work around the Susquehanna tradition locus. Here we anticipated doubling the area excavated around the Feature 1 hearth (ca. 25 m²) and excavating approximately 50 square meters of similar concentrations to the north and south to obtain a complete sample of the site remains.

The site was laid out in a metric grid system (Figure 3). Areas suspected of containing subsurface cultural materials and features were excavated by 2m x 2m squares divided into 50 x 50 cm Quarter-quads. We followed natural soil strata wherever possible, by not removing more than 10 vertical cm at a time. Shovels were used, removing the earth in thin Ascrapes until cultural material was encountered, then further excavation continued by hand troweling. Cultural material was provenienced with a tape measure and line level to a corner of the unit designated as the local datum or to the 50 x 50 cm quarter-quad. The finest provenience unit is a point specified in 3 dimensions to 1 centimeter. All soils not saved for laboratory examination were screened through 1/8th inch mesh wirecloth. Debitage, calcined bone and scattered fire-cracked rock (FCR) were located by exact provenience, if possible, particularly when a hearth or other feature was encountered.

Subsequent laboratory procedures included systematic processing of all materials. All artifacts were washed and catalogued. All artifacts and debitage were saved. After analysis, a 10% random sample of fire-cracked rock was saved, and the rest was contributed to fill potholes on a private dirt road well away from any known prehistoric site. Feature fill was floated on a water-flotation machine, and the light and heavy fractions sorted for charcoal, bone and other fine material. Charcoal

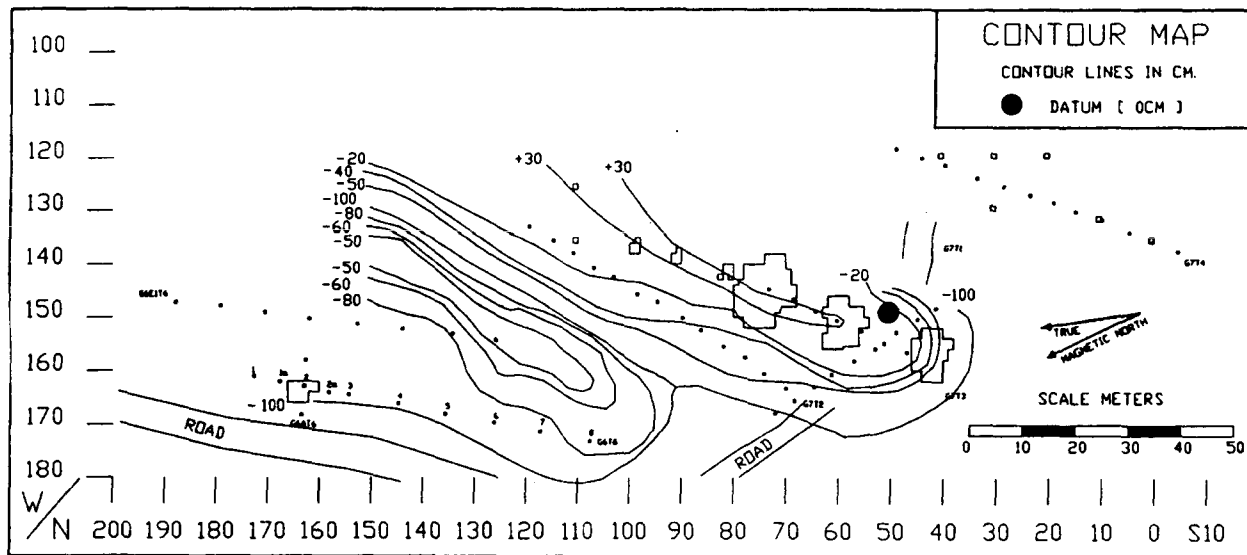


Figure 3. Surveyed map of site 53.38 showing contours (10 cm intervals above and below datum), testpits and excavation blocks. North is to the left. Isolated Late Paleoindian point find area is at N165W165 area. Late Paleoindian Locus #2 is southernmost excavation block on brow of the hill (N45 area). Road in the map is the dirt access road present at the time of excavation.

was identified where possible and selected samples were sent for radiocarbon dates.

Soils and Stratigraphy

The sandy topsoil of site 53.38 is part of a large surficial deposit of medium sand draped over several hundred yards of the highlands between Messalonskee Stream and the Kennebec River (Spiess et al 1990). The sand is well sorted, and, like similar deposits in central Maine, must have been originally deposited underwater during the regression phase of the Marine Transgression, circa 12,000 B.P. The relief development ("1m) in the form of low regular ridges in the site area we attribute to underlying sand dunes, built and vegetated sometime during the terminal Pleistocene, as were so many in central Maine (McKeon 1972). These possible dune formations run in northeast-southwesterly trending ridges. During the spring melt, the low spots between these ridges are wet with standing water, and they are noticeably less well drained than the ridge tops after a heavy rain. All prehistoric cultural material at 53.38 from Late

Paleoindian and Susquehanna tradition occupations was concentrated on the ridge tops. The low portions between the ridge tops were culturally sterile.

Field observations of soil column profiles during the 1991 and 1992 excavations remained consistent with our original description of the forest podsol soil sequence (Spiess et al 1990). The sequence evident in a deep testpit along the west wall of N58W152 (Table 1), continues to hold true for the whole site with localized exceptions where disturbance had removed or mixed soil layers. Such disturbance includes compaction and removal of the A horizon on a woodroad, churning of the A and upper B horizons in skidder tracks, wholesale removal of the A and upper B horizon by bulldozer or road grader in a few small areas, and localized biological turbation. The amount of disturbance of the A and upper B horizons was great enough to eliminate the thin (elluviated) E horizon usually found in intact podsols. However, the underlying B1 horizon, where it survived intact, was richly (orange) colored with redeposited minerals.

A 0-14 cm. A brown organic loam, developed on silty medium sand. The upper half is dense with small rootlets. The lower half contains small and medium sized roots. This soil breaks easily into sand-sized particles in the hand. The transition to the underlying A/B1 layer is uneven and mottled.

A/B1 14-26 cm. This is a zone of intense mixture, with underlying B1 horizon sand pulled upward and A horizon loam pulled downward and swirled. There is evidence of medium to intense bioturbation in the form of root shadows, small rodent holes, and earthworm tracks. The interface with the underlying B1 horizon is level and straight. Apparently there is a maximum depth at which most bioturbation stops, which has been reached relatively consistently across the site, absent any major disturbance such as a tree "fall" or large burrowing mammal.

B1 26-40 cm. Orange brown silty medium sand. In this level there is very localized deep bioturbation indicated by a dark streak or stain brought down from the overlying soil horizons. The lower boundary is a gradual transition over 2-4 cm of depth to a lighter orange B2 horizon which has a much lower silt content. The color (orange brown to lighter orange brown) and grain size (sand with silt to sand without silt) transition is coincident over the same 2-4 cm. This fact probably indicates that the silt is derived from surface deposition and weathering processes and mixed downward during normal soil formation processes.

B2 40-53 cm. This layer is a light orange brown medium sand containing little silt. The lower boundary is a gradual transition over 2-3 cm to the C horizon.

C 53-116 cm. This is a massive (unstratified, uniform) medium sand exhibiting salt and pepper (dark and light grain) colors. There is no, or very little, silt content.

Table 1. Soil description for site 53.38, west wall of square N58W152.

Three soil samples were taken from the west wall of N58 W154 and processed on a standard sieve set to measure the proportions of sand and silt-sized particles (Spiess, et al. 1990:28, Table 1). The data demonstrate that the substratum is a well sorted sand, with the addition of substantial weight of very fine sand particles and some silt in the B horizon.

THE LATE PALEOINDIAN OCCUPATION

Late Paleoindian material was found in two places on the site. An isolated, broken point (and the extensive area around it that we tested in an

effort to find more material) is designated Late Paleoindian Locus 1. Approximately 130 meters away, on the edge of the steep bank overlooking Messalonskee stream, we encountered a scatter of flakes and fire-cracked rock, and the rounded base of a Mt. Jasper rhyolite point that is *not* Susquehanna tradition in form. This area is designated Late Paleoindian Locus #2. It would be much clearer if the Susquehanna tradition occupation had not shared the same area, but apparently we had encountered and excavated a very small Late Paleoindian camp or work area about 130 m from a point broken by impact

fracture. We may have located a kill site and associated short-term occupation or processing site located 130 meters away.

Late Paleoindian Locus #1

Late Paleoindian Locus #1 is so-named for a fragmentary biface-point (spearpoint) recovered from the area. There are no other certain prehistoric cultural remains associated with the point. No debitage (stone flaking or stone tool manufacture debris) was recovered from the locus. Further testpits around the original find spots during work in 1992 proved negative.

The Biface. A thin biface midsection (53.38.004) was recovered from B horizon soil in the Phase I testpit G6T6 tp2, located at grid N163 W163. A biface distal tip (53.38.042) was recovered from basal B horizon soil less than 1 meter away (N162 W164 SEq NWqq). For reasons that we discuss below, we believe that these two fragments are from the same pointed biface which shattered upon impact at the time of use. We will describe each fragment separately, then discuss the possibly reconstructed point (Figure 4) as one specimen.

The "midsection" apparently consists of most of the distal portion of a lanceolate projectile point. The edges are excurvate, symmetrical, sharp (unground), and delicately sinuous. The piece broke proximally and distally in a transverse hinge fracture, commonly associated with impact (e.g. Frison 1989:776-779). The specimen, as preserved, is 3.08 cm long, 2.71 cm wide at the widest point (measured perpendicular to the long axis), and 0.62 cm thick. This point is extremely thin for its width (thickness/width ratio is 0.23). The cross sectional area is a nearly perfectly symmetrical, biconvex, lenticular form.

The symmetrical lenticular cross section was achieved by removal of a series of exceedingly flat thinning flakes extending commonly to the midline, and occasionally across the midline. The sharp, symmetrical edge was achieved by a series of delicate alternate flake removals regularly spaced about 1.25 mm apart. This retouch removed scalar

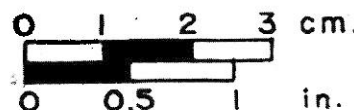


Figure 4. Impact shattered Late Paleoindian lanceolate point, tip and midsection. The pieces are not contiguous, nor did we find the missing fragments in extensive excavation.

flakes and a few step flakes extending 1.5 to 4 mm in from the edge.

The specimen has been lightly patinated, and retains speckles of iron or manganese oxide (red-brown) uniformly over the surfaces of the break and both faces of the biface. Despite the patination, the flake arrises on both faces of the point appear to be slightly worn, while the edge retains an unworn sharpness. There is no sign of edge grinding anywhere on the specimen.

At the widest portion of the point, the longest preserved edge exhibits a very slight change in edge treatment over 0.5 cm length. The alternate retouch appears to be less closely spaced, and the edge turns parallel with the long axis of the point. (Still, there is no grinding present.) The matching

0.5 cm segment has been broken off on the other side of the point. We interpret the complete fragment as most of the *distal* end of a point primarily on three pieces of evidence. First, both fractures are classic impact fractures, which would be more likely seen toward the distal end of a point than in the portion securely held in a haft. Secondly, the slight change in edge treatment and orientation of the edge parallel to the long axis of the point, at the widest preserved portion of the point, indicates some sort of change between a more proximal and more distal portion of the point. Thirdly, the fact that the long preserved sides of the point are sharp and unground indicates that the fragment is most of a distal, or "business" end, rather than a tapering hafted end. The specimen is patinated a dull tan color, which obscures the original color and luster, and may obscure inclusions. Despite the patination, we can see that the rock is composed of a uniform array of silt-sized particles. This material appears to be one of the coarser-grained chert facies, or "argillite", of which many Maine Late Paleoindian specimens are manufactured (Doyle et al 1985).

The tip fragment (53.38.042) exhibits the same finely flaked symmetrical edge as the midsection. The distal end is still sharp, and the edges are sharp and unground. It is broken proximally by a transverse hinge (impact) fracture. At its largest dimensions the tip is 1.28 cm long, 1.1 cm wide, and 0.30 cm thick. Flake arrises on the faces (not the edges) of the tip are lightly ground or worn, similarly to those on the midsection. There is no common edge that fits with the midsection. In fact, when lined up so that the edges would form a smooth transition between the two pieces, a piece approximately 1.5 cm long seems to be missing that would conjoin the two pieces. The tip is manufactured of a greenish-tan, lightly patinated material. The material is dull in luster, and exhibits the same visible "mudstone" grain size as the biface midsection. There are black mineral inclusions of the same size as similar particles in the biface midsection. We believe that this tip is a piece of the same point as the midsection.

We attribute this point to the Late Paleoindian period through the combination of attributes that may be diagnostic in combination but not by themselves (Doyle et al. 1985). These attributes include lanceolate form, lenticular symmetric cross section, width thickness ratio around 0.20, and use of argillite or siltstone as a raw material. Approximately half the specimens attributed to the Late Paleoindian in Maine (Doyle et al 1985) are made of argillite. Few diagnostic points from other time periods in Maine are made of argillite (Spiess, personal observation). Because this point is a mid-section and distal tip, the most diagnostic base is missing. In terms of the Late Paleoindian point varieties represented in Maine, this point is most likely to be an Aexcurvate, lanceolate point similar to the one from the Graveyard Point site (Doyle et al. 1985:23). Conceivably, the point could also be a minimally-fluted Nicholas (Holcome-like) point, but since those points tend to be made of cherts and Mount Jasper rhyolite, the use of argillite argues against a Nicholas point. The probably-related Paleoindian Locus #2 at site 53.38 is dominated by Mount Jasper rhyolite, however, so we are left with a either terminal fluted point Paleoindian or early Late Paleoindian attribution for the site 53.38 component.

Paleoindian Locus #2

Paleoindian Locus #2 was situated at the southern end of the sandy ridge that also contained the main Susquehanna tradition occupation some 20 meters to the north. The Late Paleoindian locus was on a 10% slope on the edge of what is now a 50% grade dropping a vertical distance of ca. 20 meters to the shoreline of Messalonskee Stream. Dense tree growth obscured what could have been a good lookout to points downstream and westward across a rapids now under the Union Gas Power Station Dam. The locus consists of an oval scatter of debitage over an area 6 meters long by 6 meters wide on the edge of the escarpment overlooking Messalonskee Stream between W154 and W162 along the N42 grid line (see Figure 3). A diffuse scatter of fire-cracked rock, proximity to the

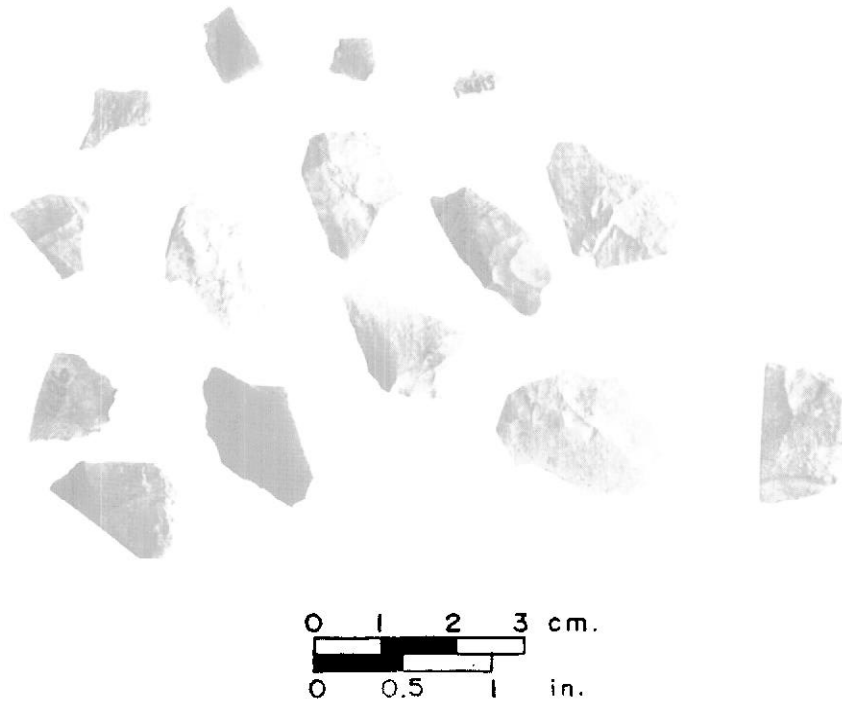


Figure 5. Biface thinning flakes from the Late Paleoindian Locus #2 and the rounded biface base at right.

Susquehanna locus and the lack of clearly diagnostic artifacts contributed to our failure early on to recognize the distinct nature of some of the lithic material (Mount Jasper rhyolite [Pollock et al. 1996], formerly called Neponset rhyolite [Spiess and Wilson 1987]). A point base of Mount Jasper rhyolite and a utilized quartzite flake are the only artifacts recovered from Late Paleoindian Locus #2. The utilized edge of the quartzite flake was only visible under a microscope. Because there was no diagnostic Susquehanna material in the assemblage, the lack of recognizable hearths and the scattered nature of the flakes and fire-cracked rock (FCR) at first led us to a working hypothesis that we were in a refuse dump area used by occupants in the Main Susquehanna Locus to the north. We excavated the entire area cautiously in the search for something of a definitive nature

without success. Only when the point base material was recognized as rhyolite on re-examination in the laboratory did we realize that the assemblage was different from the Susquehanna material just to the north. In the last five years it has become evident that Mount Jasper rhyolite, and closely related rhyolites, are a major raw material used during the Paleoindian (Spiess et al 1998, Pollock et al. 1996) and Late Paleoindian (e.g. Varney Farm, Cox and Petersen 1997) periods. Use of Mount Jasper material during the Archaic period is confined to the Androscoggin River valley.

One of the two flaked lithic artifacts recovered in Paleoindian Locus #2 has diagnostic potential. This piece (53.38.675) consists of a rounded biface base of Mount Jasper rhyolite with diverging sides (Figure 5). The base was apparently discarded after a transverse fracture. The edges are slightly

dulled, presumably where hafted. The cross-section is uneven with one side strongly convex and the other nearly planar. The angle of the flake removals on the convex side with the more planar surface range from 75° on one edge (flake removal from the convex side only with light grinding) to 65° on the opposite edge where there is heavier grinding along with some bifacial flake removals which may be a result of the grinding process. Larger planar flakes had been removed from the top of the more convex side leaving arrises that show considerable wear. This piece was recovered in soil horizon B at about 20cm below the actual ground surface near the southern edge of the debitage scatter in Locus #2.

The base conforms generally to large Late Paleoindian bifaces with rounded bases on a lenticular plan, similar to possible preforms such as those recovered at the Pittston Farm site (Doyle et al. 1985:27, 31). It is possible that a preform was finished to a point at Locus #2, to replace the point lost at Locus #1.

A utilized flake (53.38.1121) of grey quartzite, found in two pieces, represents the only other recognized flaked tool from the locus. There was no formal shaping of the flake beyond the small micro-flake removals along one utilized edge. The tool is not diagnostic to any particular period. The plan is triangular with a well defined striking platform at one apex and microflake removals along a steep (75°) edge between the prepared platform corner and a relatively thick corner opposite. A transverse fracture across the thinnest corner opposite the utilized edge suggests that the flake may have broken in use while being held at that corner. Both fragments were recovered in the sod at the same findspot (N40 W158 NW SW 0-5cm bs). No grey quartzite lithic materials were identified from the Main Susquehanna locus to the north.

Lithic Material: Debitage

Debitage (waste flakes from the tool manufacturing process) from 53.38 had been sorted macroscopically by observed attributes of color,

texture and composition into like groups. This original sorting led to the inclusion of many flakes from Paleoindian Locus #2 in with the much larger group of Kineo rhyolite characteristic of the Susquehanna Locus. There was recognition that the material did not “fit” as a few were classified as something other than Kineo rhyolite. When the presence of Mount Jasper rhyolite was established by the point base (#675), all the debitage from the locus was re-examined with a 10-power binocular microscope. Details of grain and structure became apparent that are not clearly visible to the naked eye, and all but one Kineo rhyolite flake were reclassified to Mount Jasper rhyolite or closely related volcanic rock. The largest group of 13 were visually identical to Mount Jasper rhyolite (Figure 5), based on direct comparison with a large sample of Paleoindian artifacts from several sites. Ten others are probably Mount Jasper rhyolite. Of the total sample of 23, 5 are retouch flakes weighing 0.5 grams total, while the remaining 18 are biface thinning flakes weighing 8.6 grams.

Locus #2 also contained 13 fragments of quartz shatter which appear to have come from a single quartz cobble core. Several cobble cortex fragments were noted. The quartz tended to shatter in planar fragments with sharp edges which may have been useful tools without further modification. The quartz distribution pattern overlaps that of the Mount Jasper rhyolite and related rhyolites.

Susquehanna Locus Debitage Compared to Late Paleoindian Locus Debitage

The total sample of Mount Jasper rhyolite biface thinning flakes (BT, n = 18) from Locus #2 was compared to a random sample of 18 BT flakes recovered from the Susquehanna Locus that were mostly Kineo rhyolite (Table 2). Locus # 2 BT flakes were distinguished by smaller mean size, lighter mean weight and a pressure flaking technique leading to thin, scalar flake removal scars found on the debitage and artifacts. Comparing the ratio of widths to thicknesses in both groups shows consistently thinner flakes for Locus # 2 over the Susquehanna occupation debitage.

	Paleoindian Locus #2		Main Susquehanna Locus	
	Range	Mean	Range	Mean
Widths	6.4mm - 18.26mm	11.98mm	9.95mm - 20.48mm	13.32mm
Lengths	6.79mm-24.16mm	15.20mm	12.03mm-32.84mm	17.05mm
Thicknesses	1.1mm - 3.63mm	2.18mm	1.08mm - 4.95mm	3.0mm
W/Th Ratios	0.10 - 0.30	0.18	0.08 - 0.39	0.23
L/Th Ratios	Not calc.	0.14	Not calc.	0.17
Weights	0.01g-0.8g	0.5g	0.2g-2.1g	0.73g

Table 2. Comparison of Paleoindian Locus #2 biface thinning (BT) flakes to a random sample of BT flakes from the Susquehanna locus around Feature 4 (N=18), site 53.38.

Other Lithics from Paleoindian Locus # 2

The two artifacts and the debitage assemblage from Locus 2 clearly differs in attributes of material, weight, thickness and flaking technique from the Susquehanna artifacts and debitage assemblage, and can reasonably be assigned on the basis of material (Mount Jasper rhyolite) and flaking technique to a Late Paleoindian occupation, possibly contemporary with the point fragments found in Locus 1. However, 157 other rocks, none clearly modified as tools, were also recovered in direct association with the Paleoindian assemblage. Since unmodified cobbles and pebbles were rarely found in our extensive Phase I and Phase II testing of the upper soil column (0-70cm) on the sandy terrace, we suspected that most of the rock not modified as a result of tool making were, nonetheless, present as a result of other cultural activity. Some of these activities, such as cooking or heating rocks (fire-cracked rocks or FCR), can be identified from observed alterations of the rock as result of thermostress associated with repeated heating and cooling. Other rocks, which show no modification as a result of thermostress, could have

been intended for use in cooking or other hearth related activities. They may have been intended for other purposes (hammer or anvil stones).

Our problem in interpreting the cultural significance of the FCR and other rocks in Paleoindian Locus #2 lies in the uniqueness of the association of FCR at 53.38 with probable Paleoindian lithics. Currently, so far as we are aware, there are no Paleoindian or Late Paleoindian sites reported in Maine in which fire-cracked rock can be related to the Paleoindian component (Spiess et al. 1998). Fire-cracked rock is consistently associated with hearths for later aboriginal sites in Maine. How do we explain the association in Locus #2 at 53.38? Is it a result of Paleoindian activity or an accident derived from dumping activities associated with later Susquehanna tradition occupations?

Before we could determine a reasonable answer to these questions, we needed to know if there was any evidence of a hearth feature associated with the debitage in Locus 2. Prior experience with excavating Paleoindian sites in Maine indicated that natural soil leaching processes since Paleoindian

hearth features were in use generally reduce perceptible color distinctions between the surrounding soil matrix and a Paleoindian hearth or pit feature to the point of invisibility. A greyish color accompanied by slight differences in soil texture, a scatter of charcoal near the base or the presence of a flake or two or calcined bone in the fill might be the only positive signs of a pre-existing feature. We were aware of the potential difficulty of identifying features during the actual excavation of Locus 2 and kept a sharp eye out for evidence that might relate to a hearth feature, with no positive results. Following the identification of the Mount Jasper rhyolite in Locus 2, fieldnotes, flake distribution patterns and the FCR distributions were all reviewed. To reduce the noise from possible inclusions of naturally occurring rock in the FCR sample, the saved (10%) part of the original FCR collection was re-examined and only those rocks clearly modified by thermostress in that sample and all crenelated FCR in the original sorting were plotted on a plan of the excavated area and checked against the plot of FCR in the original determination. As there was no significant difference between the two plots, we have retained the original plot (Figure) as a valid map of human-imported rock.

While most of the historic material appears in the A or A/B horizon within 15cm of the surface, a wad of electrician's tape was recovered in the B horizon near the lower limit of Paleoindian debitage. FCR appears throughout the soil column from A into the C horizon.

The distribution suggests that disturbance has obscured any differential in depth that would be anticipated between ca. 9000 BP debitage and less than 50 year old electrician's tape. The actual vertical disposition of many of these objects may be more a function of how shape, size and weight affected each object response to natural forces of bioturbation (treefalls, rodent burrowing, percolation, frost heaves and worm displacements) than a function of where they were initially discarded or laid down. In effect, given the present absence of reported FCR associations with

Paleoindian cultural remains, we are inclined to regard the distribution of FCR in Locus 2 as fortuitous, presumably dumped over or near the edge of the escarpment by later occupants of the high sandy terrace. The nearby presence of the Main Susquehanna Locus offers a likely source for the FCR as well as for the single flake of Kineo rhyolite found on the northern edge of Locus #2 in the A/B horizon.

CONCLUSIONS

We hypothesize, based on the close similarity of the attributes of point fragments recovered from the 2 loci of the Late Paleoindian component in traits and workmanship and choice of exotic lithic materials (argillite and Mount Jasper rhyolite) that both loci are the result of a single visit to the area by one or more Paleoindian hunters. Paleoindian Locus #1 represents an isolated find of 2 fragments of one spearpoint, possibly broken during a hunting mishap or successful kill. The presence of a diagnostic Late Paleoindian lanceolate, excurvate point or possibly Nicholas phase point dates the occupation to either the terminal Paleoindian or Late Paleoindian time. Speculating further, a single point may have been broken in a kill, and a short-term campsite was established about 150 m away where a replacement was made. Based on the fact that by 10,000 B.P. central Maine was forested, the prey species was either moose or a small group of caribou.

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The Maine Archaeological Society Bulletin

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