SAWDUST BAY 2: A MIDDLE WOODLAND SITE IN THE OTTAWA VALLEY

SAWDUST BAY-2:
THE IDENTIFICATION OF A MIDDLE WOODLAND SITE IN THE OTTAWA VALLEY

By

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ABSTRACT

Attention in this thesis is directed towards the analysis, description and identification of Sawdust Bay-2, a small prehistoric site located on the Ottawa River, in relation to the previous classification of Middle Woodland groups for the Ottawa Valley.

The assemblage recovered from Sawdust Bay-2 includes ceramic, lithic and faunal material. Ceramics are characterized by grit tempered, coil manufactured vessels, featuring a predominance of pseudo scallop shell impressions and a relatively moderate incidence of interior brushing. A small number of finished chipped stone tools, made of chert, were identified. A majority of the faunal material identified from the collection is mammalian with minor amounts of reptilian remains and only two fish elements.

The assemblage is comparable to assemblages identified for other Middle Woodland groups, including those of the Laurel, Saugeen and Point Peninsula Traditions. Specific similarities with those features identified by Ritchie (1969) for the Point Peninsula Tradition have resulted in the assignment of Sawdust Bay-2 to this tradition.

Observable differences in attribute frequencies between Ottawa River Drainage Basin sites, represented by Sawdust Bay-2 and the ceramic assemblage from the Kant site, and other contemporary Point Peninsula sites in New York State have led to the identification of the Ottawa Valley Phase. This phase, extending approximately from 100 B.C. to A.D. 200, is suggested to be distinguished by a predominance of pseudo scallop shell and dentate ceramic impressions, with a moderate incidence (25%) of interior brushing. The lithic inventory features a predominance of chert chipped stone tools with very few rough stone tools. Existing faunal data and the absence of such tools as net-sinkers, harpoons and fish hooks suggests that fishing may not have been as important a subsistence activity as it appears to have been for northern Laurel groups and southern Point Peninsula populations.

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CHAPTER I

INTRODUCTION

The identification of prehistoric populations from material assemblages represents one of the principal themes of archaeological research. In keeping with this theme, this thesis proposes to clarify the identity of prehistoric assemblages from the Ottawa River Drainage Basin.

The principal basis for this identification is the description and analysis of Sawdust Bay-2, a Middle Woodland site located on the Ottawa River, near the town of Arnprior (Figure 1). Discussion of this material, in conjunction with a re-examination of ceramics from the Kant Site, a Middle Woodland occupation located on the Bonnechere River, provides the data base for the following objectives:

(1) To demonstrate that the occupation identified at Sawdust Bay-2 represents a distinct phase within the Point Peninsula Tradition, of the Middle Woodland Period.

(2) To indicate that the phase represented by Sawdust Bay-2 is geographically defined to the Ottawa

River Drainage Basin and is characterized by coil manufactured ceramics, featuring a predominance of pseudo scallop shell and dentate stamp decorative impressions, with a moderate occurrence of interior brushing. This phase dates between 100 B.C. to A.D. 200.

Definition of Terms

In the following, definitions are provided for the "key" words used in the objectives outlined above. The definitions for most of these concepts are presented with greater detail in context of the analysis and interpretations.

A phase, for purposes of this discussion, represents the finest distinction of archaeological assemblages employed in the hierarchical classification (Period, Tradition, Phase) of cultural groups. It is defined as an archaeological unit representing a distinct material assemblage, limited to a specified temporal period (e.g., 300-500 years), featuring attributes sufficiently diagnostic to distinguish it temporally and spatially from other material assemblages of comparable sizes. These attributes may be physically demonstrated such as in ceramic decorative impressions, or they may be inferred as with trade, subsistence and settlement patterns.

Tradition represents a more general level of

archaeological group classification. Tradition is therefore defined as "...the perpetuation of a common archaeological culture through time which lacks major discontinuities in either sequential change or regional variation" (Wright 1967:2). This definition, adopted from J.V. Wright's use of the concept in defining the Laurel, represents a broader application of Willey and Phillips' use of tradition as a "temporal continuity represented by persistent configurations in single technologies or other systems of related forms" (1958:37).

The Point Peninsula Tradition represents an archaeological tradition defined primarily on ceramics (Ritchie 1969; Ritchie and Funk 1973). The subsistence activities of this group were characterized by hunting and gathering with an emphasis on fishing (Ritchie and Funk 1973). Point Peninsula sites have been identified for northern New York State, southeastern Ontario and southern Quebec (Wright 1967:109). Dates associated with Point Peninsula sites in Ontario range from approximately 500 B.C. (Constance Bay) to A.D. 300 (Serpent Mounds).

Period represents the final tier in the classificatory framework adopted for this discussion. Period refers to a broad "cultural" unit encompassing traditions, both spatially and temporally, which features general continuities in material culture as well as subsistence patterns.

The Middle Woodland Period in Ontario is distin-

guished from the Early and Late Woodland Periods primarily on the basis of ceramics and to a lesser degree subsistence strategies. Those groups assigned to this Period (Point Peninsula, Laurel, Saugeen, Princess Point (?)) share a similar ceramic series identified by common designs, forms and paste attributes (Fitting 1970). Existing data on settlement and subsistence patterns suggest that these groups were primarily hunting and gathering populations. This pattern contrasts with the advent of horticultural activities identified for the early Late Woodland groups, Pickering and Glen Meyer (Wright 1966; Kenyon 1968; Noble 1975).

The temporal span of the Middle Woodland in Ontario is not clearly defined. In southwestern Ontario Wright (1967) and Finlayson (1977) suggest an early date of 700 B.C. for the Laurel and Saugeen. Noble (1975; Noble and Kenyon 1972) suggests that the Princess Point Tradition, identified as a late Middle Woodland group, developed into the early Glen Meyer (Porteous) around A.D. 600. This interpretation contrasts with Stother's (1977) identification of Princess Point as a Late Woodland group extending from A.D. 600 to about A.D. 900. This issue is further complicated by Finlayson's (1977) estimate of A.D. 800 for the late Saugeen occupation in the northern portion of this area.

Noble (1975:51) also suggests, in agreement with Kenyon (1968:5), that the Miller site, an early Late

Woodland Period occupation located in south central Ontario, dates to A.D. 800. This postulated date is 300 years earlier than the radiocarbon date of A.D. 1125 ± 70 (S-108) obtained from the site (Kenyon 1968:50).

Dates of the transition from Middle to Late Woodland are even more vague for eastern Ontario. Phillip Wright's (1981) date of A.D. 1105 ± 140 (I-11,229) for the initial occupants of the Steward site, a Late Woodland site in Morrisburg, Ontario, suggests a transition date of approximately A.D. 1000. Early dates from Constance Bay 490 B.C. ± 75 (Watson 1972), Ault Park 445 B.C. (J.V. Wright, personal communication) and Adelaide Island 390 B.C. (J.V. Wright, personal communication) suggest an initial date of about 500 B.C. for southeastern Ontario.

The Ottawa River Drainage Basin, for purposes of this discussion, extends southeastward from Lake Timiskaming along the Quebec-Ontario border to Montreal Island where the Ottawa joins the St. Lawrence River. The drainage area includes a number of tributary basins. These basins include the South Nation, Rideau, Mississippi, Madawaska, Bonnechere, Petawawa, Mattawa, Gatineau, Coulange and Dumoine Rivers.

In the second objective some technological terms, including coil manufacturing, pseudo scallop shell, dentate stamp and interior brushing require some explanation. These terms are specifically defined in conjunction with the ceramic analysis presented in chapter three.

For purposes of this introduction, coil manufacture represents the construction of ceramic vessels by wrapping coils of clay into a desired vessel shape. Pseudo scallop shell decorations are wavy line impressions thought to resemble the edge of a scallop shell. Dentate decorations are impressions featuring both simple (single, independent impressions) and complex (larger, less distinct forms) designs. Finally, interior brushing refers to the interior surface treatment of vessels, brushing being characterized by lines, faintly and irregularly scraped in an apparently random sequence.

The time period of 100 B.C. to A.D. 200, identified in the second objective, is based on six dates from Ottawa River Drainage Basin Middle Woodland sites that feature material similar to Sawdust Bay-2. These dates refer to a distinct Middle Woodland group initially identified by Clyde Kennedy (1977). The use of these dates is discussed with greater detail in Chapter IV.

Significance

It is often difficult, if not impossible, to determine the contribution any single piece of archaeological research will make to the interpretation of prehistoric development. This thesis proposes to examine only a small portion of the prehistoric development of the Ottawa River Drainage Basin. The objectives

presented in the preceding discussion, in addition to the discussion of a number of associated problems and issues, represent an attempt to clarify existing impressions of the Middle Woodland occupation in the Ottawa River Drainage Basin.

Middle Woodland sites in the Ottawa River Drainage Basin have been generally assigned to the Point Peninsula Tradition (Emerson 1955; Mitchell 1966; Watson 1972; Robertson 1977). On the other hand, Pollock (1976) has included the Montgomery Lake Second Site with his categorization of the Eastern Laurel. In addition, Mitchell et al. (1970) have also noted the presence of Laurel ceramics in the Petawawa River Drainage Basin.

The mixture of these traditions in the Ottawa River Drainage Basin has provided the basis for some confusion in understanding the Middle Woodland Period in the basin. The following discussion provides suggestions that should aid in the clarification of this potentially confusing situation.

Although Sawdust Bay-2 is a comparatively small site, its undisturbed nature (a rare feature of Middle Woodland sites) and comparatively complete assemblage of archaeological material (ceramics, lithics and faunal remains) provide an important contribution to understanding the Middle Woodland Period in the Ottawa River Drainage Basin. The importance of the excavation of small sites

in understanding Middle Woodland sequences has been noted by Finlayson (1977:227) and Spence et al. (1979:115).

Finally, it is hoped that the description and analysis of material from Sawdust Bay-2 will contribute to the description and analysis of Middle Woodland sites in southern Ontario. In addition a number of theoretical issues involving the analysis of material are discussed in conjunction with the presentation of data.

Format

This thesis has been separated into four sections. In Chapter II the location and excavation of Sawdust Bay-2 is described. Also included is a description of the features identified at the site. In the third chapter the material recovered from the site is described and analyzed.

Chapter IV provides a comparison of this analysis with existing information for the Middle Woodland for southeastern Ontario. An analysis of ceramics from the Kant site is presented in this section for comparative purposes. Also discussed are the relationships between the Ottawa Valley Phase and other Middle Woodland groups in the region.

A brief summary and interpretation of the objectives identified above is presented in the fifth and final chapter.

CHAPTER II

SITE DESCRIPTION

Location, excavation and settlement data for Sawdust Bay-2 are presented in this chapter. The analysis in the following chapter is based on the description provided in this section.

Location

Sawdust Bay-2 is located on the south shore of the Ottawa River, in a small inlet locally known as Sawdust Bay. This inlet, which forms part of Marshall's Bay (Figure 1), is situated approximately four kilometers east of the mouth of the Madawaska River. It is in this stretch that the Ottawa River widens into a small basin, 25 kilometers in length and four kilometers in width, known as Lac des Chats. In addition to the Madawaska, the Mississippi and Bonhechere Rivers also flow from the south into this basin.

The site is situated approximately 30 meters from the present day shoreline and about two meters above the water level of Lac des Chats. The immediate area features a low sand plain with stands of white pine, cedar, maple,

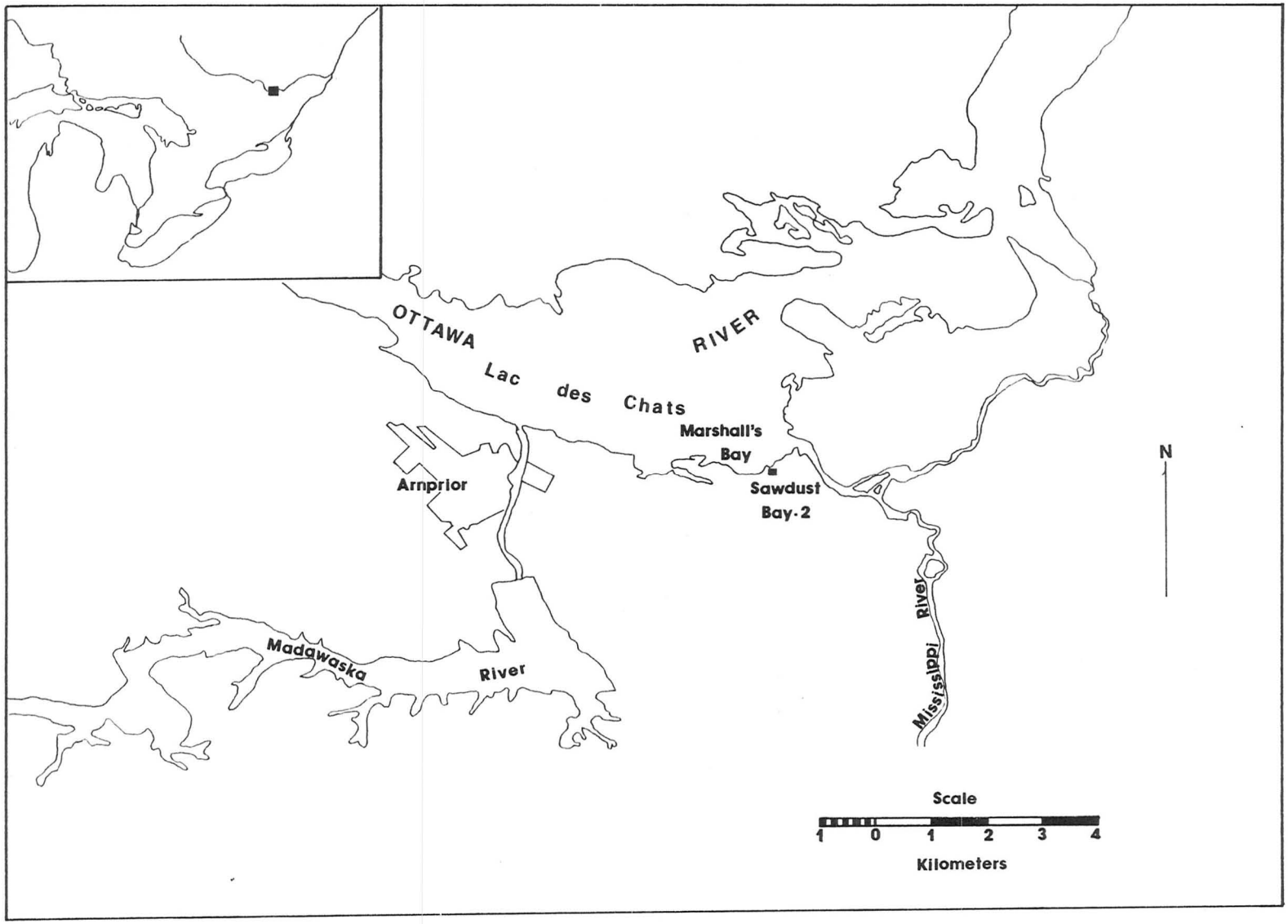

Figure 1. Location of Sawdust Bay-2.

birch and hemlock. This area is part of the Upper St. Lawrence forest region (Rowe 1972). Within a kilometer of the site are a number of swamps.

It is difficult to determine the degree to which this environment characterized the site at its time of occupation. In her analysis of charcoal from the site, Lynn Stewart of McMaster University identified sugar maple, red oak, hemlock, balsam fir, beech, trembling aspen, white pine and cedar. This list does not represent a significant deviation from the present day situation, perhaps suggesting that there has been little climatic change.

The existing water level at Sawdust Bay is artificially high due to a hydro dam located downstream at Chats Falls. Evidence from Marshall's Bay suggests that the water level was lower during the Middle Woodland Period in the area (Clyde Kennedy, personal communication, 1980).

The soil at Sawdust Bay-2 is podzolic. The humus level in horizon A features a bed of pine needles mixed with decaying leaves. This layer ranges in depth from 2 to 6 centimeters. A grey-white silicous sand layer, featured below, ranges in depth from 6 to 20 cm. This profile was underlain by an orange/brown sand extending from 20 cm. to half a meter. Iron impregnated sand nodules were present in this layer. Crystalline limestone

bedrock underlies the soil.

The present day land use of the site area is recreational, as evidenced by a number of cottages standing just west of the site. The excavation of the site itself was prompted by the possible construction of another cottage in an undisturbed portion of the shoreline.

A drainage ditch leading from the poorly drained backland to the Ottawa River marks the western boundary of the site (Figure 2). The discovery of ceramics along the erosion faces of the ditch and in the backfill excavated in adjacent squares indicates that the drainage ditch did disturb a portion of the site.

Natural disturbances such as tree falls, rodent burrows and burnt roots were noted during excavation. Water erosion on some of the ceramics suggests that occasional flooding may have occurred. However, the extent of these disturbances seems to have been limited.

Excavation

The site of Sawdust Bay-2 was discovered by Clyde Kennedy during a survey of Lac des Chats in the early 1970s. Upon being informed of the possible destruction of the Sawdust Bay-2 site through future construction, Kennedy made arrangements with the property owner to

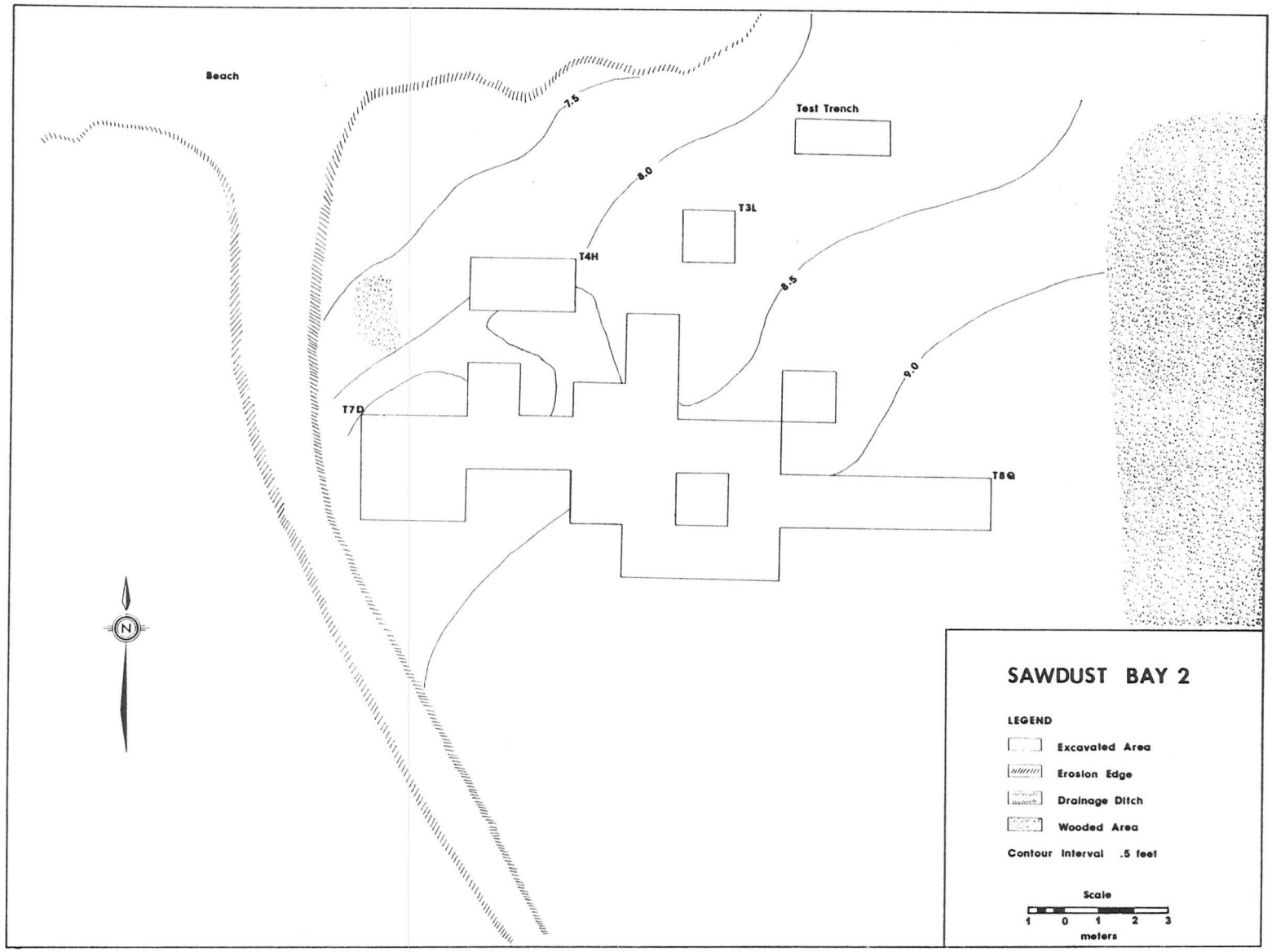

Figure 2. Sawdust Bay-2 site map.

recover as much information as possible. The site was excavated during the 1974 field season. Kennedy's crew consisted of students employed through an Opportunities for Youth Grant, obtained to provide the participants, including the author, with archaeological training.

The site was excavated using a five-foot grid labelled numerically from north to south and alphabetically from east to west. (see Figure 2). On the site map it should be noted that the letter "I" was omitted to avoid confusion in the site records.

Each square was carefully trowelled in arbitrary three inch levels, leaving six inch walls between squares. Each excavator maintained a log in which information concerning recovered material, soil disturbances and features was recorded. The exact position of artifacts in each square was noted. Floor plans were drawn for each level and soil profiles were recorded upon the completion of each square. A photographic record of floor plans, features and soil profiles was maintained.

Representative soil samples from each level were collected, in addition to samples from features in the excavation. The artifacts were bagged and recorded according to square, level and exact depth.

Approximately 725 square feet, representing an estimated 80 percent of the site, were excavated. The average depth of excavation was 46 cm., the maximum depth

being 76 cm. Deeper test pits were made to ensure there were no earlier components.

Characteristic soil profiles are presented in Figure 3. Profile a, in the western portion of the site adjacent to the drainage ditch, shows the overburden thrown from the drainage ditch. It was largely sterile. The humus layer provided only a few modern artifacts. The majority of material found was recovered from levels two and three (3-9") in the white/grey silicous sand and upper portion of the orange/brown sand. With a few exceptions, no material was recovered below 15" (37 cm.).

Settlement Features

Six settlement features were identified in the excavation of Sawdust Bay-2. All but Feature 1 were identified as hearths, each containing firestone and bone. Features 1 and 3 contained hematite. Each of these features is briefly described below. Their location is represented in Figure 4.

These features represent the only observed settlement data from Sawdust Bay-2. No post molds were identified in the excavation of the site.

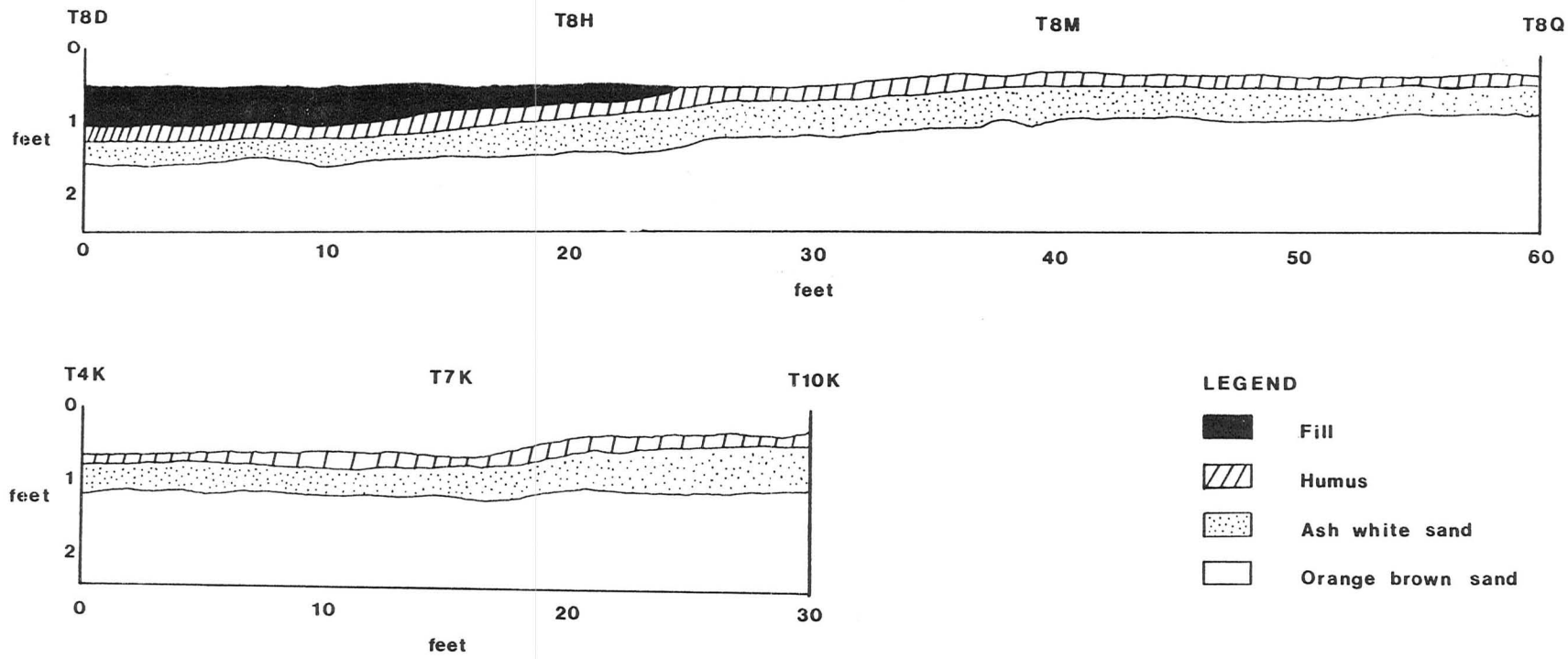

Figure 3. Sawdust Bay-2: soil profiles.

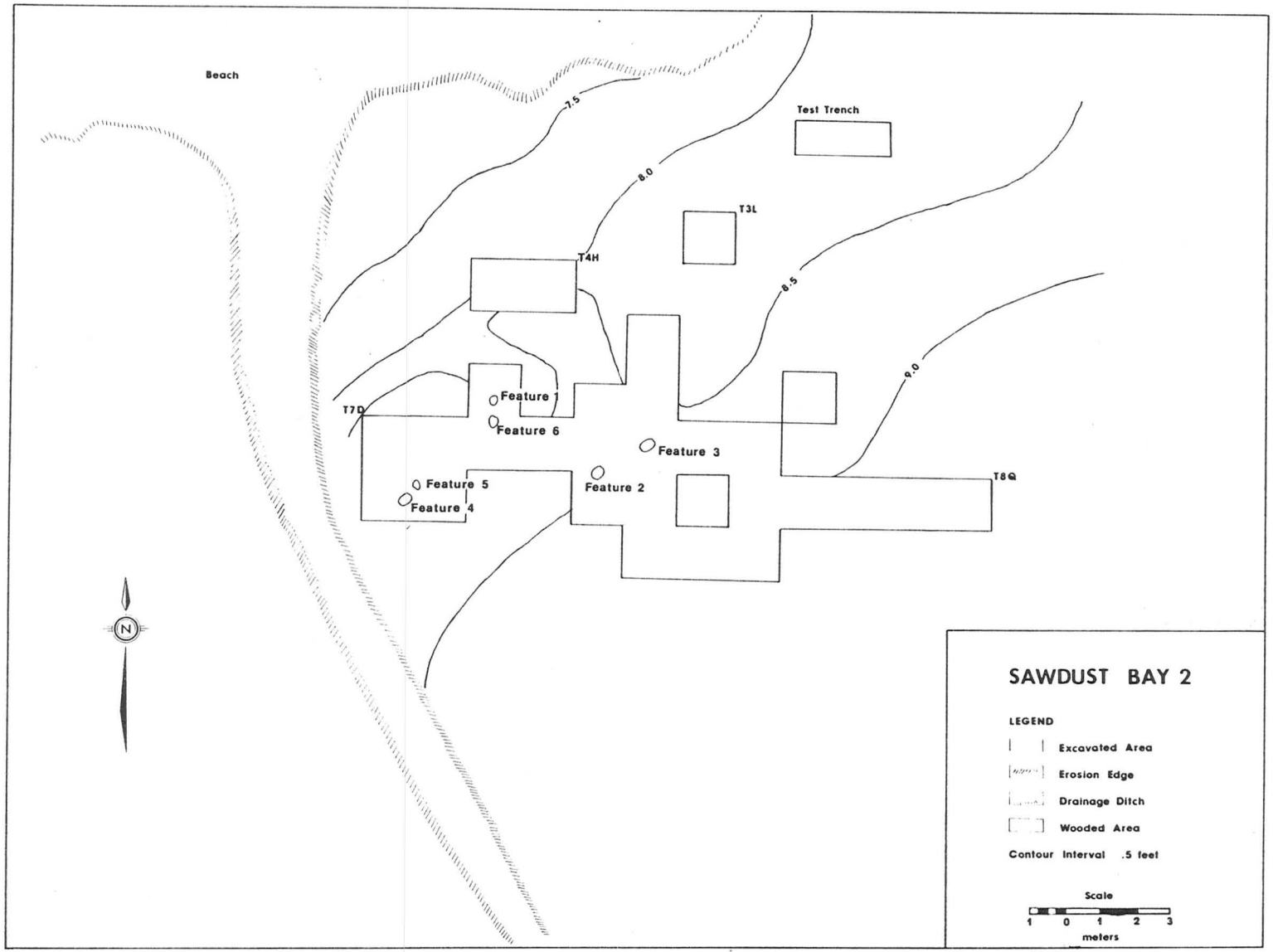

Figure 4. Sawdust Bay-2: Location of features.

Feature 1

Situated in the northwestern section of the excavated area (T6G), this feature consisted of hematite-stained sand mixed with bits of charcoal. Its elongated rectangular shape ranged from 23 to 30 cm. in length, 15 to 16 cm. in width and was 8 cm. deep.

Although no cultural material, faunal remains or firestone were found in association with feature 1, a small charcoal sample was taken.

Feature 2

This feature, located near the central portion of the excavated area (T7J/T8J), was identified as a hearth. It extended from a depth of 18 cm. to 46 cm., and had a diameter of 55 cm.

Feature 2 contained firestone, bone, chert and charcoal extending from 23 cm. to 46 cm. A charcoal sample was collected from 30 to 46 cm.

The faunal material recovered from the area of the hearth represented remains of large to medium sized mammals. Although no ceramics were recovered in direct association with the hearth, pseudo scallop shell sherds and a side notched projectile point were recovered immediately adjacent to the feature at 10-15 cm.

Feature 3

This hearth feature, situated in the central portion of the excavated area (T7K, T7K/T7J, T7K/T8K), extended from 30 cm. to a depth of 60 cm.

In association with feature 3 were firestone, bone, hematite-stained sand and chert. There were no ceramics or finished stone tools located in direct association with this feature.

Two charcoal samples were recovered from this feature. The first, collected at 45 cm., was dated 1610 B.C. $\pm$ 290 (I-11, 404). This date is 1,500 years earlier than the estimated date for the artifacts analyzed in the following chapter. Given that three species of wood were identified from this sample (beech, white birch, balsam fir), it is unlikely that the date represents an intrusive disturbance. This date suggests that there may be a Late Archaic component at Sawdust Bay-2.

Feature 4

This feature, located at the western end of the excavated area (T8E, T8E/T8F), extended from 40 cm. to approximately 65 cm. in depth. The maximum diameter recorded at 60 cm. was 20 cm. No charcoal or stained soil were noted in this feature.

Feature 4 contained a concentration of faunal material along with a number of chert flakes. Most of

of the faunal material was unidentifiable. The majority of those fragments which could be identified were white tailed deer. Two fragments of dog or wolf were also identified. There were no ceramics, firestones or chert tools recovered in association with this feature.

Feature 5

This feature was located adjacent to feature 4 (T8E/T8F). Identified as a hearth, feature 5 extended from 30 cm. to 78 cm. in depth and contained charcoal-stained sand, firestone and some bone. Charcoal samples were collected between 45 cm. and 52 cm. No lithic or ceramic materials were recovered from this hearth, nor was any of the faunal material identifiable.

Feature 6

The sixth feature identified in the excavation was a possible hearth located in the western half of the excavated area (T7G). This feature is approximately 30 cm. in depth extending from near the surface at 9 cm.

The feature contained firestone, clamshell and bone. A charcoal sample was collected at a depth of approximately 30 cm., but is believed to be from a burnt root.

One piece of the faunal material was identified as white tailed deer. The clam shells were identified as

Elliptio complanata or *Lawpsilis radiata siliquoidea* fragments.

Summary

The excavation of Sawdust Bay-2 provided no indication of cultural stratigraphy. The vertical clustering of material reflecting a fair degree of homogeneity, at 9 cm. to 13 cm. suggests that Sawdust Bay-2 is essentially a single component site. However, the occurrence of a Late Archaic date in feature 3 indicates the possibility of an earlier component, which is not, at the present time, distinguishable in the material analyzed in the following chapter.

CHAPTER III

ANALYSIS

The material recovered from Sawdust Bay-2 is described and analyzed in this chapter. This material has been divided into three categories: lithics, ceramics and faunal remains. In a thesis of this nature, dealing principally with one small site, the analysis of material has, in general, been limited to the definition of the categories used, attributes selected for study and the presentation of attribute frequencies. The correlation of attributes, locational characteristics and examination of additional variables for these and other categories remain the subject for a more specialized treatment.

Traditionally archaeologists have concentrated their analysis of Middle Woodland material on ceramics, despite interpretive restrictions in correlating ceramic traditions with prehistoric populations. This emphasis on ceramic description is maintained in this analysis in order to facilitate the comparison of Sawdust Bay-2 with other Middle Woodland sites in the Ottawa Valley. An attempt is made, however, to present as completely as possible the lithic data from the site. It is hoped that

this presentation will facilitate future discussions of cultural identity more concretely centered on a matrix of variables.

The final section of this chapter outlines the results of the faunal analysis for Sawdust Bay-2. This data provides information on subsistence and site seasonality.

LITHIC ANALYSIS

Table 1 provides a summary of the lithic artifacts recovered from Sawdust Bay-2.

Raw Material

The lithic inventory featured in Table 1 is characterized by a predominance of chert. The distribution of the lithic raw materials identified is presented in Table 2.

Seven varieties of chert, distinguished by colour and luster, were identified. With one exception, represented by a single flake, all these varieties have been identified in the Ottawa Valley (Clyde Kennedy, personal communication, 1980).

Chert A: Creamy grey to a light brown with a taffy-like luster and texture. Clearly marked conchoidal fracturing.

Table 1. Frequency distribution of lithic material from Sawdust Bay-2.

Category	No.
Projectile points	7
Bifaces	6
Scrapers	6
Worked flakes	4
Used flakes	37
Drill	1
Cores	27
Core fragments	28
Flakes	1,829
Whetstones	2
Hammerstone	1
TOTAL	1,958

Table 2. Distribution by weight and frequency of raw material from Sawdust Bay-2.

Material	Weight (gm)	%	No.	%
Chert	1,958.90	68.0	1,898	97.0
Quartz	278.09	10.0	48	2.0
Quartzite	17.81	1.0	9	-
Granite	321.60	11.0	1	-
Schist	180.14	6.0	1	-
Sandstone	112.21	4.0	1	-
TOTALS	2,868.75	100.0	1,958	99.0

Chert B: Light to dark grey chert. Some pieces feature a conglomerate appearance with pockets of black chert on a light grey to white background. This chert has poor to fair fracturing properties.

Chert C: Grey to dark with banding. Similar in texture, luster and fracturing properties to Chert B.

Chert D: Dark grey chert with distinct white flecks. The chert features poor fracturing properties.

Chert E: Dull white in colour with a chalky texture. Fracturing is irregular.

Chert F: Light grey with a brown to creamy cortex. Dull luster, poor fracturing.

Chert G: One flake has a distinct grey bluish colour with clear conchoidal fracturing. This variety is not from the Ottawa Valley.

The distribution of these chert types is presented in Table 3 below.

Table 3. Distribution by weight and frequency of chert types represented at Sawdust Bay-2.

Material	Weight (gm)	%	No.	%
Chert A	20.37	1.0	23	1.0
Chert B	1,175.76	60.0	1,063	56.0
Chert C	401.52	20.0	448	24.0
Chert D	68.13	3.0	52	3.0
Chert E	46.84	2.0	36	2.0
Chert G	.26	-	1	-
TOTALS	1,958.90	99.0	1,898	100.0

The identification of the above chert varieties from the Ottawa Valley suggests that the occupants of Sawdust Bay-2 were almost entirely dependent upon local cherts for chipped stone tools. Very little quartz or quartzite was used, a feature which distinguishes this lithic assemblage from contemporaneous assemblages in the Lake Nipissing area, where quartz is the dominant lithic material (Morris Brizinski, personal communication, 1979).

There is little data on lithic raw materials from other Middle Woodland sites in the Ottawa Drainage Basin. Watson (1972) has noted the occurrence of slate and quartzite in addition to varieties of chert ranging from light grey to dark brown at the Constance Bay site. The predominance of chert may also be noted in his lithic artifact categories (1972:10).

A burial excavated in the early 1960s by Clyde Kennedy near Pembroke, Ontario produced Adena-like blades made from chert not indigenous to the Ottawa Valley (Kennedy 1980). The comparability of dates from this site (A.D. 35) and the estimated date for Sawdust Bay-2 (100 B.C. - A.D. 200) indicates that some "foreign" cherts were imported into the region during this time period.

Chipped Stone Artifacts

The classification and attribute analysis of chipped stone tools used here has been developed largely

from the work of Binford and Papworth (1963), Montet-White (1968) and White (1963). Increasing interest in lithic studies has provided a considerable range of approaches to the analysis of lithic remains. Discussion of these analyses and their applicability to the defined objectives is beyond the scope of this paper.

The publication of lithic data from Middle Woodland sites in Ontario is variable. Generally tables of projectile point length, width, thickness, profile and material composition are presented (Mitchell 1966; Watson 1972; Wright and Anderson 1963; Wright 1967; Finlayson 1977). Studies of similar attributes for scrapers have also been included by Wright (1967) and Finlayson (1977). However, data on other chipped stone categories including utilized flakes, cores and flakes has been sparingly presented.

This analysis presents data for all the lithic categories listed in Table 1. Each of these categories is defined and the measurements are presented. The comparative significance of this material is then briefly summarized. This summary is integrated with greater detail in the following chapter.

Projectile Points

A projectile point is defined as any bifacially flaked object with one end terminating in a point and the other modified for hafting (e.g., basal grinding, notching),

that may serve as a projectile. The completeness of a point is determined by the stage of manufacture the object is thought to represent. A complete projectile point represents a finished product. This stage is indicated on chipped stone points by such characteristics as fine edge retouch, notching and/or basal thinning. It is assumed in this definition that the points were used as projectiles only after they had been completed. Points which are considered to be incomplete are referred to as preforms.

Binford's (1963) discussion of projectile point morphology provided the basis for the selection of attributes for this analysis. These are summarized in Figure 5.

The projectile point has been divided into two basic parts: blade and tang or haft element. The blade element, beginning at the apex or point, is distinguished from the tang by a directional change in the lateral edge of the point (see Figure 5).

Measurements recorded included maximum width, maximum length (only on complete specimens), shoulder width, base width, tang length and blade length. Discrete attributes observed included blade profile, cross section, longitudinal section, base shape and tang type. The results of these observations are presented in Tables 4 and 5.

The points may be characterized as small ranging

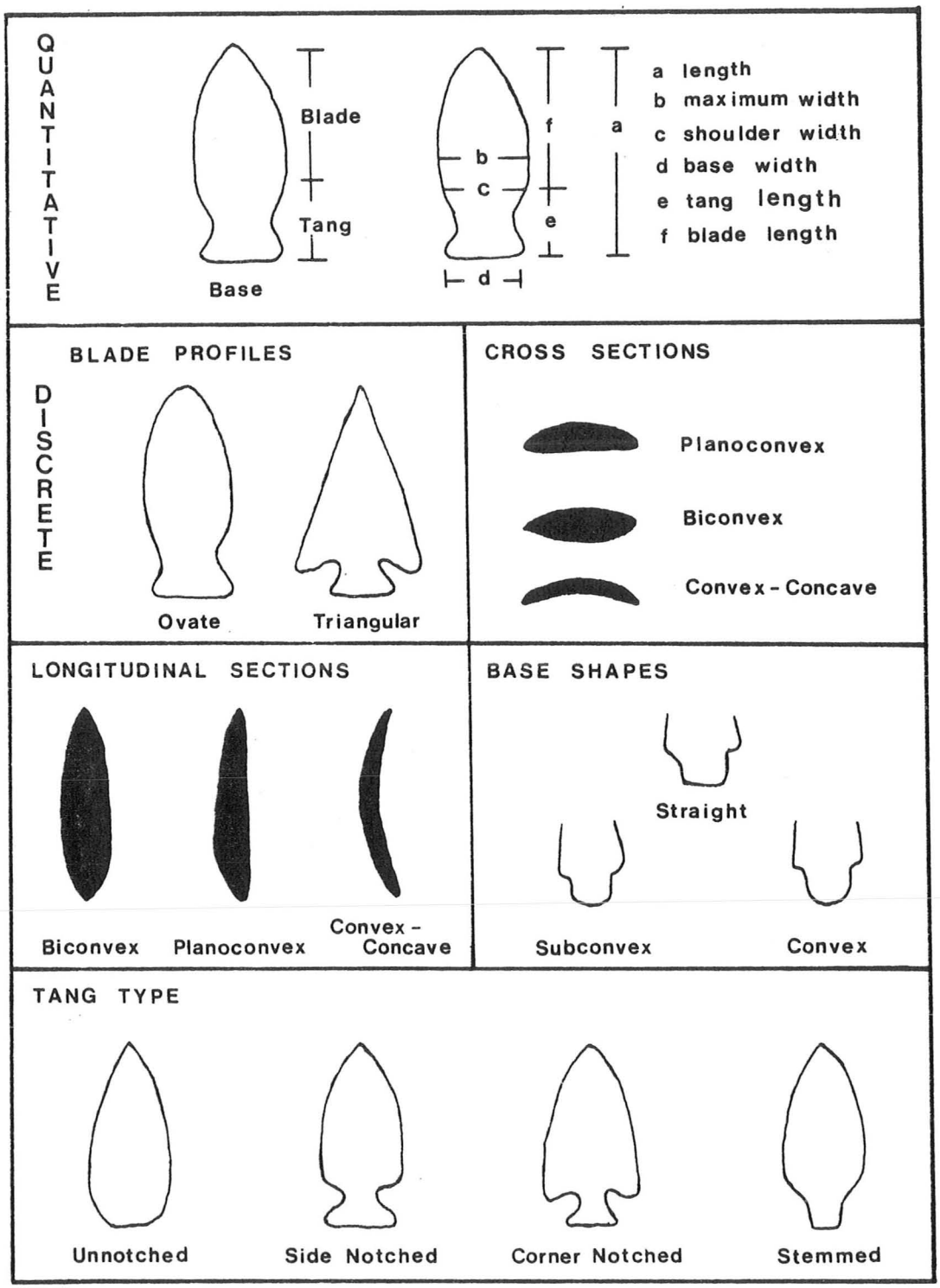

Figure 5. Projectile point attributes.

Table 4. Metric data for Sawdust Bay-2 projectile points.

Point Number	Maximum Length (mm)	Maximum Width (mm)	Maximum Thickness (mm)	Blade Length (mm)	Tang Length (mm)	Shoulder Width (mm)	Base Width (mm)
SB2-T7J-29	37.0	21.0	9.0	27.0	10.0	21.0	15.0
SB2-T6K-25	-	17.0	5.0	-	10.0	17.0	16.0
SB2-T8K-1	29.0	15.0	6.0	21.0	8.0	15.0	9.0
SB2-T8E-1	-	21.0	5.0	-	7.0	21.0	11.0
SB2-T5K-1	-	17.0	5.0	-	-	-	17.0
Sb2-T6K/T7J-5	39.0	26.0	8.0	39.0	-	-	19.0
SB2-T7H/T7J-1	-	21.0	6.0	-	-	-	21.0
$\bar{X}$	35.0	19.7	6.3	28.7	8.8	18.5	15.4
Range	39.0-29.0	26.0-15.0	9.0-5.0	39.0-21.0	10.0-7.0	21.0-15.0	21.0-9.0

Table 5. Discrete data for Sawdust Bay-2 projectile points.

Point Number	Blade Shape	Cross Section	Longitudinal Section	Base Shape	Tang Type
SB2-T7J-29	Triangular	Biconvex	Biconvex	Straight	Side notched
SB2-T6K-25	Ovate	Plano-convex	Biconvex	Subconvex	Side notched
SB2-T8K-1	Ovate	Biconvex	Biconvex	Subconvex	Corner notched
SB2-T8E-1	Triangular	Plano-convex	Plano-convex	Subconvex	Corner notched
SB2-T5K-1	Triangular	Convex/concave	Convex/concave	Subconvex	Unnotched
SB2-T6K/T7K-5	Ovate	Biconvex	Biconvex	---	Unnotched
SB2-T7H/T7J-1	Ovate	Biconvex	---	Convex	Unnotched

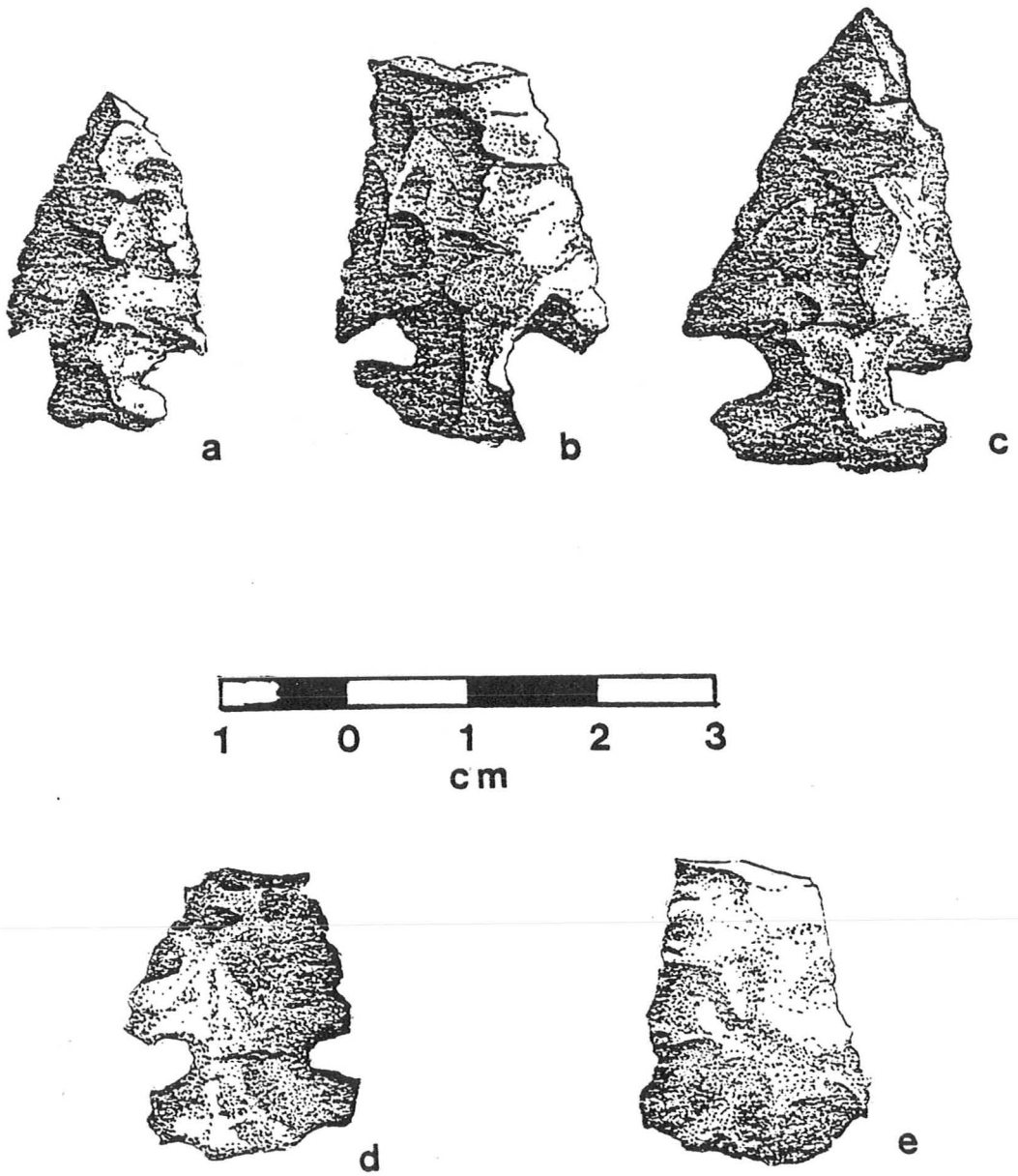

Figure 6. Sawdust Bay-2 chert projectile points: a,b: corner notched; c,d: side-notched; e: unnotched.

Table 6. Metric data for Sawdust Bay-2 preforms (in mm)

Artifact Number	Maximum Length	Maximum Width	Maximum Thickness	Blade Length	Tang Length	Shoulder Width	Base Width
SB2-T7J-31A	34.0	20.0	11.0	-	-	-	19.0
SB2-T8P-2A	42.0	26.0	10.0	-	-	-	26.0
SB2-T8H-15	30.0	20.0	9.0	-	-	-	20.0
SB2-T8Q-1B	-	-	7.0	-	-	-	-
SB2-T7H-14	-	30.0	10.0	-	-	-	30.0
SB2-T7E-1	-	54.0	23.0	-	-	-	30.0
$\bar{X}$	35.3	30.0	11.7	-	-	-	25.0
Range	42.0-30.0	54.0-20.0	23.0-7.0	-	-	-	30.0-19.0

Table 7. Discrete data for Sawdust Bay-2 preforms.

Artifact Number	Blade Shape	Cross Section	Longitudinal Section	Base Shape	Material
SB2-T7J-31A	Ovate	Planoconvex	Planoconvex	Convex	Chert B
SB2-T8P-2A	Ovate	Planoconvex	Planoconvex	--	Quartz
SB2-T8H-15	-	Planoconvex	Biconvex	Subconvex	Chert B
SB2-T8Q-1B	Ovate	Biconvex	-	Subconvex	Chert B
SB2-T7H-14	-	Biconvex	-	Convex	Chert F
SB2-T7E-1	-	Biconvex	-	Convex	Chert C

in length from 29 mm. to 39 mm. and in width from 15 mm. to 26 mm. The seven points are made of chert. There is no distinct preference of tang forms with two side notched, two corner notched and three unnotched (see Figure 6 and Plate 2).

Six of the seven points were recovered from five squares in the center of the excavated area (T5K, T6K, T7K, T8K). All but one of the points were excavated from depths of three to six inches.

There are no use wear marks nor secondary retouching on any of the points which would indicate possible use as a scraper and/or knife.

Preforms

In this discussion preforms are defined as incomplete projectiles. Attributes recorded for projectile points were also noted for preforms (Figure 5). The observations are summarized in Tables 6 and 7.

Scrapers

A scraper is defined as any flake which has been retouched in an observable, nonrandom pattern. This pattern, which is usually discernable as marginal retouch, represents an attempt to modify the natural edge of a flake to facilitate the use of the artifact as a tool.

This use is assumed to be scraping by most archaeologists.

The recorded attributes of the scrapers recovered at Sawdust Bay-2 have been incorporated from White (1963). They include the length of the axis of percussion, maximum width, maximum thickness, worked edge height, shape and placement of worked edge (determined on the relationship to axis of percussion). The observations are presented in Tables 8 and 9.

In general the scrapers may be characterized as small with lengths ranging from 11 mm. to 25 mm. and widths 9 mm. to 33 mm.

Worked Flakes

A worked flake is defined as any flake that features only *random* flake scars. This category has been distinguished from scrapers by the absence of any observable pattern to the manufacture of the artifact, which may facilitate its use as a tool.

Four worked flakes were identified. These flakes have an average length of 45 mm. and average width of 30.8 mm. Three of the four flakes are made from quartz, with the remaining one chert. Only one of the flakes featured any marginal retouch.

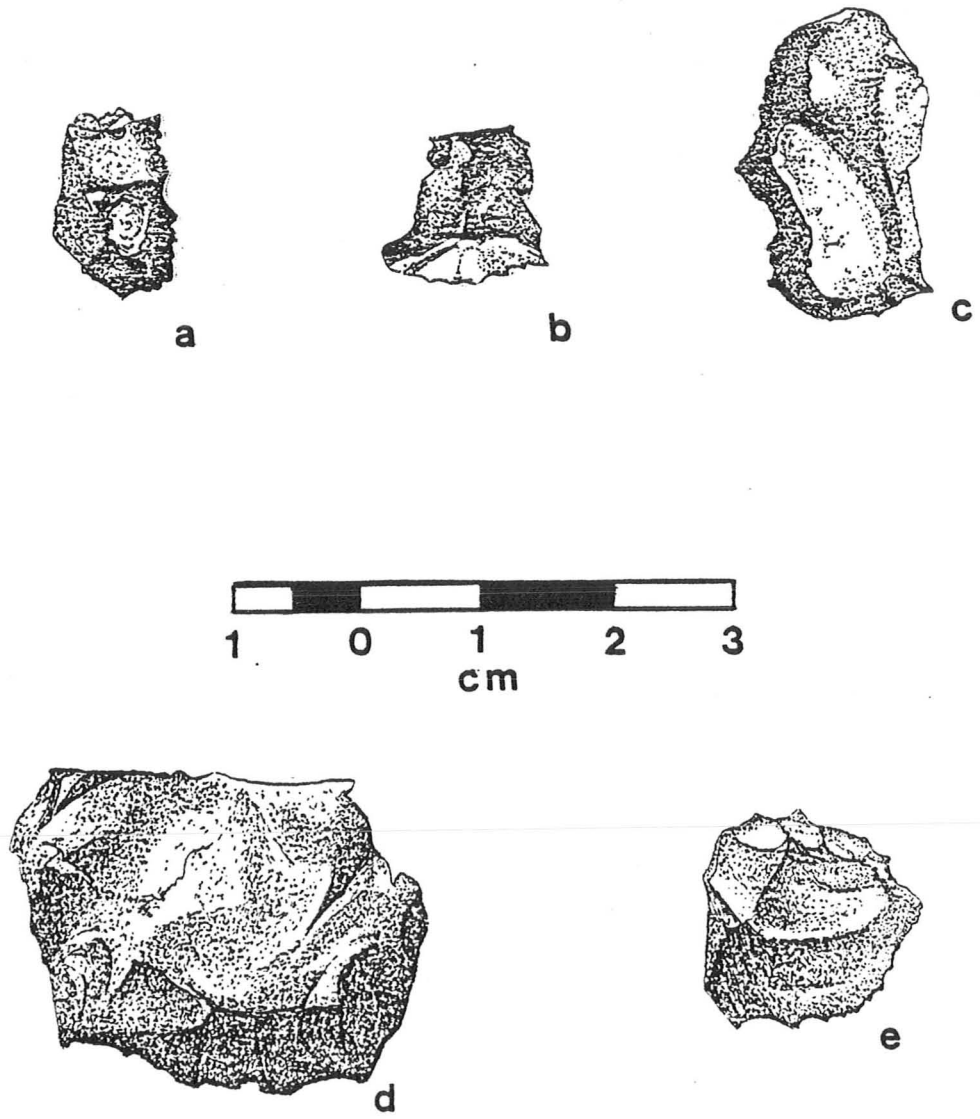

Figure 7. Sawdust Bay-2 chert scrapers: a,b,c: end scrapers; d,e: side scrapers.

Table 8. Metric data for Sawdust Bay-2 scrapers. (in mm)

Scraper Number	Maximum Length	Maximum Width	Maximum Thickness	Worked Edge Length	Worked Edge Thickness
SB2-T7F/T8F-13	25.0	33.0	7.0	21.0	4.0
SB2-T7J-3D	24.0	13.0	5.0	10.0	3.5
SB2-TTA-4	17.0	18.0	4.5	18.0	4.5
SB2-T7K-5	18.5	9.0	2.0	7.0	1.5
SB2-T6K/T5K-2	11.0	13.0	4.0	12.0	4.0
SB2-T8Q-2A	19.5	9.0	3.0	10.0	2.0
$\bar{X}$	19.5	15.8	4.3	13.0	3.3
Range	11.0-25.0	9.0-33.0	3.0-7.0	7.0-21.0	1.5-4.5

Table 9. Discrete data for Sawdust Bay-2 scrapers.

Scraper Number	Shape	Placement of Worked Edge	Material
SB2-T7F/T8F-13	Rectangular	Side	Chert B
SB2-T7J-3D	Rectangular	End	Chert B
SB2-TTA-4	Ovate	End	Chert B
SB2-T7K-5	Rectangular	End	Chert B
SB2-T6K/T5K-2	Rectangular	End	Chert D
SB2-T8Q-2A	Irregular	Side	Quartzite

Utilized Flakes

A utilized flake, for purposes of this discussion, is defined as a flake that has use wear marks on one or more edges. Use wear marks are represented by any "unnatural" striations along the edges of the flake. These striations were observed under a 10X magnifying glass.

In relation to scrapers and worked flakes there is a fairly high occurrence of utilized flakes (37) from Sawdust Bay-2. It is possible that this large number is the result of the poor fracturing properties of the local chert used in the manufacture of finished tools. The natural, unretouched flake edges were probably suitable enough for tasks that might have otherwise been performed by a scraper.

Attributes observed for used flakes consisted of maximum length, maximum width, length of used face, thickness and material. This data is summarized in Tables 10 and 11.

Drill

A drill is defined as a bifacially worked flake with a narrow stem comprising between a third and two thirds the length of the tool.

A small chert drill fragment was recovered from

Sawdust Bay-2 (see Figure 8). The piece was bifacially flaked into a long and cylindrical shape.

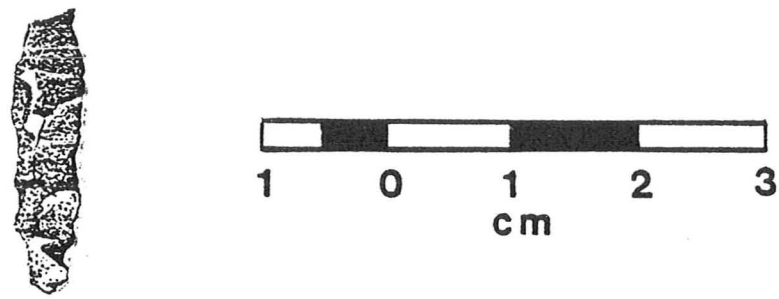

Figure 8. Chert drill fragment.

Cores

A core is defined as a block or nodule from which flakes are detached (White 1963:6). Generally cores have flake scars on two or more sides.

Attributes recorded for the Sawdust Bay-2 cores included maximum length, maximum width, maximum thickness, weight and material. Difficulty in interpreting core typologies employed by Quimby and Binford (1963) and Lewis Johnson (1975) has resulted in the omission of core typing in this analysis. Tables 12 and 13 provide a summary of the data recorded for the 27 cores identified.

Table 10. Sawdust Bay-2 utilized flake data (in mm).

	Maximum Length	Maximum Width	Length of Used Face	Maximum Thickness
No.	37	37	37	37
$\bar{X}$	24.3	17.0	10.4	5.4
Range	13.0-41.0	9.0-32.0	4.0-16.0	1.0-3.0

Table 11. Distribution of Sawdust Bay-2 utilized flakes by material.

Material	No.	%
Quartz	3	8.0
Quartzite	1	3.0
Chert B	21	57.0
Chert C	2	5.0
Chert D	3	8.0
Chert E	1	3.0
Chert F	6	16.0
TOTALS	37	100.00

Table 12. Sawdust Bay-2 core data (in mm).

	Maximum Length	Maximum Width	Maximum Thickness	Weight (gm)
No.	27	27	27	27
$\bar{X}$	32.7	22.1	13.6	12.6
Range	19.0-50.3	9.9-37.6	1.3-22.3	3.96-36.45

Table 13. Distribution of Sawdust Bay-2 cores by material.

Material	No.	%
Quartz	2	7.0
Chert B	15	56.0
Chert C	2	7.0
Chert D	6	22.0
Chert F	1	4.0
Unidentified Chert	1	4.0
TOTALS	27	100.0

Twenty-five of the 27 cores analyzed were chert. Only one of the cores has use wear marks. One bipolar core was identified.

Core Fragments

A core fragment is simply defined as a piece of a core. Fragments are generally distinguished from cores on the basis of size, number of flake scars (usually less than two) and the presence of a plane of fracture from which the fragment was detached from the core.

Core attributes, represented in Tables 14 and 15, were recorded for core fragments. All of the identified core fragments are chert.

Flakes

A flake is defined as any lithic object that is not a core or which has not been modified or used in any way. Time permitted only the analysis of flakes into primary (decortication) and secondary categories. A primary flake was identified by the presence of cortex. Secondary flakes did not feature any cortex and were generally smaller and thinner than primary flakes.

The frequency, weight and material distribution of the flakes is provided in Table 16. This distribution

Table 14. Sawdust Bay-2 core fragment data (in mm).

	Maximum Length	Maximum Width	Maximum Thickness	Weight (gm)
No.	28	28	28	28
$\bar{X}$	32.5	21.0	12.5	7.26
Range	18.0-40.9	8.9-38.9	8.1-20.8	2.82-14.17

Table 15. Distribution of Sawdust Bay-2 core fragments by material.

Material	No.	%
Chert B	18	64.0
Chert C	2	7.0
Chert E	1	4.0
Chert F	7	25.0
TOTALS	28	100.0

Table 16. Frequency, weight and distribution by material of Sawdust Bay-2 flakes.

Material	Primary		Secondary		Total	
	No.	Weight (gm)	No.	Weight (gm)	No.	Weight (gm)
Chert A	6	13.99	15	4.74	21	18.73
Chert B	122	240.46	664	388.92	786	629.38
Chert C	7	17.13	128	58.30	135	75.43
Chert D	73	128.22	361	160.39	434	288.61
Chert E	8	17.53	39	27.72	47	45.25
Chert F	16	42.56	184	98.58	200	141.14
Chert G	1	.23	-	-	1	.23
Unidentified	-	-	159	50.23	159	50.23
Quartz	7	61.58	32	29.11	39	90.23
TOTALS	241	529.75	1,588	820.08	1,829	1,349.84

shows a predominance of secondary flakes, which together with the wide variation in cherts, suggests that Sawdust Bay-2 was not simply a lithic reduction site.

Rough Stone Tools

Only three rough stone tools were identified from the Sawdust Bay-2 lithic assemblage. These include two whet or abraiding stones and one hammerstone (see Plate 4).

One of the whetstones is a sandstone piece measuring 64 mm. in length, 42 mm. in width and 22 mm. in thickness. Both faces of the stone appear to have been smoothed, indicating possible wear.

The second identified whetstone is a piece of schist measuring 66 mm. in length, 55 mm. in width and 32 mm. in thickness. One of the faces appears to have been worn by abrasion. Battering on one of the sides suggests that this piece might have also been used as a hammerstone.

The only hammerstone recovered was a piece of granitic rock measuring 109 mm. in length, 60 mm. in width and 34 mm. in thickness. One end is battered, indicating that the stone had been used for percussion.

No ground stone tools were recovered from Sawdust Bay-2. Also, in contrast to Point Peninsula sites in New York State, some Laurel sites in northern Ontario and Saugeen occupations in southwestern Ontario, no netsinkers were identified.

Summary

In general the lithic material from Sawdust Bay-2 is characterized by a predominance of chert. Finished tools are few in number. Projectile points are small and feature a variation in tang forms. Scrapers are also small featuring only one utilized edge. There is a comparatively high frequency of utilized flakes from the site. Ground stone tools are absent and rough stone tools are rare.

CERAMIC ANALYSIS

The analysis of Middle Woodland ceramics has, in recent years, been underlain by two issues in analytical techniques. These two issues or approaches are attribute versus typological analysis and individual sherd versus vessel analysis.

The analysis of Middle Woodland ceramics in south-eastern Ontario and western New York State has traditionally been typological, exemplified by Ritchie and MacNeish's (1949) definitions of pre-Iroquoian ceramics, Emerson's (1955) classification of the Kant Site material and Johnston's (1968) analysis of the Serpent Mounds. Typologies have also been incorporated in the analysis of Laurel ceramics (MacNeish 1958; Janzen 1968; Stoltman 1973).

More recently, however, there has been a trend

towards attribute analysis of ceramics (Finlayson 1977; Mitchell 1966; Stothers 1977). Wright's synthesis of the Laurel Tradition (1967) represents the principal landmark in the development of this trend.

The methodological approach employed in this analysis is based, primarily, on attributes of individual sherds. Typologies, while providing an element of definition for artifacts belonging to the same class, are identified on a clustering of often poorly defined attributes. Difficulties in understanding and communicating these classifications to other archaeologists represent the principal reason for the omission of a typological analysis in this study.

On the other hand a clearly defined attribute analysis provides data which can be easily used for comparative purposes. In addition, the isolation of individual attributes holds greater interpretative value in providing potentially significant units upon which the researcher may distinguish populations of ceramics.

The second issue of importance in understanding the methodological approach adopted in this examination is the analysis of vessels as opposed to individual sherds. Traditionally analysis of Middle Woodland ceramic assemblages has been based on rim sherds (Daily and Wright 1955; Wright 1967; Wright and Anderson 1963; Emerson 1955). Within the past fifteen years, there has been a trend

towards the use of vessels as the primary unit of analysis (Mason 1966; Watson 1972; Stoltman 1973; Finlayson 1977).

This trend appears to have resulted from an attempt to utilize a recognizable cultural unit in the identification of an assemblage. It has been demonstrated (Mason 1966) that individual sherd and vessel analyses of the same material can provide different interpretations. To my knowledge, however, the relative significance of these two approaches in the actual reconstruction of cultural groups is yet to be substantiated.

The analyzable ceramic material from Sawdust Bay-2 constitutes a fairly small sample (330). Although an attempt was made to separate the individual sherds into vessels, difficulties in defining criteria for identifying vessels have resulted in the presentation of ceramic data as individual sherds.

The ceramic material was separated into analyzable and unanalyzable sherds. Generally any sherd that was larger than a 25 cent piece and did not feature an exfoliated exterior was classified as analyzable. The sherds were then individually analyzed and tentatively separated into vessels. Attributes measured from both rim and body sherds included thickness, temper size, temper type, design impressions, surface treatment, colour, firing and presence of coil breaks. On rims, lip design impressions and profile type were noted in addition.

Table 17 provides an outline of the ceramics recovered from Sawdust Bay-2.

Table 17. Distribution of Sawdust Bay-2 ceramics.

Item	No.	%
Rim sherds	31	3.0
Decorated body sherds	152	14.0
Undecorated body sherds	146	13.0
Basal sherd	1	-
Unanalyzable sherds	757	70.0
TOTAL	1,087	100.0

Thickness

Measurements of thickness for all analyzable sherds are summarized in Table 18. The figures in this table indicate a slightly greater thickness for body sherds than for rims, represented by a mean difference of 1.5 mm.

Temper

Two observations were recorded for each sherd with respect to temper. These were temper type (grit, sand, sand/grit) and temper size. Grit temper features observable

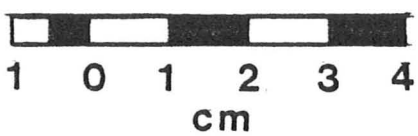

Figure 9. Grit tempered rim sherd featuring pseudo-scallop shell impressions (vessel 5).

Table 18. Distribution of sherd thicknesses for Sawdust Bay-2 ceramics.

Sherd Thickness (mm)	Rim Sherds No.	Rim Sherds %	Dec. Body Sherds No.	Dec. Body Sherds %	Undec. Body Sherds No.	Undec. Body Sherds %
05	-	-	2	2.0	5	5.0
06	8	30.0	6	6.0	8	8.0
07	9	35.0	6	6.0	16	15.0
08	9	35.0	23	25.0	14	13.0
09	-	-	32	34.0	32	31.0
10	-	-	16	17.0	18	17.0
11	-	-	7	8.0	9	9.0
12	-	-	1	1.0	2	2.0
TOTALS	26	100.0	93	100.0	104	100.0
$\bar{X}$	7.04 mm		8.70 mm		8.54 mm	
Range	6.0-8.0 mm		5.0-12.0 mm		5.0-12.0 mm	

observable particles of stone, usually feldspar, quartz or quartzite, ranging in size from 1 mm. to 10 mm. Sand tempered sherds were determined on the absence of grit and occasionally the presence of sand grains in the clay. Some sherds featured both the use of sand and grit as temper. Cavities observed in a few of the sherds indicated that organic material, such as bits of grass or twigs, may also have been used for temper.

In the initial analysis both maximum and minimum measurements were recorded for temper size. In coding the data, however, the maximum measurement was taken as the representative size.

Tables 19 and 20 provide the distribution of temper type and size among the three major sherd classifications represented. Temper type for rims is characterized by an equal frequency of grit and sand. The body sherds feature a distinct predominance of grit temper. This distinction is also reflected in an observed difference between rim and body sherds with respect to temper size, with body sherds averaging larger pieces of temper.

Decorative Impressions

In the initial analysis an attempt was made to record for each decorated sherd decorative tool type and decorative application. However, given that tool type represented an inference derived from decorative application or impressions,

Table 19. Distribution of temper type for Sawdust Bay-2 ceramics.

Temper Type	Rim Sherds		Dec. Body Sherds		Undec. Body Sherds		Basal Sherds	
	No.	%	No.	%	No.	%	No.	%
Grit	15	48.0	122	80.0	124	85.0	1	100.0
Sand	12	39.0	16	11.0	17	12.0	-	-
Sand/Grit	4	13.0	14	9.0	5	3.0	-	-
TOTALS	31	100.0	152	100.0	146	100.0	1	100.0

Table 20. Distribution of temper size for Sawdust Bay-2 ceramics.

Temper Size	Rim Sherds		Dec. Body Sherds		Undec. Body Sherds		Basal Sherds	
	No.	%	No.	%	No.	%	No.	%
1	16	52.0	30	20.0	26	18.0	0	-
2	6	19.0	39	26.0	41	28.0	0	-
3	4	13.0	46	30.0	42	29.0	1	100.0
4	1	3.0	16	11.0	19	13.0	0	-
5	1	3.0	16	11.0	14	10.0	0	-
6	1	3.0	3	2.0	3	2.0	0	-
7	1	3.0	1	-	1	-	0	-
8	0	-	0	-	0	-	0	-
9	0	-	0	-	0	-	0	-
10	1	3.0	0	-	0	-	0	-
TOTALS	31	100.0	152	100.0	146	100.0	1	100.0
$\bar{X}$	2.32 mm		2.76 mm		2.77 mm		3.00 mm	
Range	1.0-10 mm		1.0-8.0 mm		1.0-7.0 mm		3.00 mm	

the category has been omitted from this discussion and decorative applications are simply considered as impressions. The categories recognized in the analysis of decorative applications are outlined below and illustrated in Figure 10.

Pseudo Scallop Shell: Symmetrical wavy line impressions thought to resemble the edge of a scallop shell. These impressions are generally sharply impressed, although, as noted for the Kant Site material discussed in the following chapter, the impressions can be somewhat broader, with a clearly defined rectangular cross section. Motifs on Sawdust Bay-2 ceramics are generally oblique, with some horizontal impressions.

Simple Dentate: A symmetrical dentate stamp characterized by shallow repetitive impressions of either rectangular or circular shape. A circular application is distinguished from a punctate design by the spatial arrangement of impressions and by the depth of impressions, dentate being lighter and usually present in greater frequency for any given area on the vessel.

Complex Dentate: A symmetrical dentate impression featuring a "complex" shape. In this design the individual

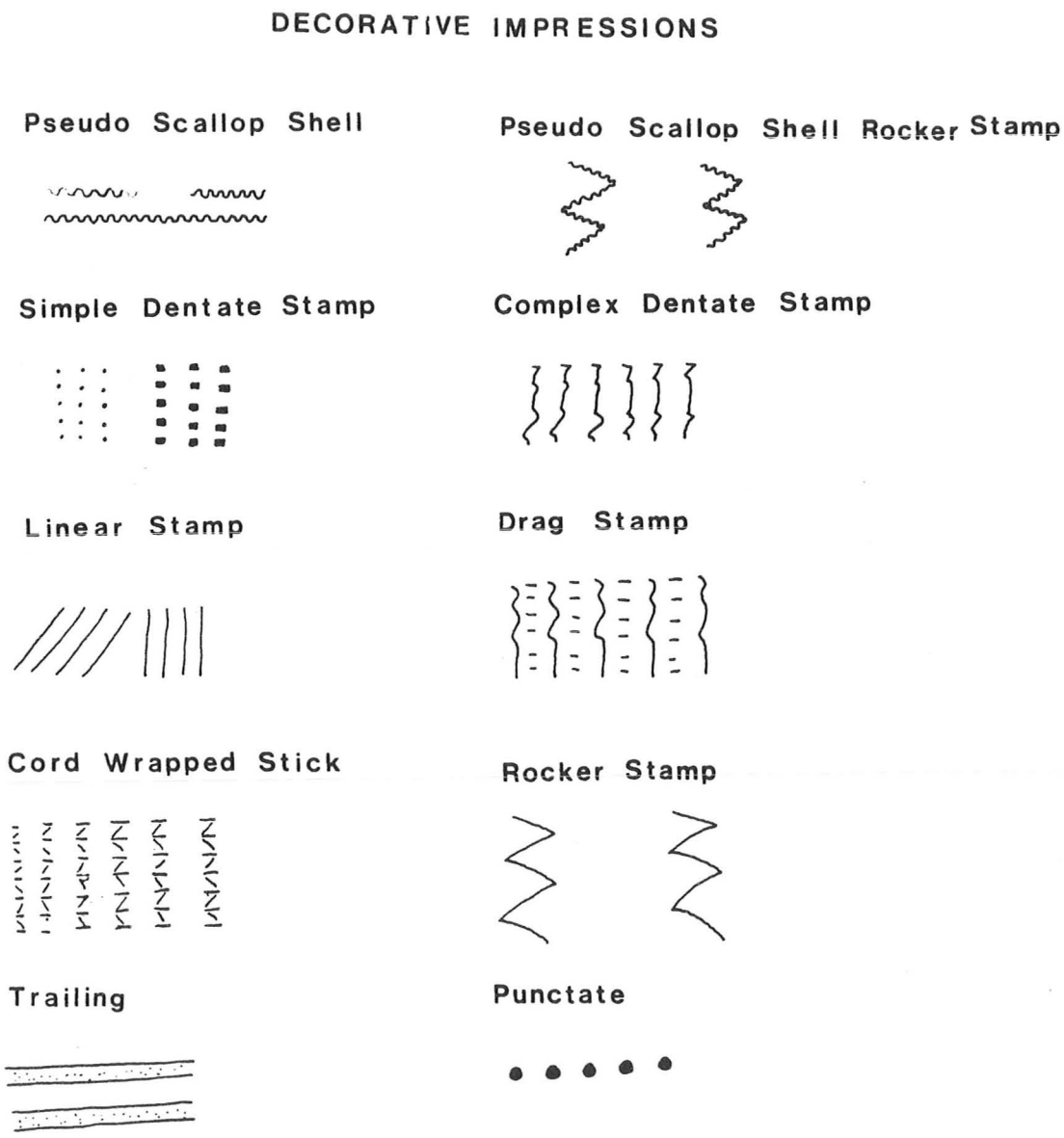

Figure 10. Ceramic decorative impressions.

Punctate: Sharply distinct impressions, generally circular in shape. Punctates can pierce the vessel wall altogether, or provide a bulge on the opposite side, a feature referred to as a boss. Neither of these features were found on the Sawdust Bay-2 ceramics.

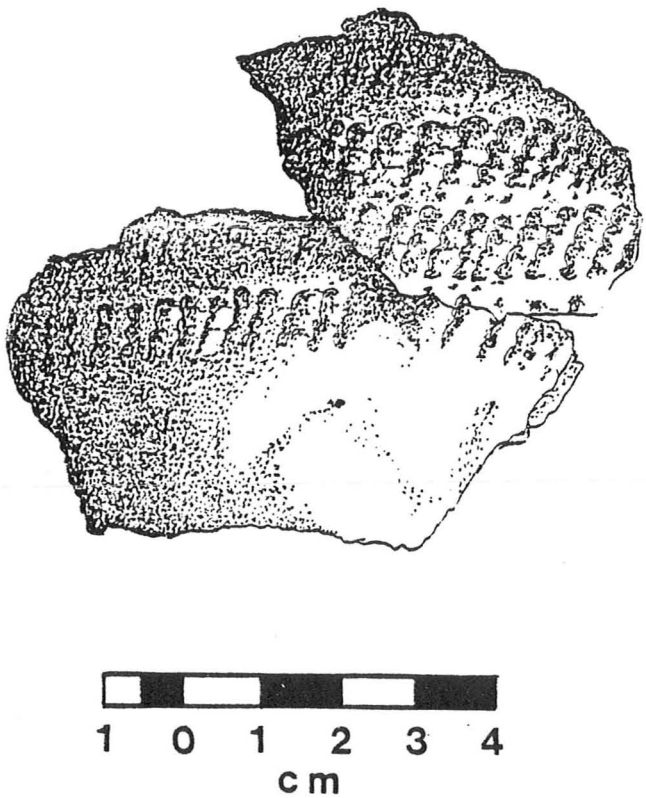

Figure 11. Oblique pseudo-scallop shell impressions on a grit tempered body sherd.

Trailing: Symmetrical linear design with a light impression. Trailing generally features faint but clearly defined channels running parallel to one another.

Channelling: For purposes of this discussion channelling is represented by more deeply impressed linear designs, which are the result of a tool edge dragged along the surface.

Linear Stamp: This decorative impression features distinct linear impressions, which appear to have been made by one impression rather than by dragging an implement. Linear stamped impressions were distinguished from trailing and channelling by the absence of striations, which indicate dragging, and the absence of small "levees" or mounds running parallel to the impression. This distinction is important in understanding differences between Emerson's analysis of the Kant Site ceramic material and the data presented in the following chapter.

Drag Stamp: Impressions which feature a series of distinct designs applied by dragging a tool across the vessel. These impressions are characterized by sharp impressions followed by a series of striations, caused by

dragging the applicator, forming ribbon-like bands (Wright 1967:12).

Cord Wrapped Stick: Cord wrapped designs are represented by a series of closely spaced, generally shallow, impressions of relatively uniform width.

Rocker Stamp: Rocker stamp designs are represented by V-shaped series of impressions that overlap at the points of intersection. These impressions are made by rocking a tool back and forth over the surface of the vessel.

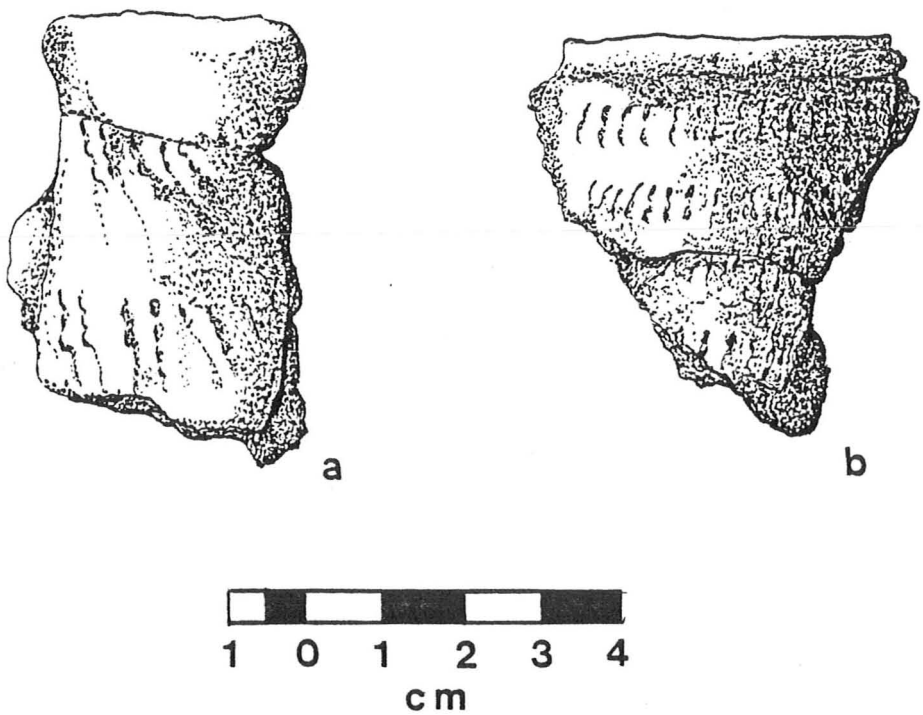

Figure 12. Decorated rim sherds: (a) oblique pseudo-scallop shell; (b) simple dentate stamp.

These decorative impressions were recorded for the exterior, interior and lip of rim sherds and for the exterior and interior of decorated body sherds. The results of this analysis are summarized in Tables 21 and 22.

Although the sample size for rims is small the predominance of pseudo scallop shell impressions represented in Table 21 is consistent with the prevalence of this decorative impression for body sherds in Table 22. The rims do reflect a greater frequency of simple dentate designs and a more conservative range of overall decorative impressions.

Surface Treatment

Surface treatment is defined as the finish provided to the surface of a ceramic vessel before firing and generally before the application of designs. This attribute has been noted in a number of Middle Woodland ceramic analyses (Wright 1967; Wright and Anderson 1963; Emerson 1955). The discussion of these "treatments" has been directed towards interior channelling or brushing, a feature characterizing many Middle Woodland vessels.

Both the interior and exterior surface treatments of all analyzable sherds were noted. Four types of surface treatment were identified. These are outlined and defined below:

Table 21. Distribution of primary decorative impressions for Sawdust Bay-2 rim sherds.

Impression	Exterior		Interior		Lip	
	No.	%	No.	%	No.	%
Pseudo scallop shell	21	68.0	-	-	10	77.0
Simple dentate	8	26.0	-	-	3	23.0
Complex dentate	1	3.0	-	-	-	-
Linear stamp	1	3.0	-	-	-	-
TOTALS	31	100.0	0	0	13	100.0

Table 22. Distribution of primary decorative impressions for Sawdust Bay-2 body sherds.

Impression	Exterior	
	No.	%
Pseudo scallop shell	124	82.0
Simple dentate	14	9.0
Trailing	5	3.0
Drag and punctate	4	3.0
Punctate	3	2.0
Drag stamp	1	1.0
Pseudo scallop shell rocker stamp	1	1.0
TOTAL	152	100.0

Smooth: A face featuring a generally even surface which may have faintly visible striations, resulting from the smoothing.

Brushed: This term has been referred to as channelling in the literature. Brushed is used here as it is less confusing than channelling, a term which features a range of meanings in the archaeological literature for the northeast. Brushing is characterized by parallel lines of shallow impressions arranged in a random fashion. This treatment is generally restricted to vessel

interiors and is achieved by wiping either a handful of grass or a dentate tool (J.V. Wright, personal communication, 1981) along the surface of wet clay.

Paddled: A surface treatment featuring faint linear impressions resulting from the application of a flat faced tool used as a paddle to finish the ceramic vessel.

Textured: A surface treatment characterized by shallow impressions of uniform spacing and shape. The trait that distinguishes this surface treatment from design impressions, including dentate stamp and cord wrapped stick, is the degree of impression as well as the general uniformity of design and spacing over the surface of the vessel. Generally this treatment is thought to be a product of impressions made by fabrics, baskets, mats and wrapped paddles.

Tables 23 and 24 summarize the distribution of surface treatment types for the Sawdust Bay-2 ceramics. These tables reflect a preference for smoothed exterior surfaces (100% for rims and 96% for body sherds). Interior surfaces indicate a similar pattern. There is, however, a moderate use of interior brushing represented by 19% of the rims and 24% of the body sherds. This

percentage may well be greater, given the fairly high incidence of interior exfoliation, averaging around 25% for the total analyzable ceramic assemblage.

Rim Profiles

Profiles of rim sherds, representing a region extending from the lip to 1-2 cm. below, were analyzed. Figure 13 outlines the profile types observed in both the Sawdust Bay-2 and Kant Site ceramics. The distribution of these types is presented in Table 25.

The Sawdust Bay-2 rims are characterized by straight to slightly outward flaring profiles. A majority of the profiles feature exaggerated lips.

Colour

Colour represents a highly subjective attribute noted for Sawdust Bay-2 ceramics. This attribute served to provide a guideline on the clay used in the manufacture of the ceramics. In general colours ranged from yellow and orange to grey. The predominant colours observed in the analysis were orangey-brown, yellow-brown and grey-brown.

Red hematite staining is a rare feature, found on only two rims and seven body sherds. This figure is much smaller than the frequency recorded for Middle Woodland

Table 23. Distribution of surface treatment for Sawdust Bay-2 rim sherds.

Surface Treatment	Exterior		Interior	
	No.	%	No.	%
Smooth	31	100.0	20	65.0
Brushed	0	-	6	19.0
Paddled	0	-	0	-
Textured	0	-	0	-
Exfoliated	0	-	5	16.0
TOTALS	31	100.0	31	100.0

Table 24. Distribution of surface treatment for Sawdust Bay-2 body sherds.

Surface Treatment	Dec. Body Sherds				Undec. Body Sherds			
	Exterior		Interior		Exterior		Interior	
	No.	%	No.	%	No.	%	No.	%
Smooth	149	98.0	66	43.0	138	95.0	82	56.0
Brushed	2	1.0	48	32.0	5	3.0	23	16.0
Paddled	0	-	0	-	0	-	0	-
Textured	1	1.0	0	-	3	2.0	0	-
Exfoliated	0	-	38	25.0	0	-	41	28.0
TOTALS	152	100.0	152	100.0	146	100.0	146	100.0

RIM PROFILE TYPOLOGY	
1 	Slightly everted; outward flaring, rounded lip.
2 	Slightly everted; extended rounded lip.
3 	Straight to slightly outward flaring; lip diagonal to the profile of the sherd.
4 	Slightly everted rim; straight lip.
5 	Straight with rounded lip.
6 	Straight with squared lip.
7 	Slightly outward flaring; rounded lip.
8 	Outward flaring; squared lip.

Figure 13. Rim profile typology.

Table 25. Sawdust Bay-2 rim profile distribution.

Profile Type	Rim Sherds	
	No.	%
1	9	29.0
2	8	26.0
3	1	3.0
4	3	10.0
5	5	16.0
6	1	3.0
7	3	10.0
8	0	0.0
9	1	3.0
TOTALS	31	100.0

ceramics from Whitefish Island (Adams 1978), but comparable to frequencies noted by Wright (1967) for Laurel sites in Ontario.

Firing

The quality of firing for the Sawdust Bay-2 ceramics was difficult to determine accurately. A distinction was made between regular and irregular firing on the basis of the colour of the sherd's cross section. A variation in colour reflected irregular firing, while a regularly fired

sherd featured a uniform color. On the basis of this criterion, over 90 percent of the analyzed ceramics featured irregular firing.

Manufacture

The only attribute examined in this analysis which served to distinguish ceramic manufacture was the presence of coil breaks. Coil breaks are defined as fractures demonstrating two symmetrical edges that fit together. These edges are generally characterized by cross sections with semi-circular to parabolic shapes. Coil breaks have been generally accepted as evidence of a coil manufacture technique. This technique features the manufacture of a ceramic vessel through the wrapping of rolled pieces of clay. The resulting clay structure is then shaped and smoothed into the desired form. Once the surface treatment is complete and decorations applied, the vessel is fired to complete the process.

Wright (1967), Kennedy (1970, 1977) and Watson (1972) among others, have noted the use of coiling for Middle Woodland ceramics. The analysis of Sawdust Bay-2 ceramics produced the following distribution of coil breaks: rims 23%; decorated body sherds 38% and plain body sherds 27%.

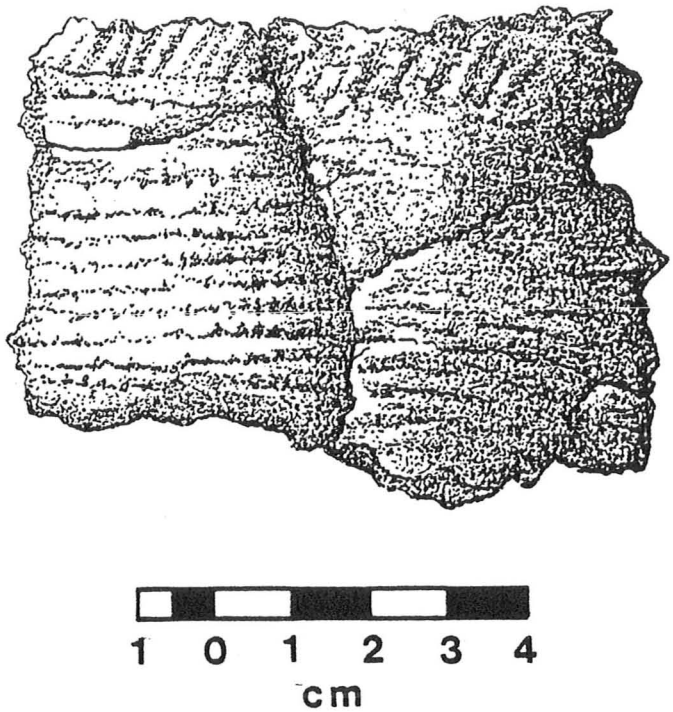

Figure 14. Water woren, decorated body sherd featuring oblique pseudo-scallop shell over horizontal pseudo-scallop shell impressions.

Vessels

As indicated in the introduction and the preceding analysis, the emphasis of this approach to understanding the Sawdust Bay-2 ceramics has rested with individual sherds. Although the sherds, when analyzed, were separated into vessels, the subjective nature of this segregation has led to the emphasis on individual sherds.

Each vessel was identified, where possible, by rims. The organization of sherds into vessels was based

on a combination of paste, colour and design. Twenty-nine vessels were identified from the analyzed ceramics. Rim sherds for only 14 of these vessels were identified, the remaining 15 being identified from body sherds. Table 26 provides a summary of the data collected for those vessels identified from the rims.

The data in this table verifies the general pattern reflected by the individual sherd analysis. There is a predominance of pseudo scallop shell vessels, featuring grit temper, coil manufacture and a 25% incidence of interior brushing. Little can be said concerning the size and shape of the vessels as the sherd sample size for any of the vessels was too small to permit even a generalized reconstruction.

Summary

The ceramic material from Sawdust Bay-2 is characterized by a predominance of pseudo scallop shell impressions. The vessels are generally coil manufactured with grit temper. The exteriors of the vessels have smooth surfaces with approximately 25% featuring interior brushing.

Table 26. Data for Sawdust Bay-2 vessels identified by rim sherds.

Vessel No.	Sherds		Decorative Impression	Surface Treatment (Interior)	Temper	Manufacture	Profile Type
	Rim	Body					
1	2	49	Pseudo scallop shell	Smoothed	Grit	Coil	1
2	2	-	Pseudo scallop shell	Smoothed	Grit	Coil	1
3	4	28	Pseudo scallop shell	Brushed	Grit/sand	Coil	2
4	3	6	Pseudo scallop shell	Brushed	Grit	Coil	2
5	3	34	Pseudo scallop shell	Brushed	Grit	Coil	4
6	1	3	Pseudo scallop shell	Smoothed	Grit/sand	(?)	5
7	1	1	Simple dentate	Smoothed	Sand	(?)	1
8	5	5	Simple dentate/linear stamp	Smoothed	Grit	Coil	5
9	2	14	Simple dentate	Smoothed	Grit	(?)	1
10	2	17	Pseudo scallop shell	Smoothed	Grit	(?)	1
11	1	2	Pseudo scallop shell	Smoothed	Grit	(?)	1
19	1	2	Pseudo scallop shell	Smoothed	Grit	(?)	2
20	1	10	Pseudo scallop shell	Brushed	Grit/sand	Coil	2
21	1	6	Drag and punctate	Smoothed	Grit	Coil	7

FAUNAL ANALYSIS

The faunal material recovered from Sawdust Bay-2 was analyzed by Stephen Cumbaa (1980), Zooarchaeological Identification Center, National Museum of Natural Sciences. The material was generally in poor condition making identification difficult.

Of the 1,678 bone fragments recovered only 78 (4.6%) were identifiable to at least the family level. The list of identifiable species in Table 27 includes five mammalian species, one bird, two reptiles and one fish. Table 28 provides a total distribution by class. There were some molluscan remains (106) identified as *Elliptio companata* and/or *Lauipsilis radiata*.

The location of Sawdust Bay-2 on Lac des Chats suggests a riverine oriented subsistence base. However, the absence of fish remains, which may also be due in part to poor preservation, coupled with the dominance of mammalian and reptilian species, suggests that the nearby swamps may have been as important in the location of the site.

Seasonality

The poor condition of the faunal material resulted in only a few clues as to the seasonality of Sawdust Bay-2. Cumbaa indicates that those clues which do exist are

Table 27. Identified species from Sawdust Bay-2 (after Cumbaa 1980).

Common Name	Biological Name	Minimum No.	No.	%
Beaver	*Castor canadensis*	1	9	11.5
Dog or wolf	Canidae	1	2	2.5
Black bear	*Ursus americanus*	1	2	2.5
Moose	*Alces americanus*	1	2	2.5
White-tailed deer	*Obocoileus virginianous*	3	47	60.0
Deer family	Cervidae	-	6	7.5
Goose	Anserinae	1	1	1.5
Snapping turtle	*Chelydra serpentina*	1	3	4.0
Painted turtle	*Chrysemys picta*	1	1	1.5
Turtle	Testudinoidea	1	3	4.0
Channel catfish	*Ictalurus punctatus*	1	2	2.5
TOTALS		12	78	100.0

Table 28. Distribution of vertebrate remains by class.

Class	No.	%
Mammal	1,576	94.0
Bird	2	-
Reptile	47	3.0
Fish	2	-
Unidentified	51	3.0
TOTAL	1,678	100.0

consistent in suggesting an occupation between April and late September or early October.

A premolar of a white-tailed deer shows growth for an estimated year. "The premolar is well developed and moderately worn, but shows no sign of imminent replacement, which usually happens at about 16-18 months" (Cumbaa 1980:3). Given that the peak season of birth for fawns is from late May to mid-June (Banfield 1974:393), it is possible to estimate the seasonality of the site to some time between April and August.

The presence of goose, a migratory bird, suggests an early spring or early fall occupation. The occurrence of reptiles indicates a summer to fall occupation.

CHAPTER IV

DISCUSSION AND INTERPRETATIONS

The assignment of the material from the Sawdust Bay-2 site is presented in this chapter. This discussion is divided into two principal parts. In the first, definitions of the classificational framework utilized for the assignment of Sawdust Bay-2, along with corresponding criteria, are provided. In the second part, the Sawdust Bay-2 assemblage is discussed in comparison to the Kant Site ceramic assemblage. Discussion is then focused upon a more general comparison of Sawdust Bay-2 to other Middle Woodland sites in the Ottawa River Drainage Basin. A postulated relationship between the Ottawa Valley Phase, represented by Sawdust Bay-2, and other Point Peninsula Phases is then provided. Broader "relationships" between Sawdust Bay-2 and the Laurel and Saugeen Traditions are presented in conclusion.

IDENTIFICATION

Period

In this paper a period is defined as a temporal unit featuring broad "cultural" similarities which are

distinguishable from other units of comparable temporal and spatial dimensions (e.g., Early Woodland; Middle Woodland; Late Woodland). This broad categorization is the most general of the tripartite hierarchical framework (period, tradition, phase) employed for this discussion.

The Middle Woodland Period, identified by James B. Griffin (1952; 1967), is, for purposes of this discussion, defined by the prevalence of a ceramic complex characterized by grit tempered, coil manufactured, collarless vessels, featuring a variation of designs.

In southern Ontario sites from this period are materially distinguished from Early Woodland occupations by an increase in the quality and variation of ceramic types, as well as through changes in projectile point forms. The larger number of identified Middle Woodland sites suggests that a population increase may also be associated with this period in the region.

Temporally the southern Ontario Middle Woodland Period falls within a range extending from 500 B.C. to A.D. 800, with some regional variations.

A number of traditions have been identified for this period. The principal traditions which temporally relate to Sawdust Bay-2 are Laurel, Saugeen and Point Peninsula. The Point Peninsula Tradition is defined below, while the Laurel and Saugeen Traditions are discussed in the second section of this chapter. The distribution of

these traditions is outlined in Figure 15.

The assemblage from Sawdust Bay-2, outlined in the preceding chapter, is characterized by collarless, grit tempered, coil manufactured vessels, sized projectile points, which would clearly suggest a Middle Woodland occupation. The absence of a radiocarbon date that falls within the temporal range identified for the Middle Woodland Period presents a problem in concretely establishing a Middle Woodland date for the site.

Tradition

The development of the concept of an archaeological tradition is discussed by Willey and Phillips (1958). The interpretation of tradition in this discussion has been adopted from Wright (1967) who defines the concept as "...the perpetuation of a common archaeological culture through time which lacks major discontinuities in either sequential change or regional variation" (1967:2).

Tradition, in this discussion, is defined as an archaeologically determined unit featuring certain general material and subsistence continuities within limited spatial and temporal boundaries (e.g., Point Peninsula, Laurel, Saugeen, North Bay and others). These boundaries are generally encompassed within a period. The material continuities are more specific than those identified for

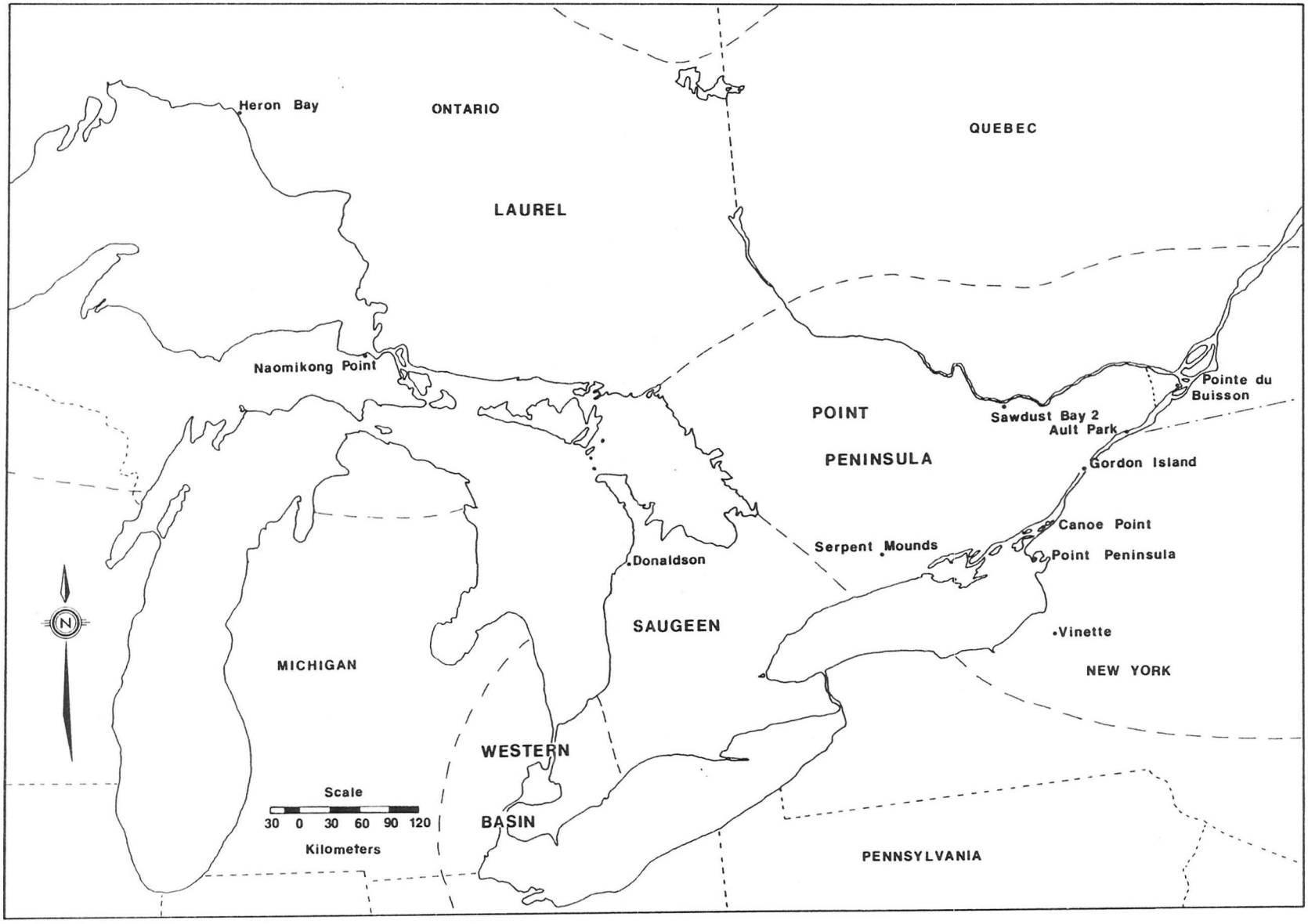

Figure 15. Distribution of Middle Woodland Traditions of southern Ontario.

periods. For example, distinctions in Middle Woodland Traditions are based largely on the presence or absence of a range of ceramic attributes identified for the Middle Woodland Period. Other "cultural" features may vary as well. Subsistence patterns, for example, show variation with later Hopewellian groups involved in horticulture in contrast to the hunting and gathering activities of Laurel.

Point Peninsula was initially identified as a focus by Ritchie (1944). The use of the term by archaeologists working in southern Ontario and New York State (Daily and Wright 1955; Emerson 1955; Johnston 1968; Ritchie and MacNeish 1949; Mitchell et al., 1966) in a broader context has led to its identification by Ritchie (1969), Wright (1972) and Spence et al. (1979) as a culture. The potential confusion in the association of an archaeologically defined culture with an ethnographic culture has led to the use here of tradition as a concept to distinguish archaeological assemblages.

The Point Peninsula Tradition is characterized by grit tempered, coil manufactured ceramics with conically shaped bases. Decorative impressions include: simple and complex dentate, cord wrapped stick, pseudo scallop shell and rocker stamp impressions (Ritchie 1969:206). There is a range of lithic material including chipped stone projectile points, scrapers and drills, as well as some rough stone tools including abraders and hammerstones.

Stone pipes, celts and gorgets have also been identified with Point Peninsula assemblages. Bone tools, including needles, awls and harpoons are also characteristic.

Point Peninsula components are located in New York State, southeastern Ontario and southern Quebec. The approximate area of this distribution is outlined in Figure 15. The temporal boundaries for the Point Peninsula Tradition range from approximately 500 B.C. to A.D. 300.

The presence of pseudo scallop shell and dentate stamp impressions with interior brushing serve to identify the ceramic assemblage of Sawdust Bay-2 as part of the Point Peninsula Tradition. The chipped stone tools, including small projectile points and scrapers, are consistent with this identification.

Phase

A phase is defined, for purposes of this discussion, as a distinguishable archaeological unit within a tradition. A phase is represented by a group of assemblages featuring detailed attribute similarities in both type and number, existing within a narrowly defined geographical area and temporal period. This definition has been adopted from Willey and Phillips (1958). Ritchie (1969) has incorporated a similar definition, replacing focus as a taxonomic unit, in outlining the prehistory of New York State.

A phase is distinguished from a tradition, in this discussion, primarily through the frequency distribution (clustering) of ceramic attributes identified for the tradition. These "unique" patterns must illustrate some spatially definable continuity and serve in contrast to other ceramic clusterings within the tradition. These patterns may also be associated with other cultural features including lithic technologies, settlement and subsistence patterns.

A number of phases have been identified for the Point Peninsula Tradition by Ritchie (1969) and Johnston (1968a). These phases include Canoe Point, Kipp Island, Hunters Home and Rice Lake.

The imprecise material definitions of these phases and their spatial restriction to New York State (Kipp Island, Canoe Point, Hunters Home) and south/central Ontario (Rice Lake) has led to the problem of placing Point Peninsula sites in eastern Ontario, particularly the Ottawa River Drainage Basin, within an identifiable unit which can either be distinguished from or identified with the above mentioned phases.

A distinction of eastern Ontario Point Peninsula sites from those of New York was noted by Emerson (1955) in his analysis of the Kant Site material. This distinction is crystallized in Wright's comparison of decorative techniques for rim sherds from Middle Woodland components

in Ontario and western New York State (1967:120).

In a paper presented to the Canadian Archaeological Association (1977), Clyde Kennedy observed a regional distinction of Middle Woodland components within the Ottawa Valley. In this discussion Kennedy identified the Middle Woodland occupation of the Ottawa Valley as the Ottawa Middle Woodland. The pottery of this group, according to Kennedy, has distinct decorative features. Chronologically, Kennedy noted this group falls within a period from 85 B.C. to A.D. 200, based on dates from six Middle Woodland sites in the Ottawa River Drainage Basin.

This observed distinction of Point Peninsula assemblages in the Ottawa River Drainage Basin has led to the identification of the Ottawa Valley Phase for the Point Peninsula Tradition. The assemblage of this phase includes a lithic inventory of shipped stone tools made predominantly from local cherts with little use of quartz. Projectile points are generally small, and feature a range of tang types. Scrapers of chert manufacture are also small. Both rough stone and ground stone tools are rare.

Ceramics of this phase are characterized by collarless, coil manufactured, grit tempered vessels. Pseudo scallop shell and dentate stamp are the predominant decorative impressions. There is a small occurrence of rocker stamping and drag stamp impressions. Interior brushing

occurs on approximately 25% of the ceramic assemblage.

The subsistence pattern of this group appears to be oriented towards hunting and gathering with some fishing. The low frequency of fishing implements and fish remains from identified Point Peninsula components in the Ottawa Valley suggests that fishing was not as prominent as it was in New York groups identified by Ritchie (1969). The faunal analysis from Sawdust Bay-2 presents a distinct predominance of mammalian species over both fish and reptiles.

Sites featuring assemblages that relate to this phase lie within the Ottawa River Drainage Basin (see Figure 16). The relationship of these sites to Sawdust Bay-2 is discussed in the following section.

The temporal definition of this phase, adopted from Kennedy's discussion of the Ottawa Middle Woodland, extends from approximately 100 B.C. to A.D. 200. The range of dates identified from Point Peninsula sites in the Ottawa Valley is outlined in Table 29.

COMPARISON

The preceding outline of the Ottawa Valley Phase has been largely drawn from the Sawdust Bay-2 assemblage described in the previous chapter. The reflection of this pattern in other Middle Woodland sites is discussed

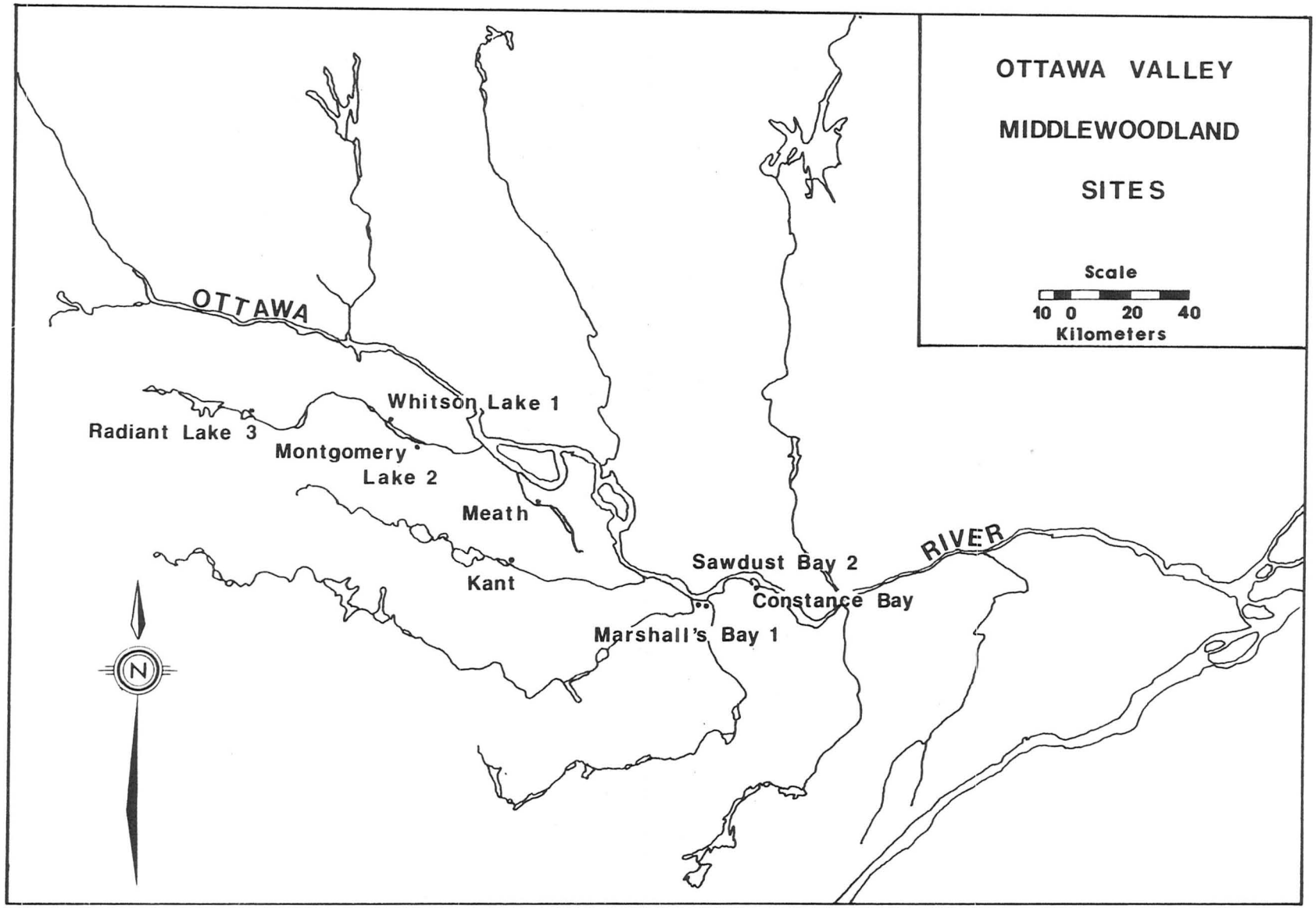

Figure 16. Location of Middle Woodland sites in the Ottawa Valley.

Table 29. Radiocarbon dates from Ottawa Valley, Point Peninsula sites.

Site	Reference	Material	Lab No.	Date
CaGi-1	(Wilmeth 1978)	Charcoal	I-2083	A.D. 130 ± 100
	(Wilmeth 1978)	Charcoal	I-2084	80 B.C. ± 100
Constance Bay-1	(Watson 1972)	Charcoal	S0578	490 B.C. ± 75
Marshall's Bay-1	(Wilmeth 1978)	Charcoal	GSC-2061	A.D. 200 ± 60
Montgomery Lake	(Wilmeth 1978)	Charcoal	NMC-216	430 B.C. ± 90
	(Wilmeth 1978)	Charcoal	NMC-217	A.D. 90 ± 80
Radiant Lake	(Wilmeth 1978)	Charcoal	GSC-1662	A.D. 80 ± 130
	(Wilmeth 1978)	Charcoal	S-1044	215 B.C. ± 75
	(Wilmeth 1978)	Charcoal	S-1045	A.D. 430 ± 60
Whitson Lake	(Wilmeth 1978)	Charcoal	GSC-1660	A.D. 400 ± 190
Constance Bay-2	(Kennedy, per. com., 1981)	Charcoal		A.D. 95 ± 110
Hynes Site	(Kennedy, per. com., 1981)	Charcoal	S-895	85 B.C. ± 70

in this section with specific comparisons of Sawdust Bay-2 and Kant Site ceramics and with more general reference to other Point Peninsula components in the region. This discussion is concluded with a broadly based examination of relationships between Sawdust Bay-2 and other Point Peninsula sites, as well as the Laurel and Saugeen Traditions.

Kant Site

The Kant Site is located on Mud Lake, a widening of the Bonhechere River, near the town of Eganville, in Renfrew County. This site was initially identified by W.J. Wintemberg in 1917 and subsequently excavated by J. Norman Emerson in the summer of 1947.

The data presented in the following discussion has been obtained from the ceramics recovered by Emerson's 1947 excavation. Emerson published his site description and artifact analysis in 1955. This description outlines a typological analysis of rim sherds, in addition to comments on lithic materials and an excellent description of the burials recovered.

Given the theoretical importance of Emerson's report in the development of ideas concerning the Middle Woodland Period for eastern Ontario, it is advantageous to provide an attribute analysis of the ceramic material for

comparative purposes.

Emerson (1955) indicates that two principal areas were excavated on the Kant Site, the Ridge and the Point. The Ridge was the more intensively investigated of the two. Three regions within this area were sampled: hillside hearth, burial area and the south ridge.

Although Emerson does provide a percentage distribution of ceramics for the differentiated areas, the author was unable to separate the existing collection, located at the Archaeological Survey of Canada and the University of Toronto,[1] into the three areas described. A number of the sherds featured square numbers which provided horizontal provenience. Despite Emerson's indication that a majority of the ceramic assemblage was recovered from depths of 6 to 8 inches (1955:27), no vertical provenience was noted on the ceramics.

The bulk of the ceramics recovered were from the hearth area. Other pieces included in the collection have been recovered from the surface at various areas within the site. Of the 202 sherds analyzed from the collection, only 167 have been included for analysis in this discussion. The criterion for the selection of these sherds was the provision of square numbers giving some indication of, at least, horizontal location.

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1. The collection at the University of Toronto has, since the time of analysis, been moved to the Archaeological Survey of Canada (J.V. Wright, personal communication, 1980).

Emerson (1955) suggests that there are three distinguishable components based on the spatial distribution of the ceramics. Owing to the disturbance of the site by plowing and the relatively poor samples of the ceramics for the different geographical locations the author is cautious in accepting this interpretation. The presence of distinct ceramic complexes based on rim sherd shape and design indicated that at least two components exist. The spatial separation of these components, however, is impossible to determine given the absence of acceptable provenience data.

For purposes of this analysis, the location of the analyzed ceramics is assumed to be from one area. The general characteristics of these ceramics indicate that they represent a predominantly Middle Woodland occupation. A summary of the ceramic analysis is presented in the following description. The data tables, corresponding to those utilized for Sawdust Bay-2, are included in Appendix 1.

The comparison of the Kant Site ceramic data is made on the basis of individual sherds. The fragmentation of the collection between the Archaeological Survey of Canada and the University of Toronto, during the period of analysis, made it impossible to provide a reasonable identification of vessels.

Table 30 summarizes the sherd type distribution of the Kant Site ceramics.

Paste attributes for the Kant ceramics including thickness, temper type and size are similar to the Sawdust Bay-2 material. Table 31 provides a comparison of the means recorded for these attributes from the two sites.

Differences between Kant and Sawdust Bay-2 ceramics may be noted in the distribution of pseudo scallop shell, dentate and complex dentate designs. However, the combination of these units provides the predominant percentage of both ceramic assemblages for both rim and body sherds (Sawdust Bay-2 rims 97%, body 96%; Kant rims 87%, body 63%). A comparative distribution of decorative impressions for rim and body sherds is represented in Figures 17 and 18.

Table 30. Morphological distribution of Kant ceramics.

Item	No.	%
Rim sherds	15	4.0
Decorated body sherds	123	30.0
Undecorated body sherds	29	7.0
Basal sherds	-	-
Unanalyzable sherds	246	59.0
TOTALS	413	100.0

Another distinction noted in the decorative impression for rim sherds included the percentage of interior design, which occurs on almost half of the Kant rims and is totally absent from Sawdust Bay-2 rims. In addition, linear stamp impressions occur with greater frequency on both rim and body sherds at the Kant Site.

The Kant rim sherds are characterized by smooth exterior surfaces with well over half (66%) featuring interior brushing. This percentage is much greater than the 19% noted for the Sawdust Bay-2 sherds. The percentages of interior brushing are more comparable for decorated body sherds (Sawdust Bay-2 32%; Kant 26%) and undecorated body sherds (Sawdust Bay-2 16%; Kant 10%).

Despite the variations in the frequencies of surface treatments, both sites display a pattern of predominantly smooth surface treatment with an appreciable percentage of interior brushing.

The rim profiles from the two sites are similar in the ranges of the types identified. There is, however, a distinction in the distribution of rim sherd profile types, with a greater number of slightly everted and straight rims for the Kant Site (94%) and slightly everted with outward flaring and extended rounded lip for Sawdust Bay-2 (54%).

Coil breaks were observed on the Kant ceramics, although they were not as numerous as in the Sawdust Bay-2

Table 31. Comparison of quantitative ceramic data from the Kant and Sawdust Bay-2 Sites.

Attribute	Sawdust Bay-2 $\bar{X}$ (mm)	Kant $\bar{X}$ (mm)
Rim sherd thickness	7.04	6.26
Decorated body sherd thickness	8.70	9.04
Undecorated body sherd thickness	8.54	8.75
Rim sherd temper size	2.32	2.86
Decorated body sherd temper size	2.76	2.80
Undecorated body sherd temper size	2.77	2.41

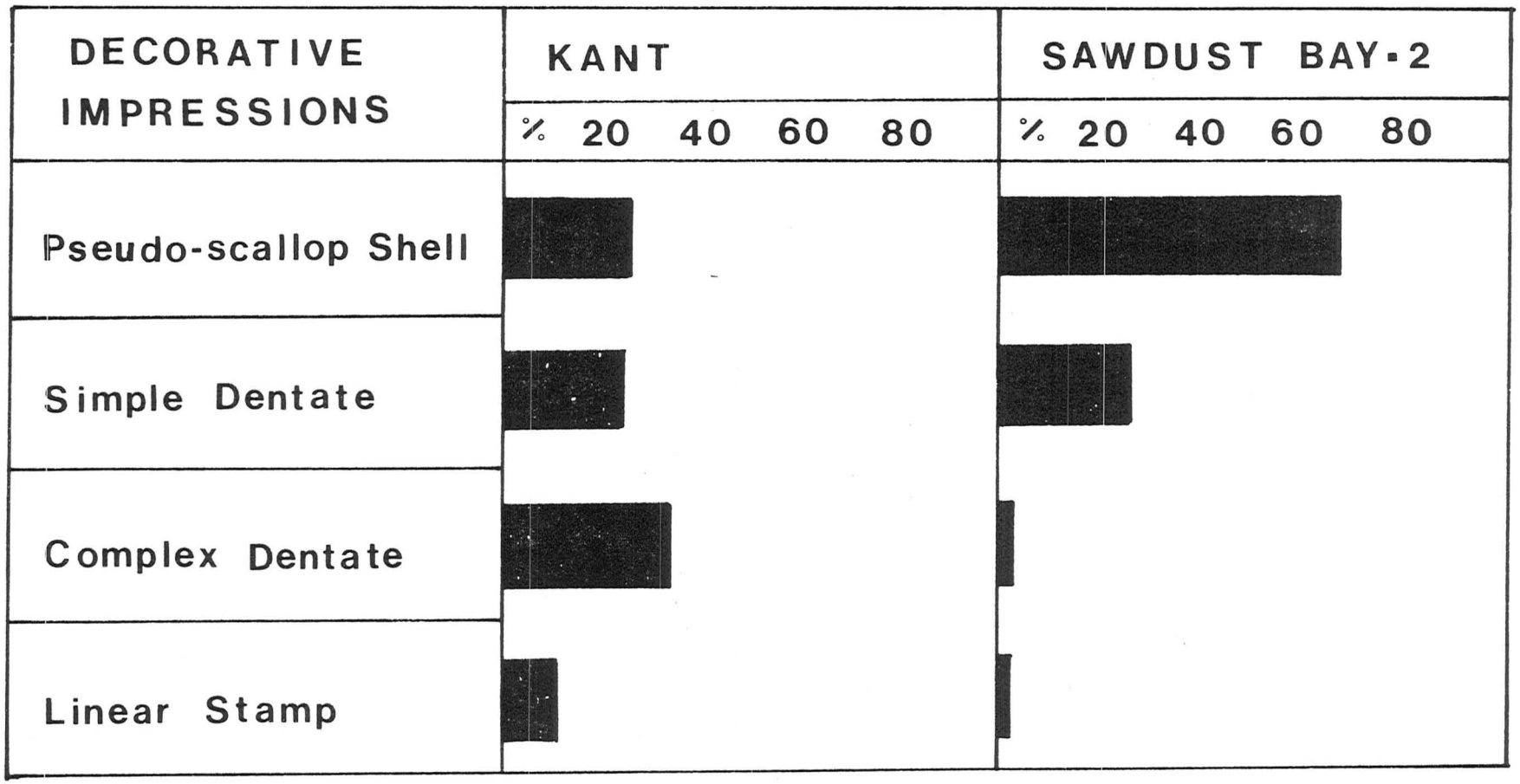


Figure 17. Histogram illustrating the comparative distribution of rim sherd decorative impressions between the Kant and Sawdust Bay-2 sites.

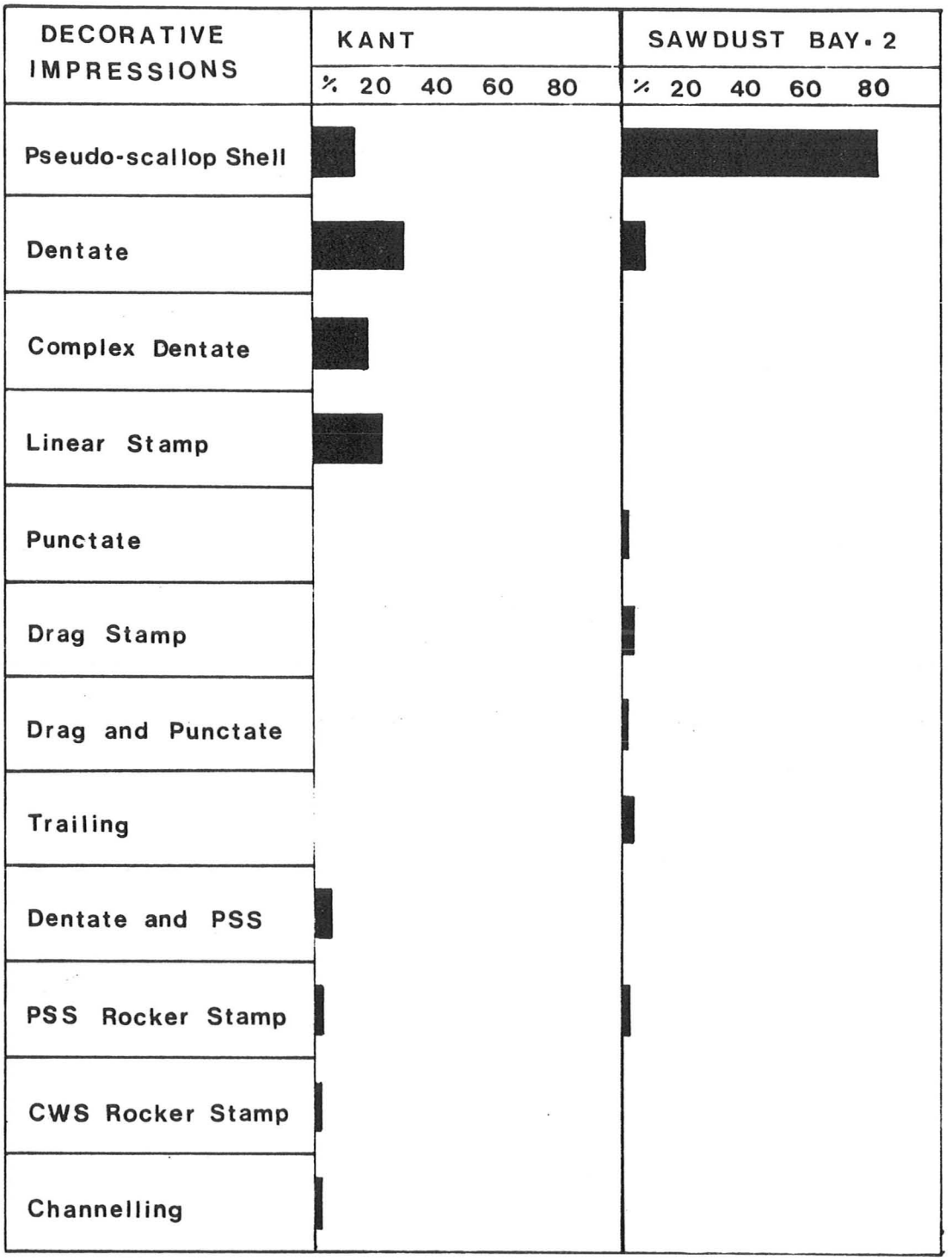


Figure 18. Histogram illustrating the comparative distribution of body sherds between the Kant and Sawdust Bay-2 sites.

assemblage. No coil breaks were recorded for the rim sherds, but were observed for 17% of the decorated body sherds and 28% of the undecorated body sherds. This is a similar distribution to Sawdust Bay-2 where coil breaks were observed on 23% of the rims, 38% of the decorated body sherds and 27% of the undecorated body sherds. Differences in these frequencies may be partially explained by the generally poor state of preservation of the Kant ceramics.

Most of the lithic material recovered from the Kant Site was surface collected. The presence of a number of ground stone tools including adzes and gouges, suggests the possibility of an Archaic component at the site. Given the poor provenience of the lithic artifacts and the possibility of more than one component being represented by the material, a lithic analysis of this assemblage was not undertaken.

Both sites ore located on lakes (Mud Lake and Lac des Chats) with access to areas which probably had a reasonably high potential for hunting and gathering. The absence of a faunal or floral analysis from the Kant Site precludes any estimate of the site's seasonality. Emerson (1955) has noted the high potential for wild rice in the area, suggesting that the site was occupied during its harvest in the late summer.

In summary, the ceramic assemblage from the Kant

Site includes a range of attributes similar to Sawdust Bay-2. Differences observed in the frequency distribution of these attributes may be attributed to a number of variables including mixing with other components in the site, temporal and spatial variation and differences in the preservation of material.

Meath Site

Located on Mud Lake near Pembroke, the Meath Site has several components ranging in occupation from Archaic to Late Woodland (Robertson and Croft 1975:1). Ten loci have been identified at the site. The primary cultural assemblage identified for most of these loci is Middle Woodland.

Although the analysis has yet to be completed, a preliminary report by the excavators, Donald Robertson and David Croft, provides a general frequency distribution of decorative impressions for rim sherds. This distribution, summarized in Table 32, illustrates a predominance of pseudo scallop shell and dentate designs.

Subsequent excavations of this site in 1975 and 1977 produced a similar distribution of decorative impressions (Robertson 1977).

The pattern featuring a dominance of pseudo scallop shell and dentate decorative impressions positively

relate to similar frequency distributions noted for both the Sawdust Bay-2 and Kant sites, suggesting that these Middle Woodland components may be placed within the Ottawa Valley Phase. Unfortunately, data for other ceramic attributes, as well as for associated lithic materials is unavailable to provide a more complete comparison with Sawdust Bay-2. In addition no radiocarbon dates have been produced from this site.

Table 32. Distribution of rim sherd decorative impressions from the Meath Site: loci 2 and 4 (after Robertson and Croft 1975:3).

Decorative Impressions	Locus 2 (143 rims) %	Locus 4 (44 rims) %
Pseudo scallop shell	17.0	47.0
Dentate	22.0	13.0
Combination	11.0	16.0
Incised	9.0	9.0
Linear stamp	7.0	-
Dragged stamp	6.0	-
Unidentified	17.0	15.0
TOTALS	100.0	100.0

Despite the lack of data from the loci represented at Meath, the existing information suggests that the site holds some potential for the further definition of the Ottawa Valley Phase and towards understanding the group's relationships with preceding and subsequent cultural developments in the valley.

Marshall's Bay-1

Located on Lac des Chats on the Ottawa River, Marshall's Bay was excavated in the early 1970s by Clyde Kennedy. Ceramics from this site are predominantly pseudo scallop shell, simple dentate and complex dentate, although trailing and incising are also present (Kennedy 1974:2). The vessels are of coil manufacture with conical bottoms. In many cases, most of the exterior is decorated. Interior brushing has also been noted.

The lithic material consisted of thirty projectile points including corner notched, side notched and stemmed tang forms, end scrapers, flake tools, knives, biface blades, a gorget, two ground stone adzes, whetstones and hammerstones. The material utilized at the site included chert, quartz, quartzite and a small amount of jasper. Large amounts of hematite and some mica were also recovered (Clyde Kennedy, personal communication 1980).

A Middle Woodland radiocarbon date of A.D. 200 $\pm$ 60 was obtained from the site. Kennedy attributes most of the

material from Marshall's Bay-1 to a Middle Woodland occupation, although he indicates that a small number of lithic artifacts recovered suggests the presence of a Late Archaic component.

The spatial proximity of Marshall's Bay to Sawdust Bay (within one kilometer) and general affinities between ceramic assemblages provide a strong foundation for the identification of a distinct Middle Woodland expression within the Ottawa Valley, as well as producing possible clues regarding the relationship between this group and earlier, late Archaic populations.

Constance Bay

The Constance Bay Site is situated on the southern shoreline of the Ottawa River approximately fifty kilometers west of Ottawa. Excavated and analyzed by Gordon Watson (1972), the site produced ceramic material similar to Sawdust Bay-2. Four coil manufactured vessels were identified from the assemblage. Designs on the vessels are characterized by a predominance of pseudo scallop shell impressions. Incising, drag stamping and rocker stamping as well as interior brushing are also represented.

The lithic material from Constance Bay features a greater variation than represented at Sawdust Bay-2. Local cherts appear to be the primary material utilized

for tool manufacture. There are, however, at least two bifaces made of chert not indigenous to the Ottawa River Drainage Basin. The projectile points are comparable in size to those of Sawdust Bay-2, but feature a predominance of side-notched tang elements.

In an analysis of the faunal material from Constance Bay, Howard Savage (1972) indicates the presence of beaver, muskrat, porcupine, black bear, raccoon and moose. Turtle and fish elements were also identified. The poor preservation of the faunal material, in addition to the absence of a species count for the elements described, precluded any discussion of distributions.

The most significant feature of Constance Bay is the radiocarbon date of 490 ± 75 B.C. obtained from feature 1 (Watson 1972:2). An association of dentate stamp sherds with this feature has been suggested by Watson (1972). Given the possibility of an Early Woodland component at the site (based on the appearance of Meadowood-like blades), it is desirable that other samples be collected from the site and tested.

This date has been incorporated by Watson (1972), Finlayson (1977) and Spence et al. (1978) in suggesting the existence of the Point Peninsula Tradition by 500 B.C. This date corresponds with the contention by Wright (1967, 1972) and supported by Finlayson (1977) for the presence of Middle Woodland Traditions in Ontario by as early as 700 B.C.

This early date represents a major area of contention in Middle Woodland research in southern Ontario. The lack of association between diagnostic cultural materials, ceramics in particular, and the early dates obtained from other sites including the Montgomery Lake Second site, in addition to the clustering of other Ottawa River Drainage Basin site dates between 100 B.C. and A.D. 200 (Table 29), has led to the acceptance of this more conservative range as the temporal boundaries for the Ottawa Valley Phase.

Montgomery Lake Second Site

The Montgomery Lake Second Site, located on one of a series of small lakes, which are widenings of the Petawawa River, was excavated in 1965 by David Croft and Barry Mitchell (Mitchell 1969). The site features Middle and Late Woodland components, identified on the basis of ceramics. The site produced 38 identified vessels from 136 rims. Pseudo scallop shell and drag stamping represent the predominant decorative impressions. Dentate, rocker stamping and incising are also represented.

The lithic inventory from the site includes six projectile points, 56 scrapers, 6 knives and 8 bifaces. Chert is the dominant material of manufacture, although Mitchell (1969) notes the extensive use of quartz for scrapers. The association of ground stone tools and a few

copper implements with the identified Middle Woodland component is not clear.

Two dates produced from the site (see Table 29) were recovered from cremations. Unfortunately there is no direct association between the earlier date of 430 ± 90 B.C. and material diagnostic of the Middle Woodland. The second date, A.D. 90 ± 80, was associated with sherds of banded pottery (Mitchell 1969:36).

The abundance of pseudo scallop shell impressions along with the presence of dentate stamping and interior brushing, suggests an affinity between Montgomery Lake and Sawdust Bay-2 ceramics. The dominance of drag stamp impression serves in contrast to the assemblage from Sawdust Bay-2. The projectile points are similar in size, form and material to those recovered from Sawdust Bay-2.

Other Sites in the Ottawa Valley

A number of other small Middle Woodland components have been identified by Mitchell et al. (1970) in Algonquin Park along the Petawawa River system. Ceramics from these sites feature predominantly pseudo scallop shell decorations with drag stamp, dentate stamp and rocker stamping also represented. Interior brushing has been noted for the pseudo scallop shell impressed sherds.

The small sample size and comparative absence of

data restrict the importance of these sites in this discussion. The Whitson Lake I site yielded a "...thick crude rim decorated with oblique stamp..." (Mitchell, et al. 1970:34), which Mitchell considers to be Saugeen. A rim sherd from the McManus 2 Site has been identified by Mitchell as being Laurel.

The Radiant Lake 3 Site produced a date of 215 ± 75 B.C. in association with Middle Woodland ceramics (Wilmeth 1978). This date, although somewhat early, falls within the time range suggested for the Ottawa Valley Phase, with which the ceramics of this component may be identified.

Material from the Hynes site, on the Ottawa River, recovered by Kennedy (Price and Kennedy 1961:16) included ceramics featuring pseudo scallop shell and rocker stamp impressions. The presence of exterior bosses and rocker stamping is regarded by Wright as evidence for the blending of the Laurel and Hopewell Traditions (1967:111).

Data from Middle Woodland sites in the lower Ottawa Valley, for either Ontario or Quebec, for all intents and purposes, is nonexistent. Roger Marois (1975) has identified a Middle Woodland component in the Gatineau River Drainage Basin, but the sample obtained is extremely small. Middle Woodland ceramics have been recovered from the Casselman 1 Site on the South Nation River by Wintemberg

and James F. Pendergast, but they have not been analyzed.

Other Point Peninsula Phases

Ritchie (1969, 1973) has identified a number of phases within the Point Peninsula Tradition, consisting of Canoe Point, Kipp Island and Hunter's Home. Differences in the temporal and spatial distribution of the latter two phases restrict the possible insight they may provide to the Ottawa Valley Phase. Their spatial definition is primarily limited to New York State and occurs within a time period that follows the proposed temporal boundaries of the Ottawa Valley Phase.

Canoe Point ceramics feature conoidal based vessels with thin pointed or rounded lips. The decorative impressions characterizing this phase include dentate, complex dentate and rocker stamping. Pseudo scallop shell impressions are regarded as a minor technique (Ritchie and Funk 1973:117).

Ritchie and Funk complete the description of the Canoe Point Phase as follows:

> The sites, always small, produce scanty artifactual and food refuse remains. Stemmed and side-notched points, the latter predominating, represent the weapons used in hunting such game as deer, bear, beaver, turkey and waterfowl. Notched pebble net-sinkers, barbs from compound fishhooks, the copper fishhook and gorge, antler toggle-head harpoons, and barbed-bone points comprise the artifactual evidence for fishing (1973:117-118).

Sites attributed to this phase by Ritchie include Grindstone Island on the St. Lawrence River, Vinette, O'Neil in western New York and East Sugar Island on Rice Lake (Ritchie and Funk 1973:117). Ritchie has also subsumed the Saugeen, initially identified by Wright and Anderson (1963) as a "focus" with this phase. However, in this paper the Saugeen, as defined by Wright (1967, 1972) and Finlayson (1977), is regarded as a separated tradition distinguishable from the Point Peninsula.

The definition of the Canoe Point Phase itself was originally based on the identification of a single complete vessel from the site of Canoe Point on Grindstone Island (J.V. Wright, personal communication, 1980). The tentative basis for the initial identification of this phase has caused doubts concerning the utility of the term. Current research on the Ault Park and Gordon Island Sites by Robert Pihl, should serve to provide a more adequate basis for the identification of early Point Peninsula sites in the St. Lawrence Valley and Lake Ontario region.

The chronological definition of Canoe Point is vague. Only two dates from identified components exist. These are from the O'Neil site (A.D. 240 $\pm$ 80) and the Cottage Site (A.D. 140 $\pm$ 100).

In general terms Sawdust Bay-2 contrasts with sites attributed to the Canoe Point Phase on the basis of the predominance of pseudo scallop shell impressions and low

frequency of rocker stamp impressions. In addition the projectile points represented at Sawdust Bay-2 are not predominantly side-notched, and there is no indication either from the faunal remains or artifacts recovered that fishing was a primary subsistence activity.

Sawdust Bay-2 does provide general similarities in the types of decorative impressions represented, site size, and its estimated chronological date of between 100 B.C. and A.D. 200. These similarities serve to identify both the Ottawa Valley and the Canoe Point Phases to the Point Peninsula Tradition.

The series of Point Peninsula mound sites on Rice Lake, including the Serpent Mounds (Johnston 1968) and Cameron Point (Spence 1968) have been distinguished as a phase by Johnston (1968a). Johnston's (1968) discussion of the material does suggest ceramic affinities between the Serpent Mounds and the Kant Site through the relatively high frequencies of pseudo scallop shell and dentate decorative impressions. However, the burial features of the mounds themselves serve to differentiate the two sites. In addition Johnston's identification of Rice Lake banded, a ceramic type featuring linear complex dentate impressions arranged in band motifs, is not found in the Ottawa River Drainage Basin. These traits indicate that a distinction may be made between Sawdust Bay-2 and the Serpent Mounds. However, the relationship between the Ottawa Valley Phase

and the Rice Lake Sites remains to be more completely explored.

Laurel Tradition

The Laurel Tradition was initially identified by Wilford (1943) on the basis of several large mounds excavated in northern Minnesota. MacNeish (1958) identified regional Laurel expressions in southeastern Manitoba. Wright (1967) has identified the Laurel for Ontario in his synthesis of the Middle Woodland for the province. Janzen's (1968) report on the Naomikong Point Site extended the spatial identification of this tradition to Michigan. Stoltman (1973, 1974) has provided the most recent synthesis for the Laurel.

Stoltman (1973) has characterized the Laurel as a hunting and gathering culture featuring an emphasis on fishing. Moose and beaver are cited as being particularly important among the mammalian species (Stoltman 1973:113).

Addition characteristics, noted by Stoltman, which Laurel groups share with other Middle Woodland populations include:

> ...the construction of burial mounds at some sites; secondary burials accompanied often by red ocher; a variety of stemmed and notched projectile points; an abundance of end-scrapers; the cold hammering of native copper into simple forms like awls

> and beads; hafted beaver incisor tools; and a distinct ceramic industry whose hallmark is a simple, conoidal-based, grit-tempered vessel with a variety of dentate stamps... (1973:113).

The primary distinguishing features of Laurel ceramics include: (1) absence or extremel paucity of cord marking of any kind; (2) confinement of decorative application to the upper portion of the vessel; (3) frequent use of bosses and/or punctates; (4) absence or extreme paucity of rocker stamping and (5) absence of interior channelling (Stoltman 1973:114).

In addition to these characteristics the Laurel Tradition features a very small polished stone industry with a complete absence of axes and adzes, a greater incidence of burial mounds and the practice of post mortem tapping of human skulls and long bones (Stoltman 1973:114).

This general pattern, excluding the mound construction, appears to be representative of Laurel components identified for northern Ontario by Wright (1967). Ceramic data provided by Wright (1967:120) indicate the predominance of pseudo scallop shell and dragged stamp techniques. Design applications also represented include dentate stamp, plain, incised and linear punctate.

The chronological placement of Laurel is a variant issue. Wright (1967, 1972) has hypothesized a time range extending from 700 B.C. to A.D. 1000. The early range is

largely based on the association of Laurel and Saugeen ceramics with a date of 530 ± 60 B.C. from the Donaldson Site in southwestern Ontario (Wright and Anderson 1963: 50). More recently, dates from the Michipicoten Harbour Site and the Wawa Site (1165 B.C. and 535 B.C. respectively) have served to verify this range (J.V. Wright, personal communication, 1981).

Sites in northern Ontario, however, feature dates ranging between 100 A.D. and 700 A.D. (e.g., Heron Bay A.D. 610 ± 170 and Sand River A.D. 320 ± 100). These dates coincide with Stoltman's more conservative estimate of 300 B.C. to A.D. 900 for the Laurel. This range appears to have greater support among other researchers in the United States.

The Laurel Tradition features a number of phases including the Pike Bay and McKinstry Phases for Minnesota and possibly northwestern Ontario (Stoltman 1973), the Anderson and Nutmik for southeastern Manitoba (MacNeish 1958) and the most recently proposed eastern Laurel in northeastern Ontario (Pollock 1976).

The material from Sawdust Bay-2 features similarities to the Laurel Tradition. Common traits include the predominance of pseudo scallop shell impressions and the absence of cord wrapped stick as well as a small incidence of rocker stamping. The comparative frequency of undecorated and decorated body sherds is close to that indicated by

Stoltman for Laurel sites (1973:114).

Features of the Sawdust Bay-2 assemblage not shared with the Laurel Tradition include the presence of interior brushing, the absence of bosses and the paucity of punctate impressions and drag stamping.

There have been no burial mounds, of the nature attributed to the Laurel, found on Point Peninsula sites in the Ottawa Valley. Middle Woodland burials are limited in the Ottawa Valley to the Montgomery Lake Second Site, the Kant Site and the Adena burial near Pembroke, identified by Kennedy (1980).

Lithic tool forms at Sawdust Bay-2 appear to be similar to Laurel lithic assemblages. However, the even ratio of scrapers to projectile points contrasts with the comparatively high ratio of scrapers to projectile points noted for Laurel sites (Wright 1967; Janzen 1968; Stoltman 1973).

The Laurel dependency upon fish noted by Stoltman (1973:113) contrasts with the predominance of mammals, in addition to the absence of fishing artifacts and copper at Sawdust Bay-2.

Although there are similarities between Sawdust Bay-2 and Laurel, the differences in certain ceramic attributes and inferred subsistence patterns are sufficient to distinguish the site from the Laurel Tradition. The similarities do suggest, however, that there was an interaction between groups of the Laurel Tradition and the

Ottawa Valley Phase. The nature and extent of this interaction remains to be determined.

Saugeen Tradition

Initially identified and defined by Wright (Wright and Anderson 1963; Wright 1967, 1972) the Saugeen Tradition has been most recently synthesized by Finlayson (1977).

The Saugeen Tradition represents a hunting and gathering culture occuping most of southwestern Ontario between 700 B.C. and A.D. 800 (Finlayson 1977:vi). The subsistence pattern of these people was characterized by a predominance of fish, evidenced by the location of sites near aquatic resources, large number of fish remains and the presence of fishing implements, including netsinkers and toggle head harpoons.

The ceramic complex of the Saugeen Tradition features grit tempered, coil manufactured vessels. The vessel shapes are generally semi-globular with conoidal bases. Rim profiles are generally outflaring, occasionally vertical, but rarely inflaring. Decorative impressions include a concentration in frequency of pseudo scallop shell and dentate impressions. Other designs represented include linear punctate, annular punctate, cord wrapped stick and rocker stamp. Generally the entire exterior surface of the vessel is decorated, and there is a moderately

high incidence of interior brushing (Finlayson 1977:616-620).

The lithic inventory features a dominance of chert scrapers, followed in order of frequency by bifaces and projectile points. Many of the bifaces are thought to be cache blades (Finlayson 1977:622). The projectile points feature a variation in tang type including side-notched, corner-notched and stemmed. In addition, Finlayson (1977: 623) notes the predominant use of non-local cherts in the manufacture of chipped stone tools.

Other artifacts noted for the Saugeen Tradition include shell beads, modified rodent incisors, harpoons and bone points. Ground stone tools include hammerstones, celts, anvilstones, abraders, netsinkers and gorgets. The presence of hematite and mica is also noted by Finlayson (1977:625).

The occurrence of pseudo scallop shell and dentate impressions, as well as interior brushing at Sawdust Bay-2 compares favourably with ceramic attributes noted for the Saugeen. The general range in projectile points and prevalence of end scrapers also provide similarities.

Differences are discernable in the comparative importance of punctate and cord wrapped stick impression for Saugeen ceramics. Both punctate and cord wrapped stick are poorly represented at Sawdust Bay-2. Other differences in the ceramic assemblages include the

dominance of interior and lip designs on Saugeen rims, as well as the greater frequency of vessels featuring entire exterior decorations.

Other differences observed in the assemblages include the uneven ratio of scrapers to projectile points, the use of non-local cherts and relatively high frequency of bone tools including rodent incisors and projectile points.

Existing information suggests that the subsistence patterns of the Saugeen are more extensively oriented towards fishing than can be thus far determined for the Point Peninsula components in the Ottawa Valley. The site sizes also appear to be distinct, Saugeen featuring larger occupation units. A functional variation in the identified sites for both areas could also be a factor in this difference.

Finlayson (1977) also notes temporal changes in the frequency distribution of ceramic designs, indicating that pseudo scallop shell decreased in importance while there was a corresponding increase in dentate designs. Wright (1976) notes a similar pattern for Laurel ceramics with pseudo scallop shell impressions being replaced in popularity by dentate stamping from early to late.

It is possible that differences in ceramic impressions between Sawdust Bay-2 and the Kant Site, discussed earlier, represent temporal changes in the popularity of

designs within the Ottawa Valley. Differences in certain ceramic motifs for the Ottawa Valley have been suggested by Watson (Gordon Watson, personal communication, 1981). I believe, however, that there are insufficient data to indicate such changes at the present time.

Other Influences

The only other evidence of influence from contemporaneous traditions or cultures occurs with the Adena-Hopewell groups of the Ohio Valley. These influences on the Point Peninsula Tradition have been suggested by a number of researchers (Ritchie 1969; Johnston 1968; Wright 1967).

The Late Adena Robbins blades from a burial near Pembroke (Kennedy 1980) and a ground sandstone gorget at Marshall's Bay (Kennedy 1974) as well as the Hopewellian associated trait of rocker stamping has provided evidence of possible influences from these southern cultures. The rocker stamp decorative motif is the only Hopewellian associated trait found at Sawdust Bay-2.

Aside from the work on Pointe-du-Buisson (Clermont 1978), comparatively little is known of eastern Middle Woodland groups from eastern Quebec and the maritime provinces. Clyde Kennedy (1977) has indicated that,

apart from any Laurel and Point Peninsula influences on the Ottawa Valley, origins of the Ottawa Valley Phase should be sought through southern Quebec, where similar ceramics are found, and into the Maritimes where relatively little archaeological research has been carried out.

I suspect that the work presently in progress directed towards defining the Middle Woodland occupations of the St. Lawrence River Drainage Basin is of more immediate importance to understanding the development of the Ottawa Valley Phase. How these developments and those occurring in other parts of the region (e.g., definition of the Western Basin Tradition by Stothers et al. 1979) reflect on the Middle Woodland period of the Ottawa River Drainage Basin remain to be more completely explored.

CHAPTER V

SUMMARY AND CONCLUSION

This chapter has been divided into two parts. In the first a brief summarizing statement is made concerning Sawdust Bay-2. In the second part a definition, based primarily on the Sawdust Bay-2 assemblage, of the Ottawa Valley Phase of the Point Peninsula Tradition is provided.

Sawdust Bay-2

The material recovered from Sawdust Bay-2 on the Ottawa River represents a Middle Woodland site. A radiocarbon date of 3560 ± 290 B.P. (1610 B.C.) obtained from a feature lacking a direct association with ceramics and finished stone tools suggests an otherwise unidentified Late Archaic component.

Although the artifact assemblage from Sawdust Bay-2 is small, it includes lithic, ceramic and faunal material. The lithic material is characterized by the use of locally collected cherts, featuring small chipped stone projectile points and scrapers. Rough stone tools are few and ground stone tools are absent.

The ceramic assemblage is characterized by grit tempered, coil manufactured vessels, featuring a distinct predominance of pseudo scallop shell impressions.

The faunal remains feature a dominance of mammalian species. Species represented include beaver, dog or wolf, moose, white-tailed deer, goose, turtle and catfish. Fresh water shell fragments were also recovered from the site.

Evidence from the faunal remains suggests that Sawdust Bay-2 was occupied during either the early spring or early fall. The location of the site on Lac des Chats, within easy access to a swamp, indicates that hunting was an important feature of the subsistence patterns of the people represented by this occupation.

Ottawa Valley Phase

The material from Sawdust Bay-2 shows general similarities in both ceramic and lithic attributes with other Middle Woodland sites from the Ottawa Valley. This similarity extends to those characteristics identified by Ritchie (1969) for the Point Peninsula Tradition. However, distinctions noted by other researchers for Middle Woodland sites in the Ottawa Valley (Kennedy 1977; Emerson 1955) in addition to those noted in the preceding discussion of Sawdust Bay-2, have resulted in the identification of the Ottawa Valley Phase within the Point Peninsula Tradition.

The Ottawa Valley Phase is defined as a distinguishable archaeological unit in the Ottawa River Drainage Basin, occurring between approximately 100 B.C. and A.D. 200. This group featured a hunting and gathering subsistence pattern. Existing data suggest that, unlike Laurel populations to the west, Saugeen to the south and other Point Peninsula Phases to the east, fishing was not a prominent subsistence activity for the Ottawa Valley Phase.

Subsistence exploitation appears to have been concentrated around lakes and adjacent swamps. Mammals hunted include moose, deer, beaver, porcupine, muskrat and raccoon. Other animals utilized include goose, turtle and catfish. Clams appear to have also provided a portion of the subsistence. The absence of floral remains from Middle Woodland sites identified in the Ottawa Valley presents a gap in completing the subsistence reconstruction of the Ottawa Valley Phase.

Particularly diagnostic of the Ottawa Valley Phase is its ceramic complex, featuring grit tempered, coil manufactured vessels. Decorative impressions are characterized by a predominance of pseudo scallop shell and simple dentate impressions. Other decorative impressions include linear stamping, complex dentate, drag stamp, punctate, rocker stamp, trailing and incising. The vessel exteriors are generally smooth in finish while between a

quarter to one third of the vessels have brushed interiors.

The lithic assemblage includes the utilization of predominantly local chert, small chipped stone tools, including medium to small projectile points, scrapers, drills and utilized flakes. Rough stone tools, comparatively few in number, include whetstones or abraiders and hammerstones. Groundstone tools are rare.

Sites which have been tentatively assigned to this phase include Sawdust Bay-2, Marshall's Bay-1, Kant, Constance Bay, Meath and Montgomery Lake Second Site. These sites feature lacustrine locations along major drainage routes. They are also comparatively small suggesting that this Phase represents a number of small but related bands. The seasonal movement and spatial range of these groups remains to be determined.

The nature and extent of relationships between the bands of this Phase and other neighbouring phases remains to be more completely developed. The attributes shared with both Laurel sites and other Point Peninsula sites identified for eastern Ontario and the St. Lawrence indicate a moderate to strong association with the Ottawa Valley Middle Woodland groups.

The origins and subsequent development of the Ottawa Valley Phase remain unknown. These unanswered questions, coupled with the need for a more complete identification of the Ottawa Valley Phase, than provided

in this treatment, remain outstanding objectives for future research. The intent of this discussion has been largely to stimulate this research as well as provide some immediate answers regarding the classification of Sawdust Bay-2.

BIBLIOGRAPHY

Adams, Nick
1979 "Painted Middle Woodland Pottery from Whitfish Island, Sault Ste. Marie." In Arch Notes, *Newsletter of the Ontario Archaeological Society*, 79-2, pp. 12-13. Toronto.

Banfield, A.W.F.
1974 *The Mammals of Canada*. National Museum of Natural Sciences, National Museums of Canada. Toronto: University of Toronto Press.

Binford, Lewis R.
1963 "A Proposed Attribute List for the Description and Classification of Projectile Points." In *Miscellaneous Studies in Typology and Classification*, by A.M. White, L.R. Binford, M.L. Papworth. Museum of Anthropology, Anthropological Papers No. 19, pp. 193-221. Ann Arbor: University of Michigan.

Binford, Lewis R. and Mark L. Papworth
1963 "The Eastport Site, Antrim County, Michigan." In *Miscellaneous Studies in Typology and Classification*, by A.M. White, L.R. Binford, M.L. Papworth, Museum of Anthropology Anthropological Papers No. 19. Ann Arbor: University of Michigan.

Binford, Lewis R. and George I. Quimby
1963 "Indian Sites and Chipped Stone Materials in the Northern Lake Michigan Area." *Fieldiana Anthropology* 36(12). Chicago: Chicago Natural History Museum.

Brose, David S.
1970 *The Archaeology of Summer Island: Changing Settlement Systems in Northern Lake Michigan*. Museum of Anthropology, Anthropological Papers, No. 41. Ann Arbor: University of Michigan.

Clermont, Norman
1977 "A Middle Woodland Site on Point-du-Buisson." *The Ottawa Archaeologist* 7(3):6-7. Ottawa: The Ottawa Chapter, Ontario Archaeological Society.

Clermont, Norman and Claude Chapdelaine
1978 "Une Station Csompolite du Sylvicole Moyen: Point-du-Buisson No. 3." *Canadian Journal of Archaeology* 2:79-106. Ottawa: Canadian Archaeological Association.

Cumbaa, Stephen L.
1980 *Notes on Animal Remains From the Sawdust Bay-2 Site Near Arnprior, Ontario.* Unpublished faunal report, Zooarchaeological Identification Centre, National Museum of Natural Sciences, Ottawa.

Daily, R.C. and J.V. Wright
1955 "The Malcolm Site: A Late Stage of the Middle Point Peninsula Culture in Eastern Ontario." *Transactions of the Royal Canadian Institute* 31(Part I):3-23. Toronto.

Emerson, J.N.
1955 "The Kant Site: A Point Peninsula Manifestation in Renfrew County, Ontario." *Transactions of the Royal Canadian Institute* 31(Part I):24-66. Toronto.

Finlayson, William David
1977 *The Saugeen Culture: A Middle Woodland Manifestation in Southwestern Ontario.* National Museum of Man, Mercury Series. Archaeological Survey of Canada, Paper 61. Ottawa: National Museums of Canada.

Fitting, James E.
1970 *The Archaeology of Michigan.* The American Museum of Natural History. Garden City: The Natural History Press.

Griffin, James B.
1952 "Cultural Periods in Eastern United States Archaeology." *Archaeology of the Eastern United States*, edited by James B. Griffin. Chicago: University of Chicago Press.

1967 "Eastern North American Archaeology: A Summary." *Science* 156(3772):175-191. Washington, D.C.: American Association for the Advancement of Science.

Janzen, Donald E.
1968 *The Naomikong Point Site and the Dimensions of Laurel in the Lake Superior Region.* Museum of Anthropology, Anthropological Papers No. 36. Ann Arbor: University of Michigan.

Johnson, L. Lewis
1975 "Graph Theoretic Analysis of Lithic Tools from Northern Chile." *Lithic Technology,* edited by Earl H. Swanson. pp. 63-95. The Hague: Mouton.

Johnston, Richard B.
1968 *The Archaeology of the Serpent Mounds Site.* Art and Archaeology, Occasional Paper 10. Royal Ontario Museum, Toronto: University of Toronto.

1968a *Archaeology of Rice Lake, Ontario.* Anthropology Papers No. 19. National Museum of Canada, Ottawa: Department of the Secretary of State.

Kenyon, Walter A.
1968 *The Miller Site.* Art and Archaeology, Occasional Paper 14. Royal Ontario Museum. Toronto: University of Toronto.

Kennedy, Clyde C.
1970 *The Upper Ottawa Valley.* Renfrew County Council, Pembroke, Ontario.

1974 "A Woodland Site Near Arnprior, Ontario." A paper presented to the Ottawa Chapter, Ontario Archaeological Society, February, 1974, summarized in *Archaic Notes Newsletter of the Ottawa Chapter.* Ontario Archaeological Society, pp. 1-2, March 1974, Ottawa.

1977 "Characteristics of the Middle Woodland in the Ottawa River Drainage Basin." A paper presented at the 1977 Canadian Archaeological Association Conference, Ottawa. Abstracts.

1980 "An Adena Burial in the Upper Ottawa Valley." A paper presented at the 1980 Canadian Archaeological Association Conference, Saskatoon. Abstracts.

MacNeish, Richard S.
1958 *An Introduction to the Archaeology of Southeastern Manitoba.* National Museum of Canada, Bulletin No. 157. Ottawa: Department of Northern Affairs and National Resources.

Marois, Roger J.M.
1974 *Les Schemes d'Establissement a la Fin de la Prehistoire et au Debut de la Periode Historizue: Le Sud du Quebec.* National Museum of Man, Mercury Series. Archaeological Survey of Canada Paper 17. Ottawa: National Museums of Canada.

Mason, Ronald J.
1966 *Two Stratified Sites on the Door Peninsula of Wisconsin.* Museum of Anthropology, Anthropological Papers No. 26. Ann Arbor: University of Michigan.

Mitchell, Barry M.
1969 "Archaeology of the Petawawa River. The Second Site at Montgomery Lake." *The Michigan Archaeologist* 15(1,2):1-53;1-53.

Mitchell, B.M., P.J. Butler, J. Ford and J. Lance
1966 "The Multi-component Montgomery Lake Site." *Ontario Archaeology* 9:4-24. Toronto: Ontario Archaeological Society.

Mitchell, B.M., D.A. Croft, P.J. Butler and R.J. Cawthorn
1970 "The Petawawa Small Sites Report." *Ontario Archaeology* 15:20-53. Toronto: The Ontario Archaeological Society.

Montet-White, Anta
1968 *The Lithic Industries of the Illinois Valley in the Early and Middle Woodland Period.* Museum of Anthropology, Anthropological Papers No. 34. Ann Arbor: University of Michigan.

Noble, William C.
1975 "Van Beisen (AfHd-2): A Study in Glen Meyer Development." *Ontario Archaeology*, No. 24. Toronto: The Ontario Archaeological Society.

Noble, William C. and I.T. Kenyon
1972 "A Probable Early Glen Meyer Village in Brant County, Ontario." *Ontario Archaeology* 19:11-38. Toronto: The Ontario Archaeological Society.

Pollock, John William
1976 *The Culture History of Kirkland Lake District, Northeastern Ontario.* National Museum of Man, Mercury Series, Archaeological Survey of Canada, Paper 54. Ottawa: National Museums of Canada.

Price (Mrs.) Carl and Clyde C. Kennedy
1961 *Notes on the History of Renfrew County.* Renfrew County Council, Pembroke, Ontario.

Ritchie, William A.
1969 *The Archaeology of New York State.* Garden City: The Natural History Press.

1944 *The Pre-Iroquoian Occupations of New York State.* Rochester Museum of Arts & Sciences, Memoir 1, Rochester.

Ritchie, William A. and Robert E. Funk
1973 *Aboriginal Settlement Patterns in the Northeast.* New York State Museum and Science Service, Memoir 20, Albany.

Ritchie, William A. and Richard S. MacNeish
1949 "The Pre-Iroquoian Pottery of New York State." *American Antiquity* 15(2):97-124. Menasha: The Society for American Archaeology.

Robertson, Don S.
1977 "The Meath Site." *The Ottawa Archaeologist* 7(3):2-5. The Ottawa Chapter of the Ontario Archaeological Society, Ottawa.

Robertson, Don S. and David Croft
1975 "The Meath Site." *Archaic Notes, Newsletter of the Ottawa Chapter.* Ontario Archaeological Society, pp. 1-4, June 1975, Ottawa.

Rowe, J.S.
1972 *Forest Regions of Canada.* Canadian Forestry Service. Ottawa: Department of Fisheries and the Environment.

Savage, Howard
1972 "Faunal Findings at the Constance Bay Site No. 1 (BiGa-2)." *Ontario Archaeology* 18:25-36. Toronto: Ontario Archaeological Society.

Spence, Michael W.
1967 *A Middle Woodland Burial Complex in the St. Lawrence Valley.* Anthropology Papers No. 14, National Museum of Canada. Ottawa: Department of the Secretary of State.

Spence, M.W., W.D. Finlayson and R.H. Pihl
1979 "Hopewellian Influences on Middle Woodland Cultures in Southern Ontario." *Hopewell Archaeology*, edited by David Brose and N'omi Greber, pp. 115-121. Kent State Press.

Spence, Michael W. and J. Russel Harper
1968 *The Cameron's Point Site.* Art and Archaeology Occasional Paper 12, Royal Ontario Museum. Toronto: University of Toronto.

Stoltman, James B.
1973 *The Laurel Culture in Minnesota.* St. Paul: Minnesota Historical Society.

1974 "An Examination of Within-Laurel Cultural Variability in Northern Minnesota." *Aspects of Upper Great Lakes Anthropology,* edited by Elden Johnson. St. Paul: Minnesota Historical Society.

Stothers, David Marvyn
1977 *The Princess Point Complex.* National Museum of Man, Mercury Series, Archaeological Survey of Canada, Paper 53. Ottawa: National Museums of Canada.

Stothers, David M., M.G. Pratt and C.S. Orrin
1979 "The Western Basin Middle Woodland: Non-Hopewellians in a Hopewellian World." *Hopewell Archaeology,* edited by David Brose and N'omi Greber, pp. 47-58. Kent, Ohio: The Kent State University Press.

Watson, Gordon D.
1972 "A Woodland Indian Site at Constance Bay, Ontario. *Ontario Archaeology,* 18:1-24. Toronto: The Ontario Archaeological Society.

White, Anta M.
1963 "Analytic Description of the Chipped-Stone Industry from Syners Site, Calhoun County, Illinois." *Miscellaneous Studies in Typology and Classification* by A.M. White, L.R. Binford, M.L. Papworth. Museum of Anthropology, Anthropological Papers No. 19, pp. 1070. Ann Arbor: University of Michigan.

Wilford, Lloyd A.
1943 "A Tentative Classification of the Prehistoric Cultures of Minnesota." *The Minnesota Archaeologist* 9(4). Minneapolis.

Willey, Gordon R. and Philip Phillips
1958 *Method and Theory in American Archaeology.* Chicago: The University of Chicago Press.

Wilmeth, Roscoe
1978 *Canadian Archaeological Radiocarbon Dates.* National Museum of Man, Mercury Series, Archaeological Survey of Canada. Ottawa: National Museums of Canada.

Wintemberg, W.J.
1917 Unpublished letter to Harlin Smith regarding the discovery of the Kant Site. Archaeological Survey of Canada Archives, Ottawa.

Wright, James V.
1966 *The Ontario Iroquois Tradition.* National Museum of Man, Bulletin 210. Ottawa: National Museum of Canada.

1967 *The Laurel Tradition and the Middle Woodland Period.* National Museum of Canada, Bulletin 217. Ottawa: Department of the Secretary of State.

1972 *Ontario Prehistory, An Eleven-Thousand-Year Archaeological Outline.* Archaeological Survey of Canada, National Museums of Canada. Ottawa: National Museum of Man.

Wright, James V. and J.E. Anderson
1963 *The Donaldson Site.* National Museum of Canada, Bulletin 184. Ottawa: Department of Northern Affairs and National Resources.

Wright, Phillip J.
1981 "Emergency Salvage at the Steward Site: A Further Preliminary Report. *The Ontario Archaeologist, Newsletter of the Ottawa Chapter.* Ontario Archaeological Society 10(5): 2-6. Ottawa.

PLATES

PLATE 1. Sawdust Bay-2. (Photograph courtesy of Energy, Mines and Resources)

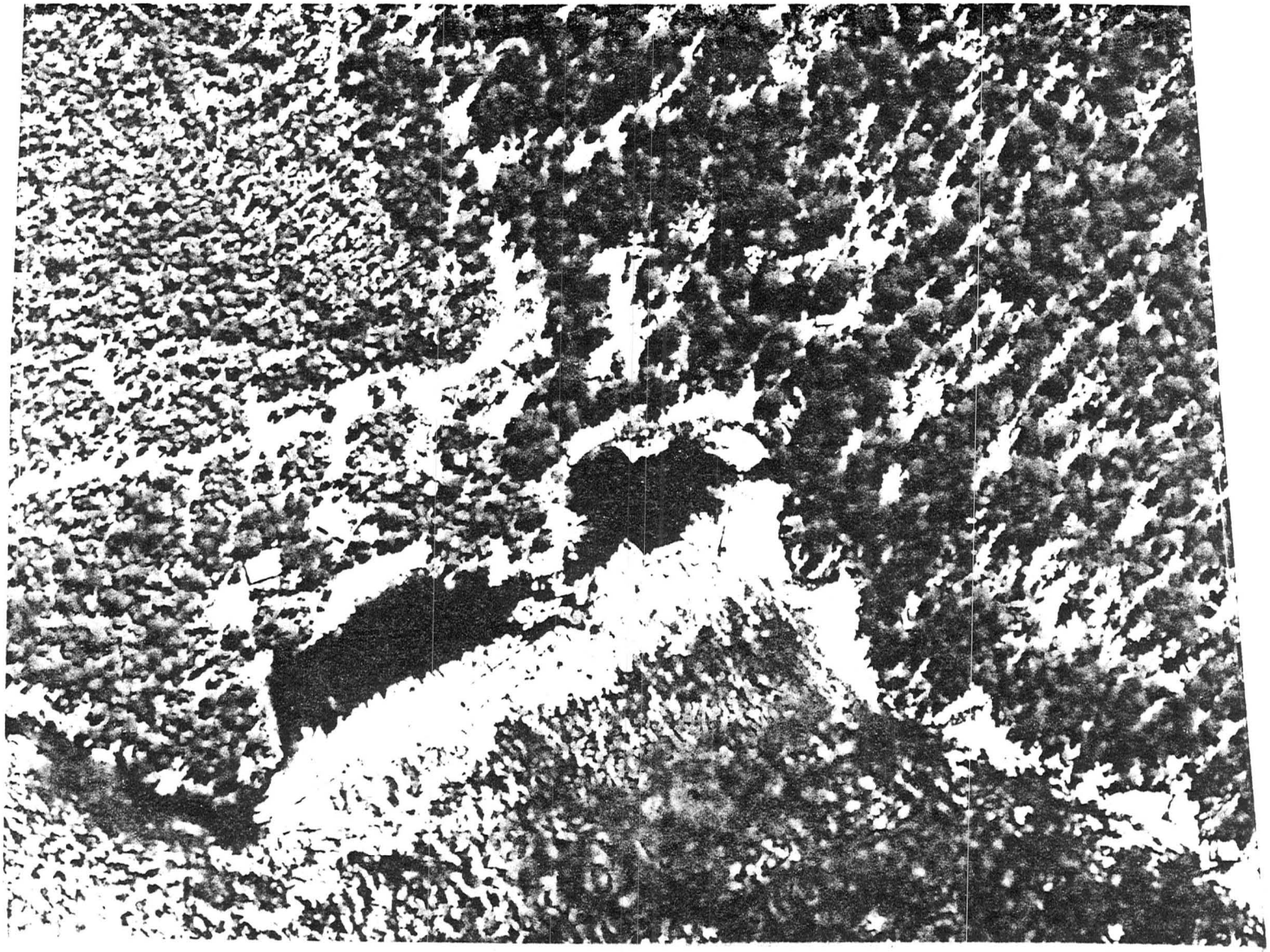


PLATE 2. Sawdust Bay-2 projectile points.

1-2 Corner notched chert points

3-4 Side notched chert points

5-6 Unnotched chert points

1

2

3

4

5

6

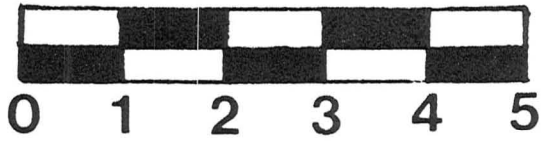


PLATE 3. Sawdust Bay-2 scrapers.

1 - chert end scraper

2 - chert side scraper

3 - chert side scraper

4 - chert end scraper

5 - quartzite side scraper

6 - chert side scraper

1

2

3

4

5

6

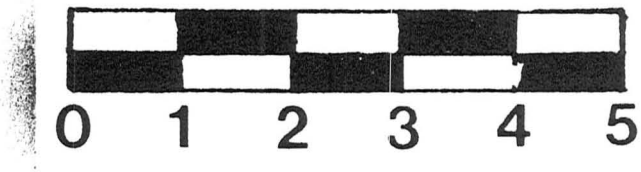
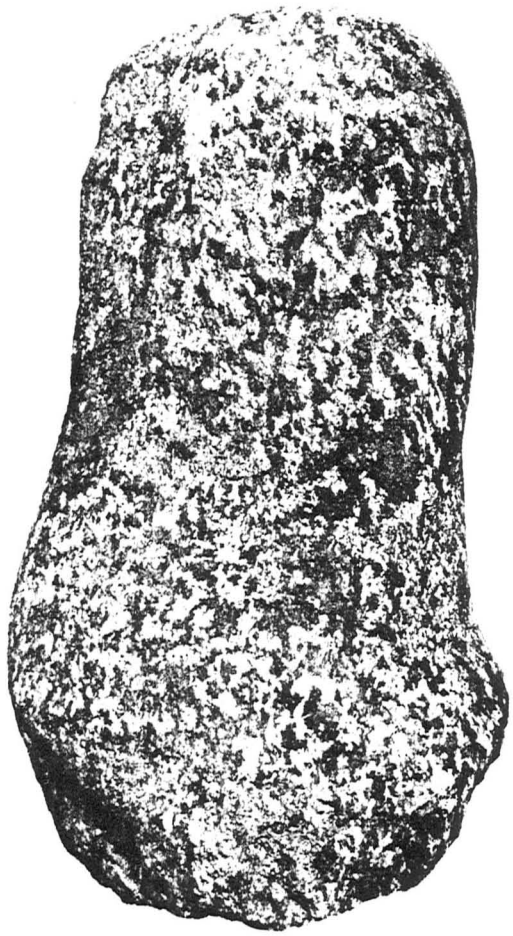


PLATE 4. Sawdust Bay-2 rough stone tools.

1 - grentitic hammerstone

2 - schist whetstone

3 - sandstone whetstone



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2

3

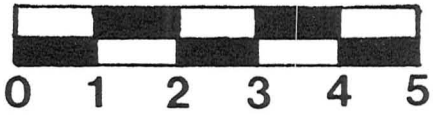
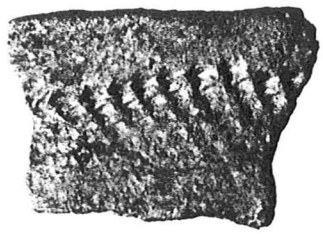


PLATE 5. Sawdust Bay-2 ceramics.

1-8 - pseudo scallop shell rim sherds

1



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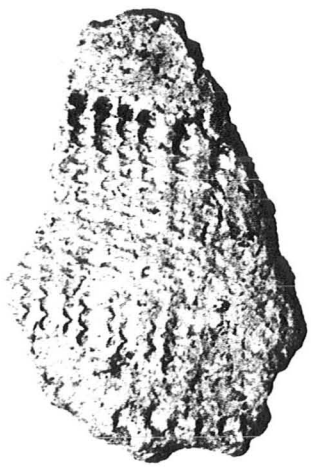
3



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7

8

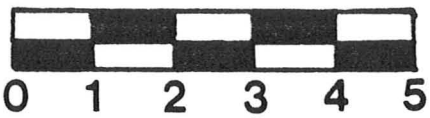


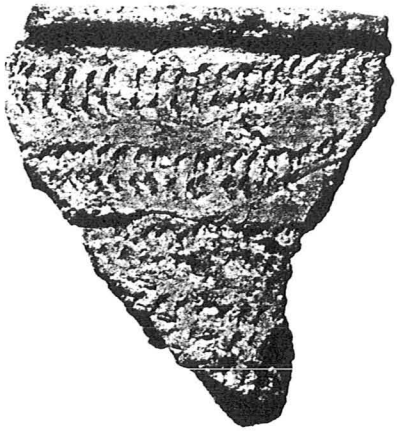
PLATE 6. Sawdust Bay-2 ceramics.

1-2 dentate stamp rim sherds

3 pseudo scallop rim sherd

4 pseudo scallop shell and punctate rim sherd

5 pseudo scallop and dentate rim sherd



1

2

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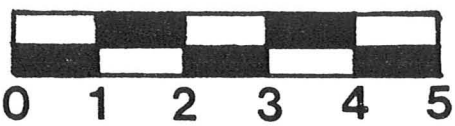
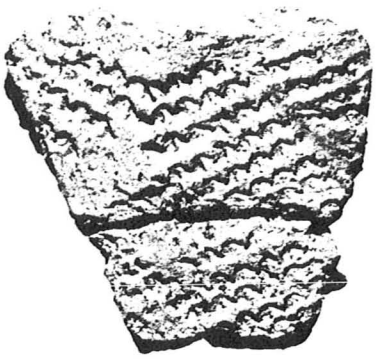


PLATE 7. Sawdust Bay-2 ceramics.

1-3 - Pseudo scallop shell body sherds



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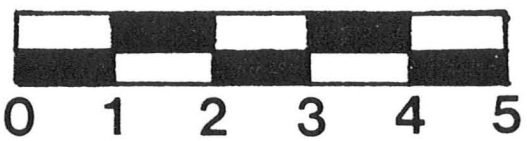
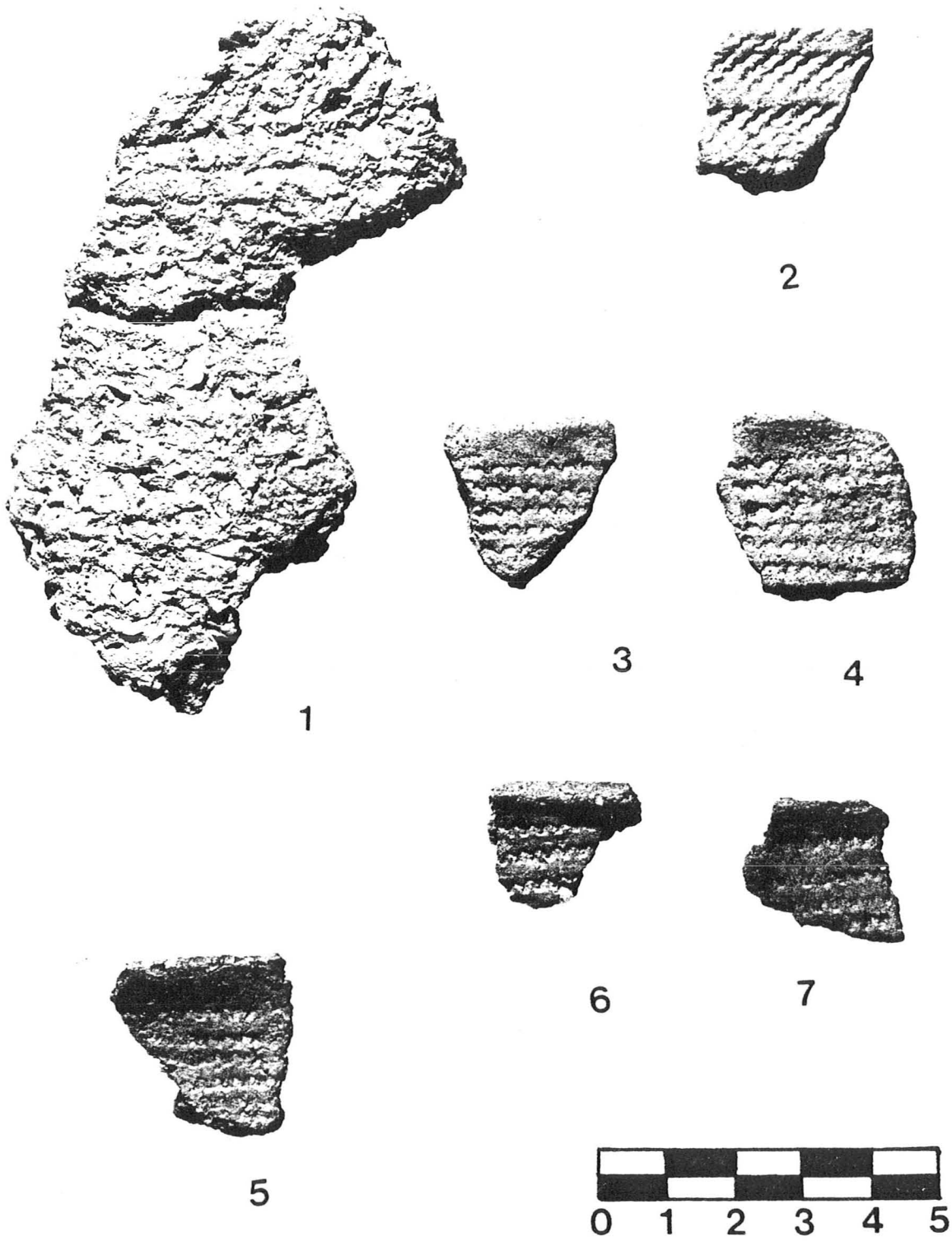


PLATE 8. Sawdust Bay-2 ceramics.

1-7 - Pseudo scallop shell rim sherds


1
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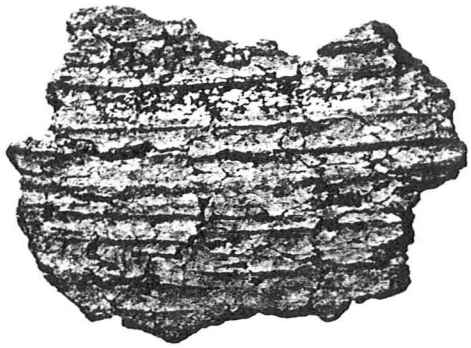
6
7
0 1 2 3 4 5

PLATE 9. Sawdust Bay-2 ceramics.

1,3,5,7 Pseudo scallop shell body sherds (vessel 5)

2,4,6 Interior brushing on body sherds (vessel 5)

1



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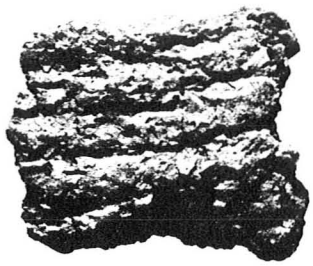

3

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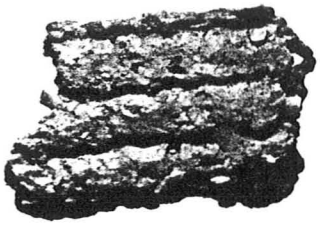

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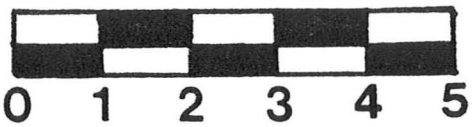
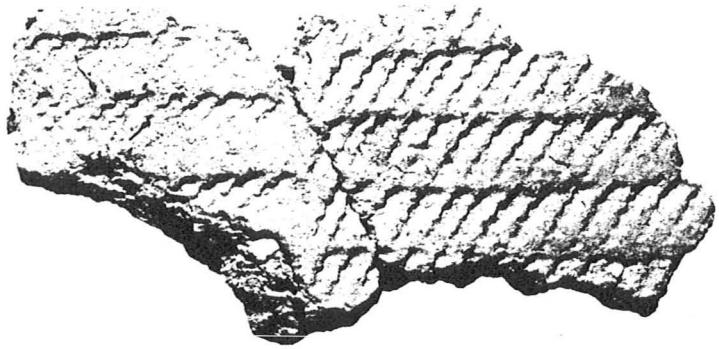


PLATE 10. Sawdust Bay-2 ceramics.

1,2,4 Pseudo scallop shell body sherds



1

2

3

4

PLATE 11. Kant ceramics.

1-3 - Dentate stamp rim sherds

4-5 - Dentate stamp body sherds

6-10- Rectangular dentate stamp body sherds

1 2 3

4 5 6

7 8 9

10

PLATE 12. Kant ceramics.

1-3 Pseudo scallop shell rim sherds

4-6 Pseudo scallop shell body sherds

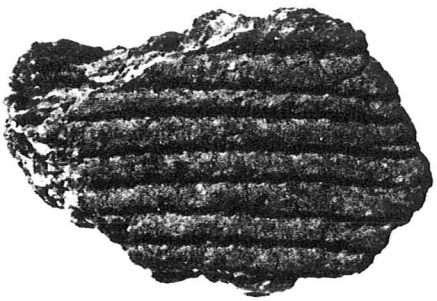
7 Dentate rocker stamp body sherd

1

2

3

4



5

6

7

cm

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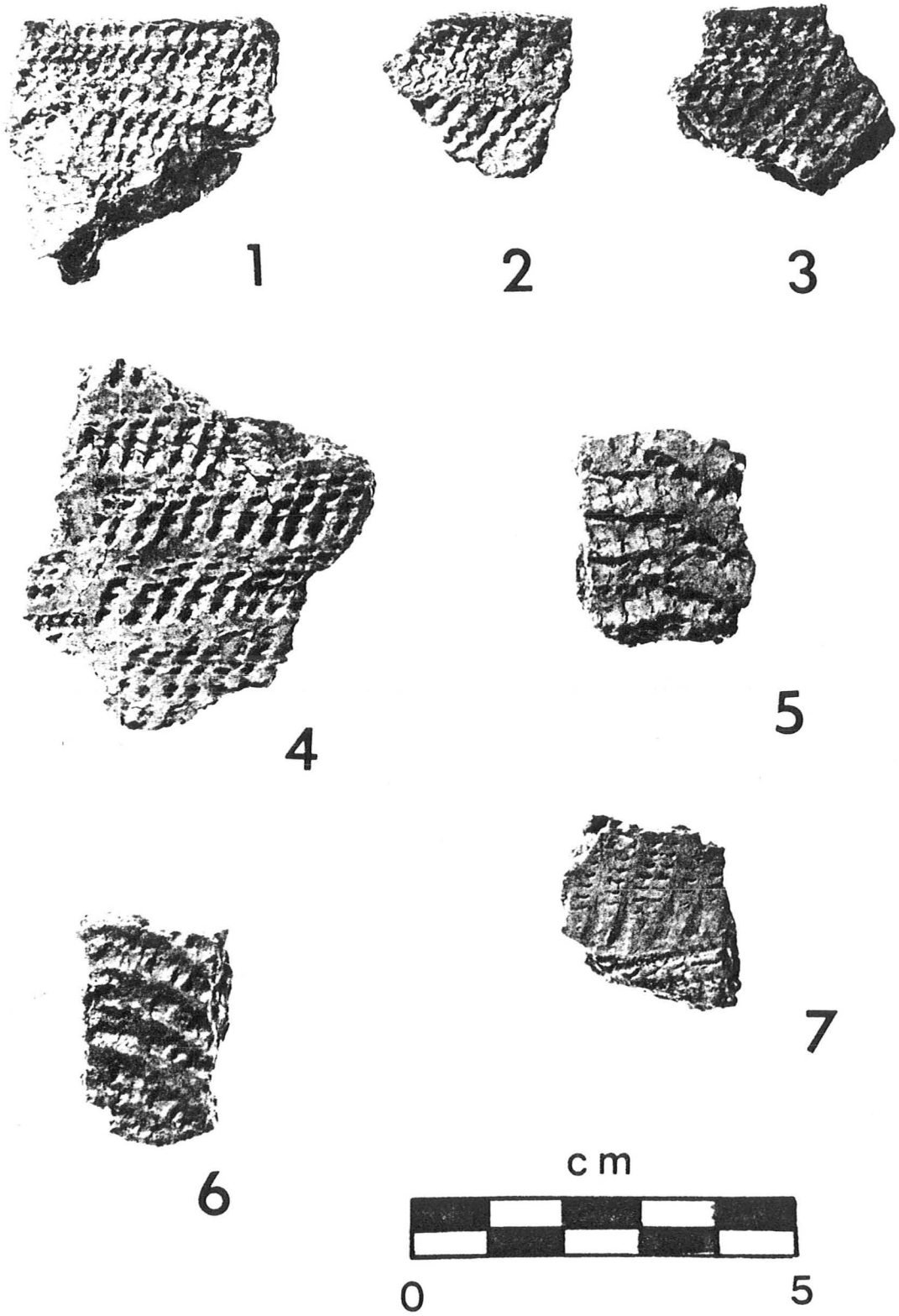
PLATE 13. Kant ceramics.

1-3 Complex dentate stamp rim sherds

4-7 Complex dentate stamp body sherds


1
2
3
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cm
0
5

PLATE 14. Kant ceramics.

1-10 Rectangular dentate stamp body sherds

1

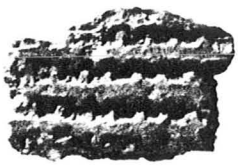
2

3

4

5

6



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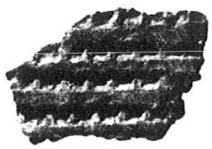

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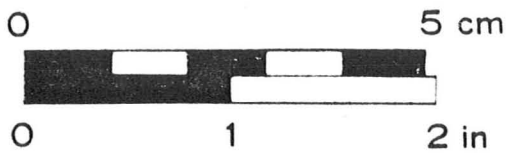
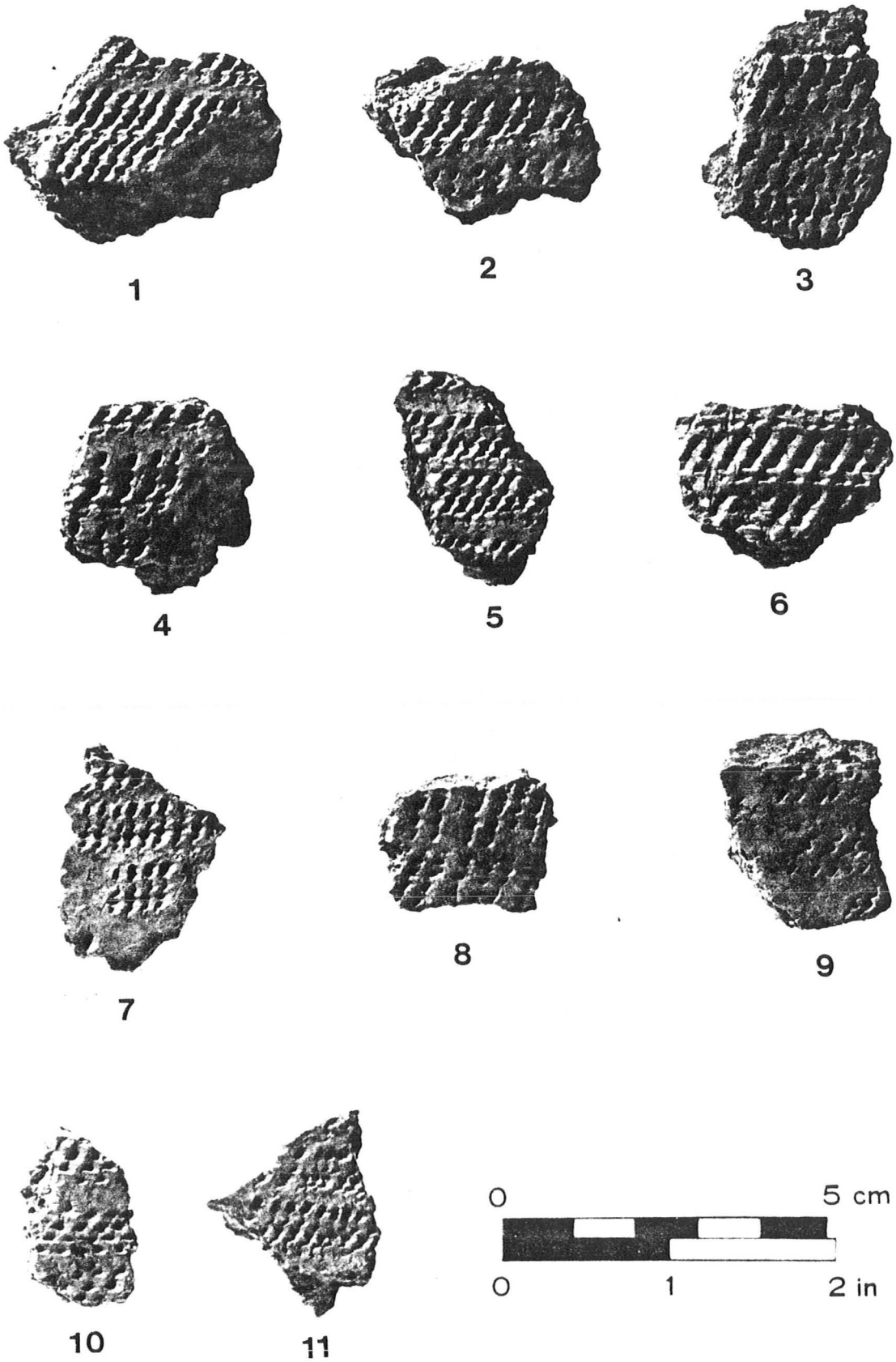


PLATE 15. Kant ceramics.

1-11 Complex dentate stamp body sherds


1
2
3
4
5
6
7
8
9
10
11
0
5 cm
0
1
2 in

APPENDIX 1: Kant Ceramic Data

Table 33. Distribution of sherd thickness for Kant ceramics.

Sherd Thickness (mm)	Rim Sherds No.	Rim Sherds %	Dec. Body Sherds No.	Dec. Body Sherds %	Undec. Body Sherds No.	Undec. Body Sherds %
5	1	8.0	2	3.0	-	-
6	5	38.0	4	6.0	-	-
7	3	23.0	4	6.0	3	25.0
8	1	8.0	13	18.0	2	17.0
9	2	15.0	13	18.0	2	17.0
10	1	8.0	9	13.0	5	41.0
11	-	-	9	13.0	-	-
12	-	-	11	16.0	-	-
13	-	-	5	7.0	-	-
TOTALS	13	100.0	70	100.0	12	100.0
$\bar{X}$	6.38 mm		9.56 mm		8.75 mm	
Range	5.0-10.0 mm		5.0-13.0 mm		7.0-10.0 mm	

Table 34. Distribution of temper type for Kant ceramics.

Temper Type	Rim Sherds		Dec. Body Sherds		Undec. Body Sherds	
	No.	%	No.	%	No.	%
Grit	15	100.0	121	98.0	29	100.0
Sand	-	-	1	1.0	-	-
Sand/Grit	-	-	1	1.0	-	-
TOTALS	15	100.0	123	100.0	29	100.0

Table 35. Distribution of temper size for Kant ceramics.

Temper Size (mm)	Rim Sherds No.	Rim Sherds %	Dec. Body Sherds No.	Dec. Body Sherds %	Undec. Body Sherds No.	Undec. Body Sherds %
1	2	13.0	17	14.0	2	7.0
2	1	7.0	30	24.0	14	48.0
3	11	73.0	57	46.0	12	41.0
4	-	-	12	10.0	1	4.0
5	-	-	2	2.0	-	-
6	1	7.0	4	3.0	-	-
7	-	-	1	1.0	-	-
TOTALS	15	100.0	123	100.0	29	100.0
$\bar{X}$	2.80 mm		2.50 mm		2.31 mm	
Range	1.0-6.0 mm		1.0-7.0 mm		1.0-4.0 mm	

Table 36. Distribution of primary decorative impressions for Kant rim sherds.

Impression	Exterior		Interior		Lip	
	No.	%	No.	%	No.	%
Complex dentate	5	33.0	-	-	2	25.0
Simple dentate	4	27.0	4	50.0	3	38.0
Pseudo scallop shell	4	27.0	3	38.0	-	-
Linear stamp	2	13.0	1	12.0	2	25.0
Channelling	-	-	-	-	1	12.0
TOTALS	15	100.0	8	100.0	8	100.0

Table 37. Distribution of primary decorative impressions for Kant body sherds.

Impression	No.	%
Simple dentate	38	31.0
Linear stamp	27	22.0
Complex dentate	24	20.0
Pseudo scallop shell	19	15.0
Dentate & pseudo scallop shell	7	7.0
Channelling	2	2.0
Pseudo scallop shell rocker stamp	3	2.0
Pseudo scallop shell/dentate/punctate	1	1.0
Cord impressed	1	1.0
Cord rocker	1	1.0
TOTALS	123	100.0

Table 38. Distribution of surface treatment for Kant rims.

Surface Treatment	Exterior		Interior	
	No.	%	No.	%
Smooth	15	100.0	5	33.0
Brushed	-	-	8	53.0
Paddled	-	-	-	-
Textured	-	-	-	-
Exfoliated	-	-	2	12.0
TOTALS	15	100.0	15	100.0

Table 39. Distribution of surface treatment for Kant body sherds.

Surface Treatment	Dec. Body Sherds				Undec. Body Sherds			
	Exterior		Interior		Exterior		Interior	
	No.	%	No.	%	No.	%	No.	%
Smooth	123	100.0	45	37.0	27	93.0	9	31.0
Brushed	-	-	31	25.0	2	7.0	3	10.0
Paddled	-	-	-	-	-	-	-	-
Textured	-	-	-	-	-	-	-	-
Exfoliated	-	-	47	38.0	-	-	17	59.0
TOTALS	123	100.0	123	100.0	29	100.0	29	100.0

Table 40. Kant rim profile distribution.

Profile Type	Rim Sherds	
	No.	%
1	0	0.0
2	0	0.0
3	0	0.0
4	3	20.0
5	4	27.0
6	7	47.0
7	0	0.0
8	1	16.0
9	0	0.0
TOTALS	15	100.0