THE FINCH SITE: A LATE IROQUOIAN SPECIAL PURPOSE SITE ON WEST CATFISH CREEK

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The Finch site is a small Iroquoian special purpose site situated on the West Catfish Creek that dates to the first half of the fifteenth century. It was discovered during the course of survey in advance of the construction of an Ontario Hydro transmission line. The threatened portions of the site were subsequently excavated and have provided new data concerning the Late Woodland settlement and subsistence practices along the north shore of Lake Erie.

INTRODUCTION

The Finch site (AeHg-58), a small early Late Iroquoian special purpose site, was located by Archaeological Services Inc., in the summer of 1989, during archaeological survey along the route of an Ontario Hydro transmission line. The site, in Lot 23, Concession 11, South Dorchester Township, is situated at the south-east corner of a cornfield, atop the west bank of the West Catfish Creek (Figure 1). Midden soils were identified in test pits excavated along the wooded bank, and an artifact scatter was recorded in the ploughed field. These initial investigations suggested that the site probably encompasses an area of 1,650 m^2, less than half of which has been disturbed by modern agriculture.

Following test excavations, all areas threatened by construction disturbance were salvage excavated by Archaeological Services Inc. Over 6,000 artifacts were recovered, contributing new information to our current understanding of prehistoric Iroquoian occupations along the Lake Erie shoreline. However, with the exception of the midden, a few scattered post moulds and small pit-like features, no meaningful settlement patterns were exposed.

ENVIRONMENTAL SETTING

The Finch site is situated on a small area of flat ground overlooking the West Catfish Creek, within an area of marked topographic and biotic diversity (Carscallen 1991a:3). The general terrain consists of gently rolling hills to the north and west, as well as the creek itself and its floodplain to the south and east. The main channel of the creek currently lies on the far edge of the floodplain. The site lies within the Mt. Elgin Ridges physiographic region, which is generally characterized by a topography of broad ridges and vales with gently sloping relief. West Catfish Creek forms what was once a glacial meltway and is now the principal drainage between the St. Thomas and Norwich Moraines. The St. Thomas Moraine, on which the Finch site is situated, forms the height of land which divides the drainages of Catfish and Kettle Creeks. The soils of the morainic ridges are described as consisting of "pale brown calcareous clay or silty clay" (Chapman and Putnam 1984:233), while those of the vales are predominantly an alluvial mix of gravel, sand or silt. Generally, the uplands are considered to be relatively well drained while the vales and hollows are either imperfectly or poorly drained. The early historic vegetation in the vicinity of the site has been described as predominantly maple/beech forest with localized stands of basswood and elm (Finlay 1977). A large black ash swamp lies 1.5 km downstream from the site and is located on the former delta of a creek tributary of glacial Lake Whittlesey. At the time of the site's occupation, the wet alluvial soils of the nearby bottomlands likely supported similar vegetation (Carscallen 199la:5).

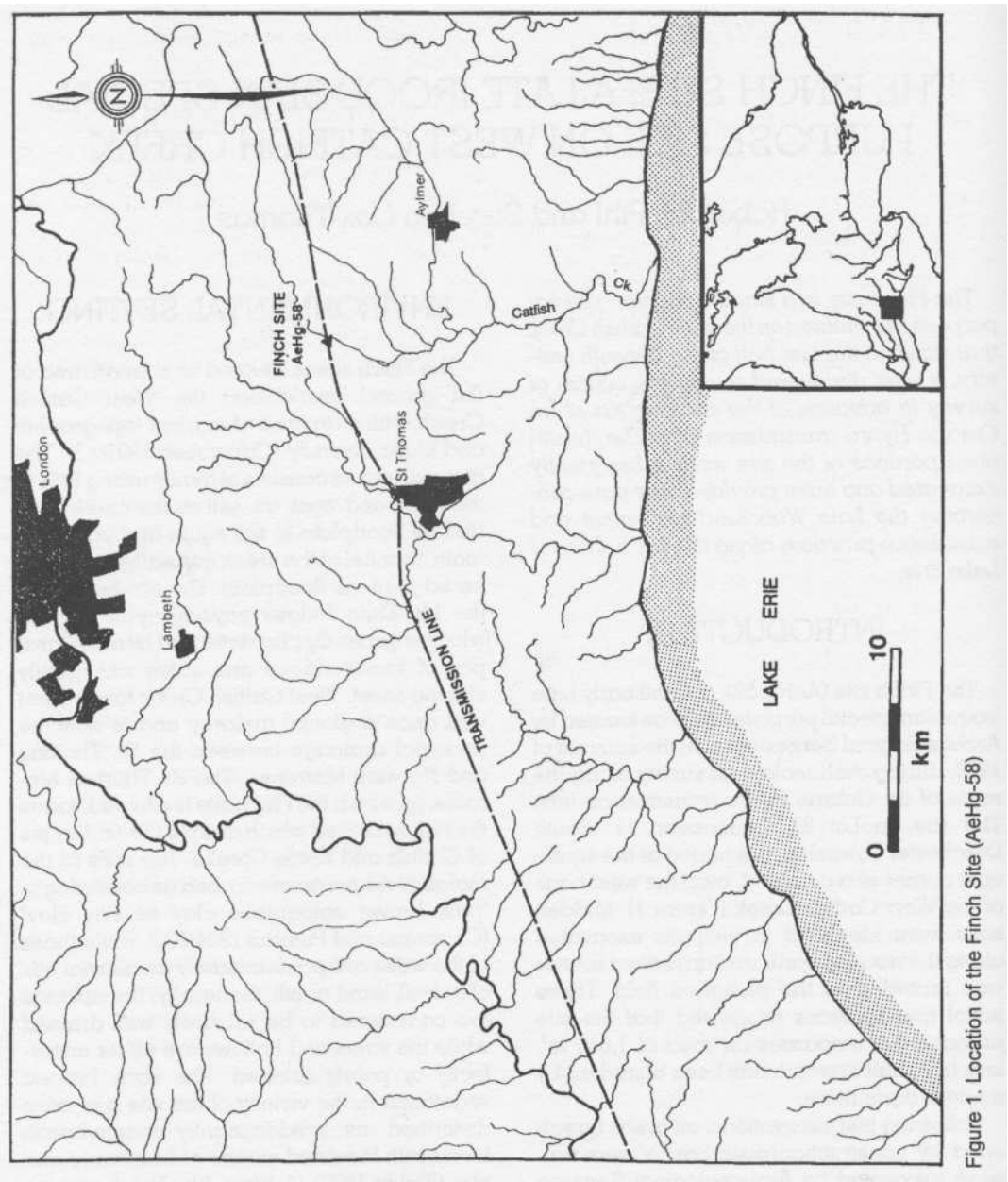


Figure 1. Location of the Finch Site (AeHg-58)

1989 EXCAVATIONS

The main area to be impacted by the construction of a transmission line tower was located in a ploughed field approximately 100 m west of the valley edge. Two controlled surface collections in this area defined the presence of a diffuse artifact scatter. The subsequent excavation of 32 test units to subsoil depth did not substantially alter this pattern (although several weak concentrations were noted), nor did it produce evidence of subsurface cultural features (D. Pihl 1991a:7). Nevertheless, analysis of the test unit profiles permitted the reconstruction of the original topography of the area (Figure 2). Topsoil was most shallow on the rising ground to the north and deepest to the south east of the tower centre, towards the edge of the ploughed field. Hence, erosion has probably moderated the more extreme relief of the former land surface. This process has progressively reduced the height of several undulations to the north of the tower, and of the hill lying to the west. Furthermore, it is likely that a more pronounced terrace or swale extended roughly northwest to southeast through the tower centre (D. Pihl 1991b:13). In light of the generally negative results of the test units in the agricultural field, the removal of topsoil was confined to the tower impact area (Figure 2). Approximately 850 m^2 was stripped of ploughzone soil by Gradall. The freshly exposed subsoil was shovel-shined twice in an effort to document cultural features. Four subsurface disturbances were located, but with one possible exception, they proved to be tree burns. The recovery of a complete ground stone cell from the remaining disturbance may indicate that it was a poorly defined, irregularly shaped feature.

Only 30 m^2 of the midden atop the creek bank slope lay within that area threatened by disturbance. Here, the excavation procedures consisted of hand excavation and screening of all soils through six-millimetre mesh. The midden deposits were found to be stratified, consisting of topsoil, various layers of ash, and subsoil (Figure 3). While the topsoil and subsoil were natural strata, a series of intermediate undisturbed ashy layers appeared to be cultural in origin. The midden excavations extended beyond these ashy layers in order to determine more fully the spatial extent of activity and refuse deposition in this portion of the site.

The depth of the dark brown topsoil ranged from 5 to 30 cm. The presence of a B-horizon in the northern portion of the midden is evidence that the woods have been present for some length of time, the ground being relatively undisturbed. Although artifacts, ash and charcoal occurred in the topsoil in the vicinity of the midden, the frequency of cultural material varied with proximity to the main midden deposit. It is not known whether the presence of cultural materials outside the limits of the main midden was the result of dispersal from the primary deposit, the accumulation of less extensive deposits adjacent to the primary midden, or a consequence of nearby events that may have occurred in adjacent activity areas or features. The topsoil was excavated as a single stratigraphic unit (Zone A).

A series of cultural layers below the topsoil contained the bulk of the artifactual material, and these were excavated as a single stratigraphic unit (Zone B). In places, these cultural strata reached 42 cm in depth. The layers were comprised of varying proportions of ash, clay, and rock with inclusions of artifactual material, bone and shell remains, charcoal and macroplant remains. At the undisturbed north end of the midden, lenses of light ash were noted within a darker ashy clay matrix. However, in other areas of the midden, the stratigraphic relationships among the various midden layers were unclear as the layers and lenses were interlaid. In the undisturbed portions, the midden appeared to be relatively homogenous. The complexity of the deeper portions may reflect numerous episodes of deposition and/or subsequent disturbance. One layer of medium brown organic soil (Figure 3:Profiles D-D' and E-E'), which occurred in some of the deepest depressions, appeared to represent a buried paleosol. It may represent in situ topsoil or may be topsoil washed into depressions created by the prehistoric inhabitants or by animal activity.

In summary, the midden appears to be the product of numerous depositional events, although the lack of relict topsoil strata suggests that there were no long term lapses between periods of occupation.

Although the midden location is well documented, the associated occupation area remains undefined in both nature and extent.

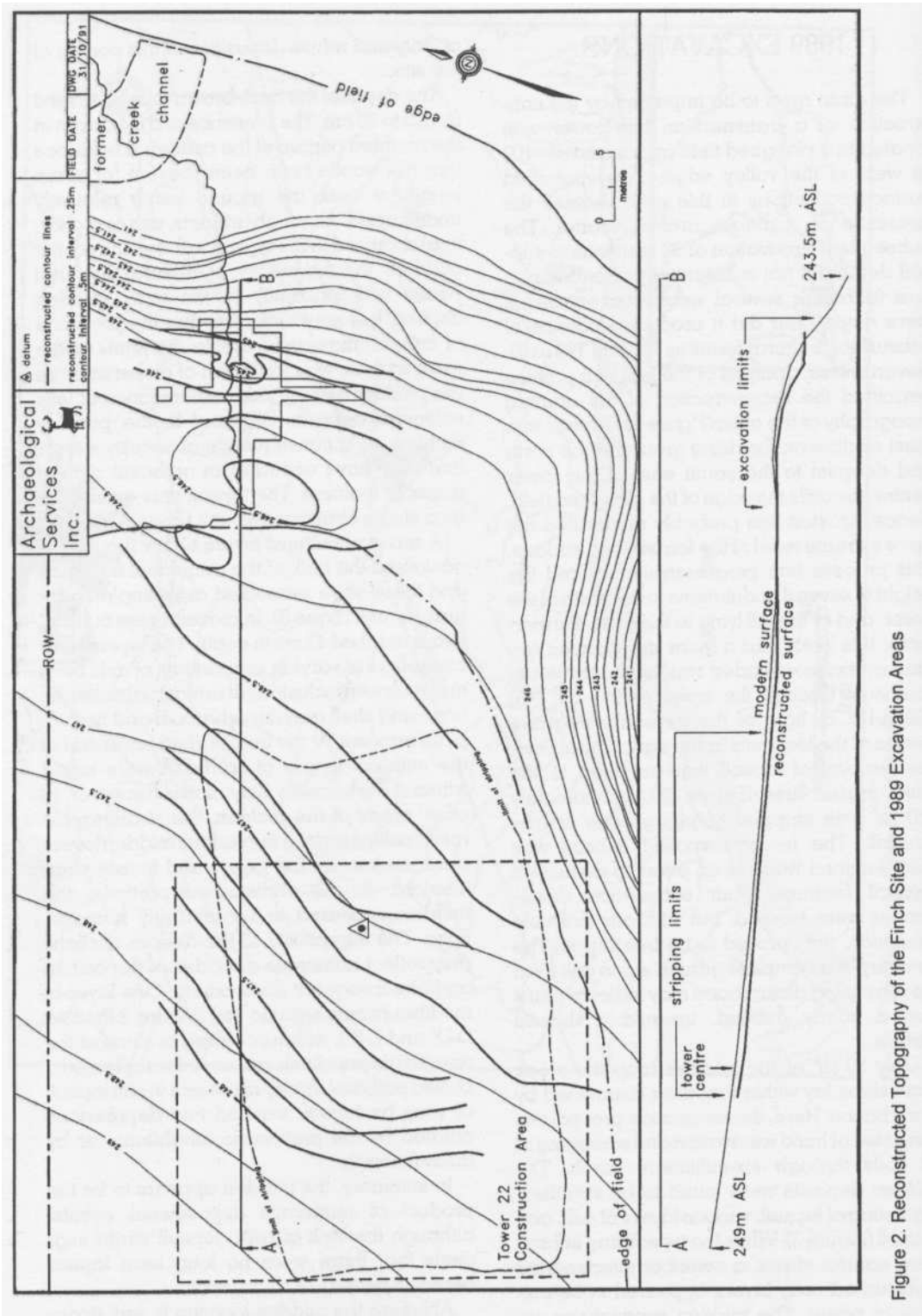


Figure 2. Reconstructed Topography of the Finch Site and 1989 Excavation Areas

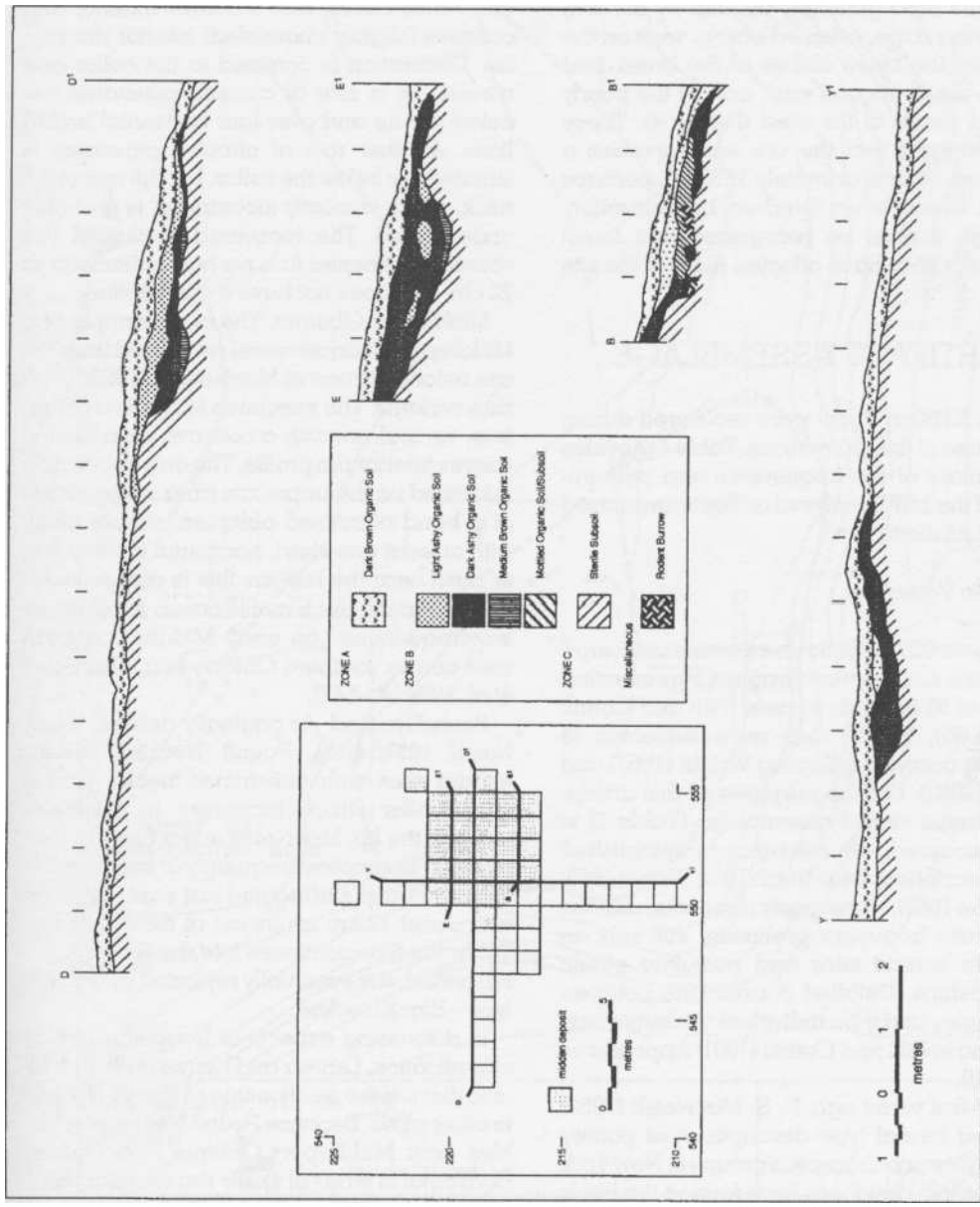


Figure 3. Representative Stratigraphic Profiles Across the Midden Area at the Finch Site

The site is situated atop the creek bank, sheltered by uplands which ascend 10 m in elevation from the top of the creek bank, as a series of low ridges. It is likely that any house structure(s) would have been oriented along one of these ridges, which were more pronounced in the past, prior to the erosion induced by forest clearance and intensive agriculture. Likewise, the swale southwest of the midden was probably characterized by poor drainage; hence, the tower impact area, stripped of topsoil, was unlikely to have been suitable for habitation.

Thus the occupation may have taken place within the area generally defined by the low, undulating ridge, oriented east to west on the north, by the steep slopes of the creek bed itself to the south and east, and by the poorly drained swale to the west (Figure 4). These limits suggest that the site encompasses a maximum of approximately 1650 m^2, perhaps half of which is undisturbed by cultivation, although it must be recognized that forest clearance may have affected most of the site area.

ARTIFACT ASSEMBLAGE

Over 6,000 artifacts were recovered during the course of the excavations. Table 1 provides a summary of the frequencies and percent-ages of the 1,271 analyzed artifacts, organized by artifact class.

Ceramic Vessels

Just over 800 ceramic sherds were recovered during the course of excavations, representing a total of 36 ceramic vessels (Pihl and Cottrill 1991:25-65). Vessel rims were subjected to attribute analysis, following Wright (1967) and Smith (1983). For the purposes of this article, the ceramic vessel assemblage (Table 2) is only discussed with reference to established type descriptions (MacNeish 1952; Wright 1966; Emerson 1968), since most current discussions of Ontario Iroquoian prehistory still rely on types to seriate sites and postulate ethnic relationships. Detailed correlations between these types and their individual attributes may be found in Pihl and Cottrill (1991: Appendices A and B).

Forty-five years ago, R. S. MacNeish (1952) provided formal type descriptions of pottery from eight major Iroquoian groups in New York and Ontario, and these have formed the basis for much research and discussion ever since. Despite all the problems inherent in MacNeish's types (Wright 1967; Ramsden 1977:16-18; Smith 1983:10-14), they have always provided a means by which Iroquoian sites can be organized, if only in a preliminary fashion, through space and time.

Ontario *Horizontal*. A single Ontario Horizontal vessel, which compares favourably with the type definition (MacNeish 1952:16), was recovered from the site. The specimen has a poorly developed, vertical collar, 28.1 mm high and 7.8 mm thick, and a convex exterior and concave (slightly channeled) interior rim profile. Decoration is confined to the collar and consists of a row of circular punctates just below the lip and over four horizontal trailed lines. Another row of circular punctates is situated just below the collar, but the rest of the neck, which is mostly incomplete, is probably undecorated. The recovered portion of this vessel is estimated to have had a diameter of 22 cm, and does not have a castellation.

Middleport Oblique. The one example of a Middleport Oblique vessel recovered from the site belongs to one of MacNeish's (1952:16-17) rare variants. The specimen features a collarless, vertical rim with a concave exterior and convex interior rim profile. The only decoration is located on the upper rim area and consists of a band of incised obliques (simple motif) with at least one short, horizontal incised line or gash near the bottom; this is also called a crossed motif. Such motifs occur, in relatively low frequencies, on early Middle Iroquoian sites across southern Ontario (e.g., Ramsden et al. 1998:145-147).

Pound Necked. As originally defined (MacNeish 1952:14-15), Pound Necked vessels feature rims with constricted necks, and a short collar which increases in thickness towards the lip. MacNeish noted that the type reached its greatest frequency at the fifteenth-century Pound site located just east of Aylmer and about 13 km southeast of the Finch site. While the type continues into the Late Iroquoian period, it is eventually replaced by another type - Black Necked.

In discussing aspects of Iroquoian pottery classification, Lennox and Kenyon (1984:14-16) also discuss the relationship of Pound Necked to other types. Because Pound Necked resembles both Middleport Oblique and Ontario Horizontal in terms of upper rim or collar motif, they consider it to be the fourth member of the temporal and stylistic continuum featuring several of MacNeish's types:

Iroquois Linear-Ontario Horizontal - Middleport Oblique-Pound Necked--Black Necked

The major distinction between Middleport Oblique and Pound Necked is a slight variation in the location of the motif with respect to

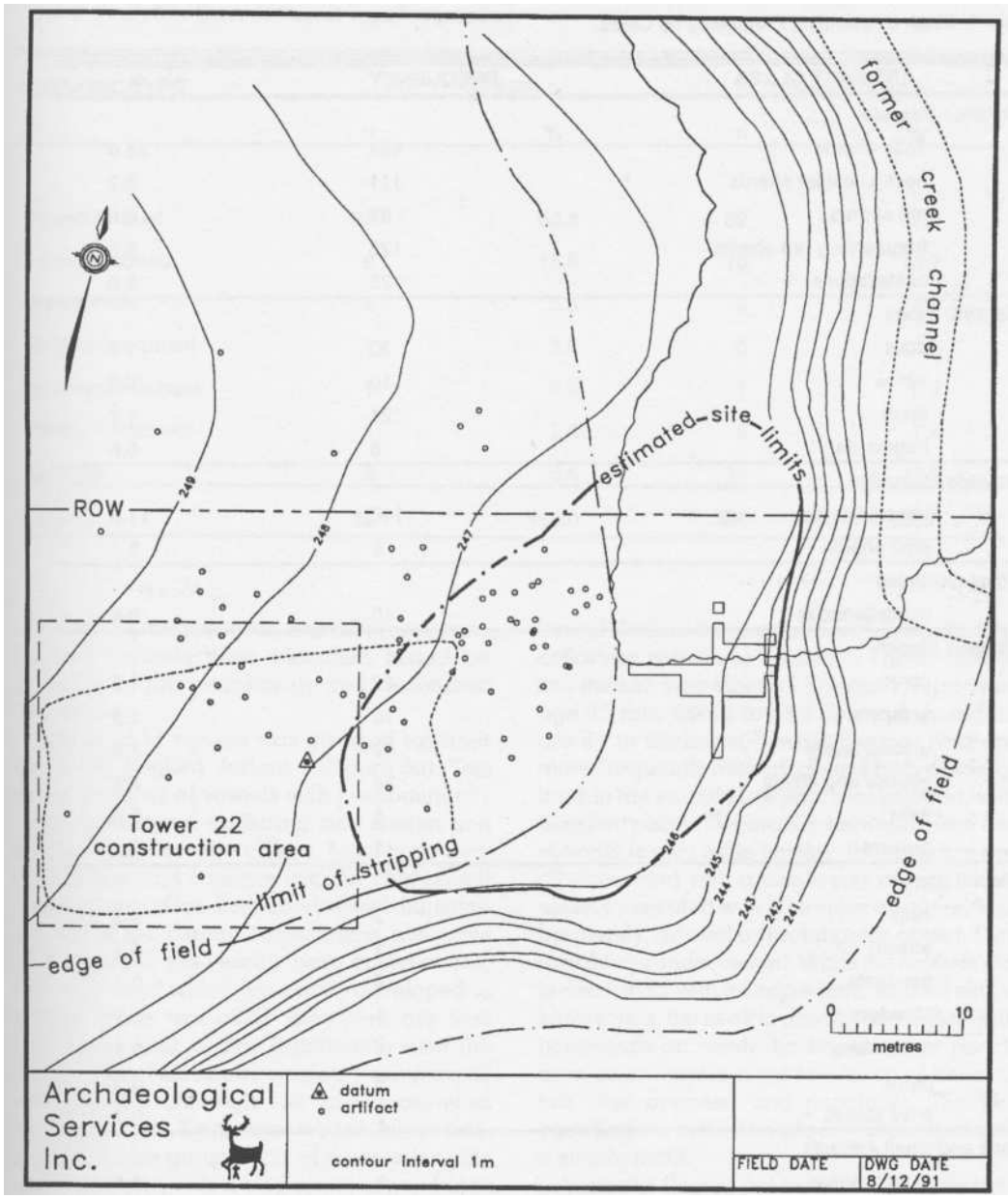


Figure **4.** Estimated limits of the Finch Site

the collar-neck juncture. Middleport Oblique includes obliques over one or more horizontal elements on the collar with the horizontal elements continuing on the neck. On Pound Necked vessels, the entire collar is taken up by oblique elements while the horizontal elements begin just below the juncture of the collar and neck and continue on down the neck. They suggest that perhaps collar height is the underlying attribute which separates this type from the others.

At the Finch site, 23 vessels were typed as Pound Necked, representing 63.9 percent of the total vessel assemblage. However, during

Table 1. Finch Site Artifact Frequency by **Class.**

ARTIFACT CLASS	FREQUENCY	%
Ceramic Vessels[1]		
body sherds	453	35.6
neck/shoulder sherds	111	8.7
rim sherds	87	6.9
fragmentary rim sherds	125	9.8
castellations	25	2.0
Ceramic Pipes		
bowl	20	1.6
elbow	10	0.8
stem	21	1.7
fragmentary	8	0.6
Juvenile Ceramics		
vessel sherds	146	11.5
pipe sherds	9	0.7
Other Ceramics		
miscellaneous	10	0.8
Chipped Stone[2]		
cores	19	1.5
scrapers	19	1.5
utilized flakes	89	7.0
bifaces and points	74	5.8
drills	8	0.6
gravers	1	0.1
Ground Stone		
celts	3	0.2
adzes	1	0.1
pendants	4	0.3
abraders	1	0.1
net-sinkers	1	0.1
pipes	3	0.3
anvil stones	2	0.2
Bone and Shell Artifacts		
awls/punches	5	0.4
scraping tools	7	0.6
beads	4	0.3
miscellaneous	5	0.4
TOTALS	1271	**99.9**

[1]excludes 9.15 kg of unanalyzable sherds

[2]excludes 15.85 kg of debitage

Table 2. Finch Site Ceramic Vessel Type Frequencies.

CERAMIC TYPE	VESSELS		RIM SHERDS	
	n	%	n	
Pound Necked	23	63.8	62	57.3
Lawson Incised	6	16.6	18	16.7
Ripley Plain	2	5.6	2	1.9
Ontario Horizontal	1	2.8	3	2.8
Middleport Oblique	1	2.8	1	0.9
Parker Festooned	1	2.8	8	7.4
Untyped	2	5.6	14	13.0
TOTAL	36	100.0	108	100.0

the vessel sorting process, four different Pound Necked variants were identified based on similarity of rim morphology and decoration (Figure 5).

A total of 11 vessels was grouped together as Pound Necked Variant 1 (Figure 5a). This group consists of vessels with predominantly poorly developed, outflaring, and shorter and thinner than average collars. Most have convex exterior and concave (slightly channeled) interior rim profiles. Estimated vessel diameter, on nine of the Variant 1 specimens, averages 23.3 cm wide. Six vessels have castellations, the majority of which are poorly developed in profile, while two other examples are well developed (that is, they significantly alter the rim profile); of the three complete examples, all are pointed, although two are considered incipient points. Decoration is internally consistent within the group. Most of the interior rims are decorated with a single row of punctates made from an oval, or, infrequently, a circular or triangular object. All lips are undecorated. By definition, all exterior collar motifs consist of simple motifs over neck/shoulder motifs comprising either horizontals or horizontals over punctates. Castellations are usually decorated with simple motifs, although one opposed motif was noted. Lip, neck and shoulder thickness for Variant 1 vessels average 6.6 mm, 7.2 mm and 7.9 mm, respectively.

Seven vessels define the second variant of Pound Necked (Figure 5b), which is basically a collarless version of Variant 1. These vessels are thicker than those of Variant 1. Lips average 8.7 mm, necks are 8.8 mm and shoulders are 8.1 in thickness. Variant 2 upper rims are more frequently outflaring, and both castellations in the sample are poorly developed, with incipient points. Decoration between these two variants is also quite similar. Interior rims are all decorated with a single row of punctates, usually executed with a circular object or, less frequently, an oval or rectangular object. Lips are always undecorated. While the exterior rim is decorated with a simple motif incised with a blunt stylus, the neck is usually decorated with horizontals or, rarely, horizontals over punctates, or a complex motif consisting of horizontals over opposed and punctates. The two castellations in the sample are decorated with a simple motif.

Variant 3 (Figure 5c) includes three vessels distinguished primarily on the basis of collar motif. The vessels in this group tend to have taller and thicker collars than Variant 1, and they are outflaring with convex exterior and concave interior profiles. Both castellations in the sample are well-developed, one being rounded and the other pointed in shape. On average, these vessels tend to be largest within the type, with an estimated diameter of 33.3 cm. In contrast to the previous Pound Necked variants, these vessels all have an

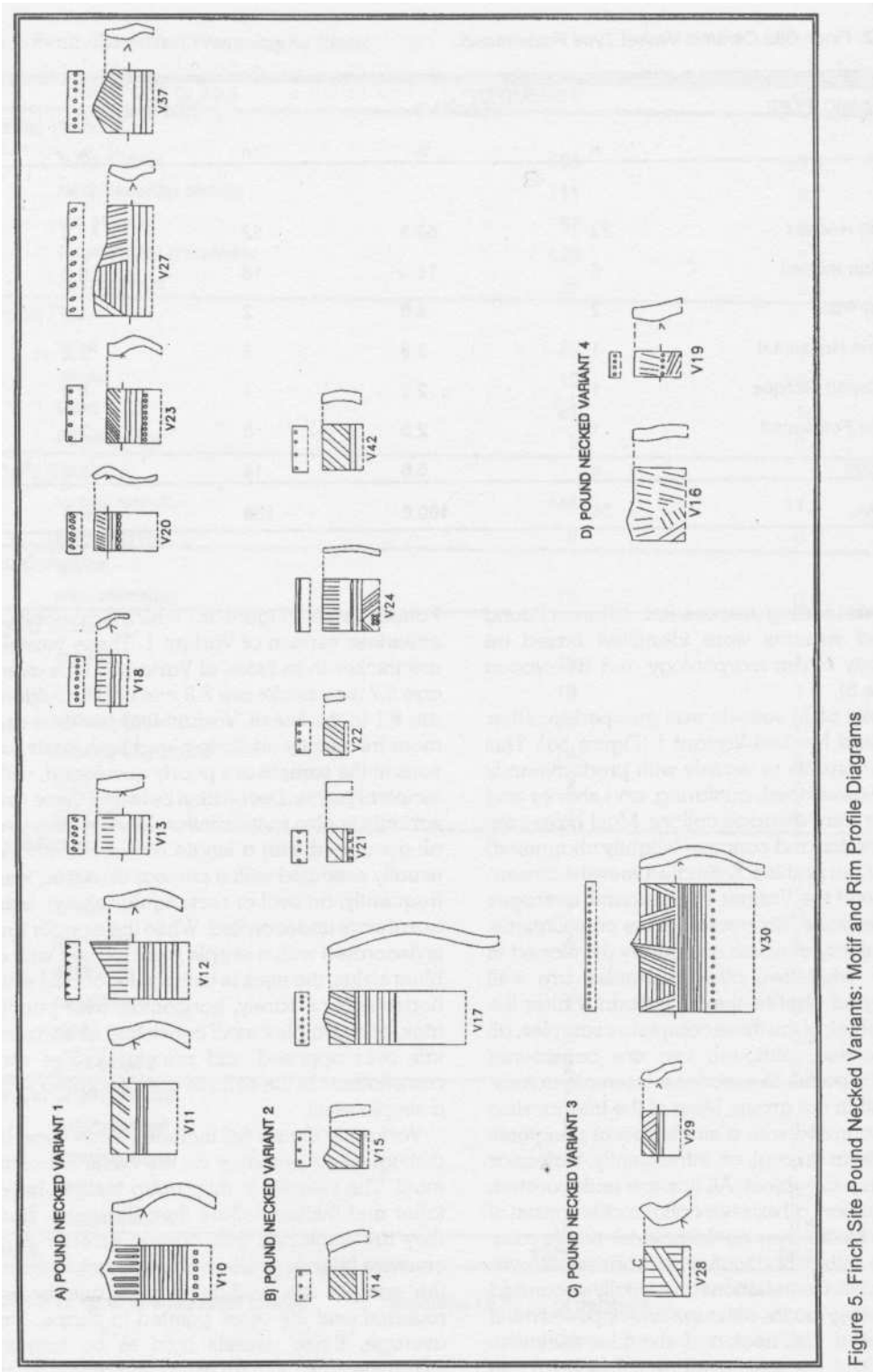


Figure 5. Finch Site Pound Necked Variants: Motif and Rim Profile Diagrams

incised opposed motif, although one is associated with a castellation and, consequently, may not characterize the rest of the rim. While interior decoration is absent on two of three vessels, the third has an interior motif consisting of a row of punctates. Lip decoration is absent. Like most of the other Pound Necked vessels, the neck is decorated with either incised horizontals, or horizontals over punctates.

The fourth Pound Necked variant includes two vessels, which are distinguished from the others by their neck motifs (Figure 5d). Collar development is either lacking or poorly developed, and the rims are outflaring or vertical with straight exterior and straight to concave interior profiles. The one castellation is poorly developed and rounded in shape. The decoration is generally typical of the rest of the type. Interior rims are either undecorated or have a single row of punctates. Lips are undecorated. Both collars and the single castellation are decorated with a simple motif. The necks, however, lack the usual decorative motifs; they are characterized by either simple or opposed motifs. In fact, were it not for the channeled interior rim profiles, these vessels would probably have been classified as Black Necked (D. Smith, personal communication, 1990).

Several noteworthy observations can be made concerning the Pound Necked sample from the Finch site. First, there is a high occurrence (7 or 30.4 percent) of collarless rims on vessels which otherwise closely fit the type definition. While it is possible that Variant 2 may be a regional stylistic trait, it is more likely to be early in the developmental sequence postulated by Lennox and Kenyon (1984: 14-16; Figure 1), in which early and later forms of Pound Necked vessels are characterized by poorly-defined and well-defined collars respectively. Collar development in general has been identified as a very sensitive macro-temporal attribute (Pearce 1984:201-202; Williamson 1985:275). Second, the characteristics of Variant 3 - an opposed motif on a rolled (convex exterior/concave interior) collar - could be considered a forerunner to the Lawson Incised/Opposed type series which lacks any neck decoration. Finally, the use of non-horizontal motifs on the neck in combination with a Pound Necked rim profile (traits which highlight Variant 4) is suggestive of an early or perhaps regional variant of Black Necked. It may be concluded, then, that this Pound Necked series shows relatively early developmental characteristics.

Lawson Incised. Six vessels from the Finch assemblage were identified as Lawson Incised (Figure 6). Collars tend to be vertical and poorly developed, averaging 19.2 mm high and 10.2 mm thick. Rim profiles favour convex or straight exteriors, and concave or straight interiors. The two extant castellations are poorly developed with incipient points. Decoration is largely confined to the exterior collar. Only one interior rim surface is decorated, this with a single row of oval punctates. Like the other vessels from the site, the lips are undecorated. The collar has a simple motif which was commonly stamped with a linear, or rarely, a dentate stamp. One vessel is deco-rated by incising with a blunt instrument. Both castellations are decorated with a stamped simple motif. The neck and shoulder areas are undecorated.

Ripley Plain. The Finch site sample includes two vessels which are typed as Ripley Plain. MacNeish (1952:25-26) describes vessels of this type as globular with small mouths and insloping necks and rims. Decoration is rare, but when it occurs it consists of incising on the lip. Diagnostic features, therefore, are the smoothness of surface, a total lack of decoration, and a small-mouthed globular form. The two vessels are more crudely made than the others in the assemblage. Both have smoothed surfaces and straight interior and exterior rim profiles.

Parker Festooned. This type was originally defined by T. E. Lee based on his work at the Parker Earthworks site (Lee 1958:19-20, Figure 7; Murphy and Ferris 1990:218-221). Vessels are elongated and characterized by relatively thin, outflaring, mostly collarless rims with rounded or flat lips and constricted necks. The type is distinguished by a distinctive narrow to wide applique strip on which decoration is applied, but this applique strip is frequently absent. Decoration consists of curvilinear or "festooned" motifs which extend from just below the lip to well down the neck. It is executed by stamping or drag-stamping a linear or dentate tool in bands. Lips and rim interiors are not decorated. Parker Festooned vessels are the most commonly occurring Western Basin Tradition ceramic type found on Iroquoian sites in southwestern Ontario, first appearing in the early fifteenth century (Murphy and

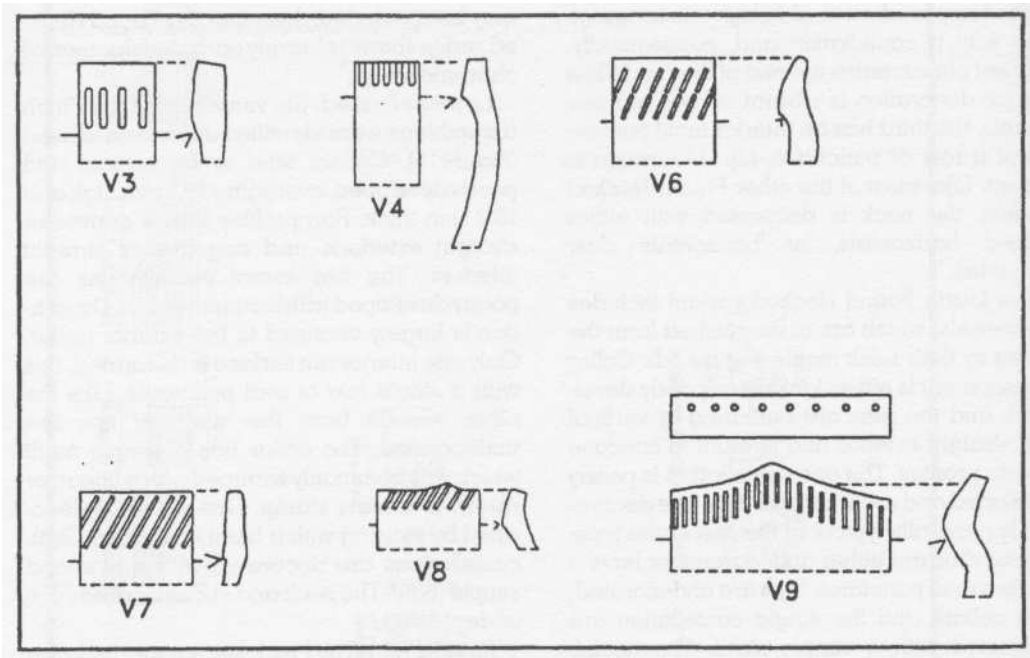


Figure 6. Finch Site Lawson Incised Variants: Motif and Rim Profile Diagrams

Ferris 1990:218).

A single example of Parker Festooned pottery was recovered from the site (Figure 7a). The vessel features an outflaring, short, collared rim which has a poorly developed, incipient castellation. Decoration consists of a single band of dentate stamps parallel to and just beneath the interior and exterior lip; a festoon-like decoration extends down to the lower rim and neck areas and continues across the castellation as well. The lip is undecorated.

Untyped Vessels. Two of the recovered vessels do not fit into any of the established typologies. The first of these (Figure 7b) is actually a composite of two of MacNeish's types: Ontario Horizontal and Lawson Incised. It has a relatively tall (20.0 mm), thick (7.3 cm), well-developed and outflaring collar with a convex exterior and concave interior rim profile. It also features a well-developed castellation with an incipient point. The rim decoration is unique. One side of the castellation has a simple incised motif, while the other side has a complex motif consisting of oval punctates over horizontals over oval punctates. These different motifs come together at the castellation which is decorated with a single column of oval punctates. Although this vessel is apparently a composite of two different types, it was left untyped so as not to bias the sample.

The other untyped vessel (Figure 7c) has a tall (28.0 mm), thick (12.5 mm), poorly-developed and outflaring collar with a convex exterior and convex interior profile. The castellation is poorly-developed and has an incipient point. The only decoration on the entire vessel occurs on the exterior collar and consists of linear, oval punctates parallel to and just below the lip and in a curvilinear design extending over the collar.

We have not, as yet, found references to similar vessels. While vessel morphology and decoration for the Parker Festooned type, especially the festooning, are somewhat similar (see Murphy and Ferris 1990:Figures 7.22 and 7.23), the decorative technique is totally different. Although this may be a variant of the type, further consideration must await a larger and more representative sample.

Discussion. J.V. Wright defined the Middle Ontario Iroquoian stage on the basis of data from seven sites located throughout southern Ontario and southwestern NewYork. He stated that three pottery types dominated the Middle-

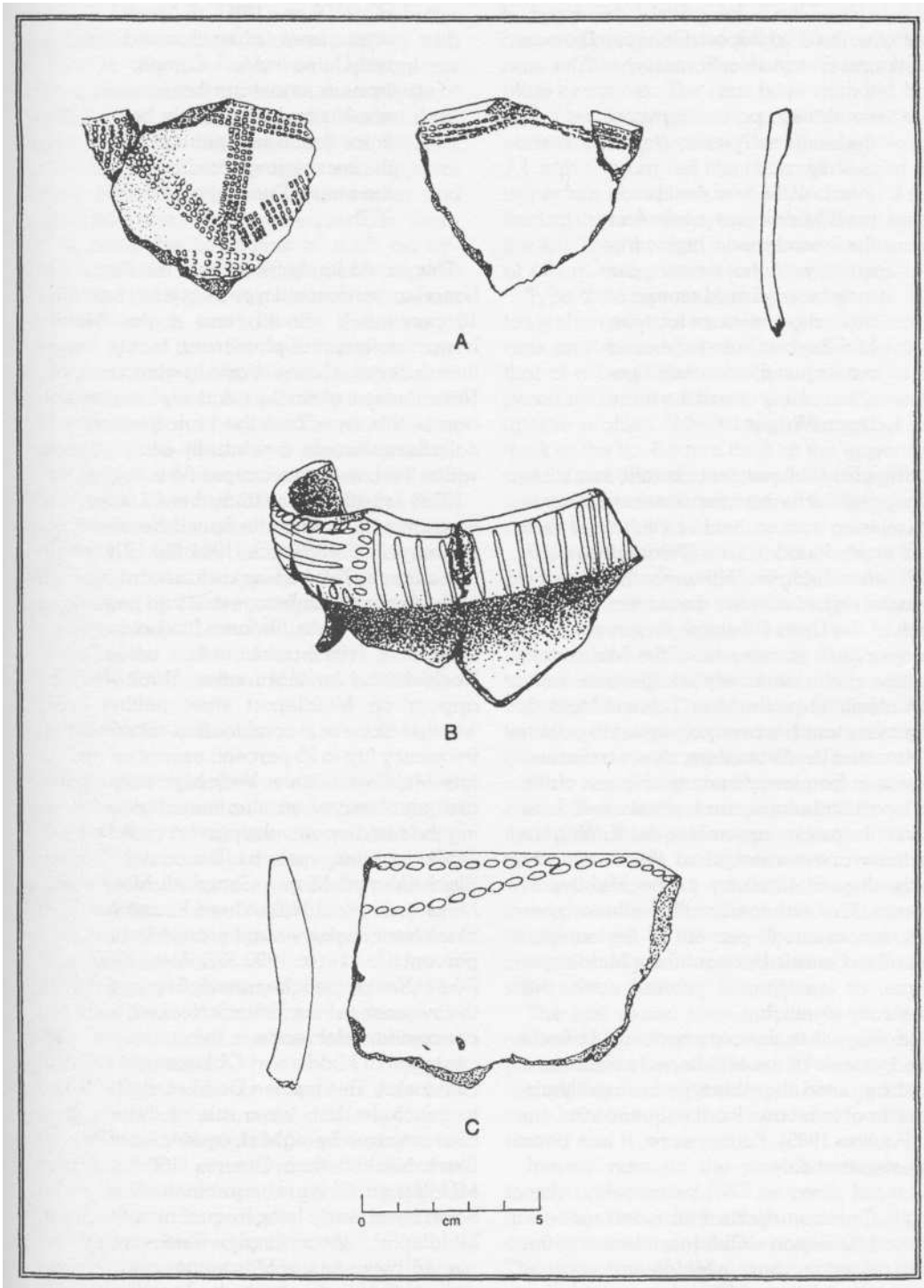


Figure 7. Selected Finch Site Minority Vessel Types: Parker Festooned (a), Untyped 1 (b), Untyped 2 (c)

port substage, the later part of this stage. These are the Middleport Oblique, Lawson Incised, and Ontario Horizontal types. The

> combined percentages of these three pottery types usually account for more than half the total rim sherds from Middleport sites. And the combined high frequency of the three types may be regarded as one of the diagnostics of the Middleport substage and not as just the dominant position of any one of the three types (Wright 1966:61).

Middleport Oblique was identified as most characteristic of the Middleport substage since it was missing from earlier Uren substage sites and is rarely found in Late Ontario Iroquoian period assemblages. Although the Ontario Horizontal type usually dominates assemblages of the Uren substage, it occurs in sizable quantities on sites from the Middleport substage, and more rarely in collections from Late Ontario Iroquoian sites. Lawson Incised, on the other hand, is rarely observed in collections from the Uren substage, shows a marked increase in frequency in assemblages of the Middleport substage, and dominates Late Ontario Iroquoian assemblages. If Wright's assertions are correct, then the Finch site sample does not belong in the Middleport substage. The sum total of these three types barely surpasses 20 percent of the sample, and neither Ontario Horizontal nor Middleport Oblique, at less than 3 percent each, are numerically significant.

With respect to the occurrence of Lawson Incised vessels in the Middleport substage, it should be noted that this type is virtually absent from at least one local sequence in London (Poulton 1985). Furthermore, it has been suggested that only

> Ontario Horizontal and Middleport Oblique, are dominant on true Middleport sites, forming 50% of rim or vessel samples; conversely, Lawson Incised almost never attains a frequency of more than 10% on such sites, even when lumped with Huron Incised. Comparisons demonstrate that Lawson/Huron Incised only become dominant types during the succeeding Late Iroquoian stage (Dodd et al. 1990: 337).

This would imply that, since the Finch site has a Lawson Incised type frequency equaling 16 percent, it should have a post-Middle Iroquoian temporal placement, that is, sometime during the Late Ontario Iroquoian period. Nevertheless, given the relatively low percentage of this type, and the high frequency of collarless vessels, a relatively early position within the Late Iroquoian period is suggested.

This hypothesis is strengthened when one considers the role of the Pound Necked type. Although Robert Pearce (1984:190-191) recognizes Pound Necked as a dominant type on both Middleport substage and late prehistoric Neutral (i.e., Late Ontario Iroquoian) sites, Dodd et al. (1990) point out that, while Pound Necked (and for that matter, Black Necked) appear on Middleport sites, neither type, whether alone or in combination, attains a high frequency (up to 25 percent) except on mid- to late Middleport sites. Very high frequencies are only observed on sites immediately following the Middleport substage (circa A.D. 1400-1450) on sites such as Doncaster, Pound, Slack-Caswell, Moyer, Campbell, Messenger, Milton and Pond Mills where Pound Necked/Black Necked percentages range from 38 to 83 percent (Dodd et al. 1990:337). At the Finch site, Pound Necked reaches nearly 64 percent. With the increase in Pound/Black Necked, there is a concomitant decrease in the combined percentages of Middleport Oblique and Ontario Horizontal. This has led Dodd et al. (1990:337) to conclude that, "as a rule of thumb, sites characterized by higher frequencies of Pound/Black Necked than Ontario Horizontal and Middleport Oblique combined should be considered early Late Iroquoian rather than Middleport." Accordingly, Finch would be placed between the Messenger and Lawson sites, both considered to be Late Prehistoric Neutral sites (Dodd et al. 1990:Figure 10.6).

In summary, the Finch type frequencies would appear to date the site somewhere

between circa A.D. 1400 and 1450. To better understand the site's relative position with respect to other, roughly contemporaneous sites across southern Ontario, an analysis of coefficients of similarity was also undertaken. David Smith, of the University of Toronto, compared the Finch sample with approximately 50 other sites, using an earlier and slightly different set of type frequencies. Bearing in mind the limitations of such an approach, with its assumptions concerning the social and temporal significance of certain attributes which underlie the definition of ceramic types, and the fact that there may have been only gradual spatial variation in ceramic expression, it is possible to ascertain a relative temporal position. The most similar sites are (1) the Messenger site, situated on Lake Whittaker 13 km to the northeast (coefficient of 163.15 out of 200), and (2) the Pond Mills site, located in south London 16 km to the northwest (coefficient of 149.58). In an unrelated study of ceramic types, both of these sites were drawn by cluster analysis into a group interpreted to be "Late Prehistoric" and dated by associated radiocarbon assays to circa. A.D. 1400-1550 (Lennox and Kenyon 1984:23).

Juvenile Ceramic Vessels

A total of 146 sherds was classified as juvenile ceramics based on criteria pertaining to manufacturing techniques, decoration, shape and size. Compared to the sample discussed earlier, these ceramics are markedly inferior in overall workmanship. Accordingly, they are interpreted as having been made by apprentice or juvenile potters.

Within the juvenile sample, 76 sherds (or 52.4 percent of the total) could be sorted into vessels for more detailed analysis. In all, 51 vessel rims were identified.

Tempering is entirely absent in over half (56.9 percent) of the sample, and is sparse in the remainder. Although 74.5 percent of vessel exterior and 70.6 percent of interior surfaces were smoothed or wiped, approximately 15 percent of interior surfaces were untreated and rough, or showed anvil marks.

Only 14 rims have collars, but most (12 or 85.7 percent) are poorly developed, basally rounded and barely discernible. Four different vessel forms were recognized for some of the specimens. The first type (Type 1), represented by four vessels, is characterized by short, thick and outflaring, almost flange-like collarless rims on flat bases. The shape resembles a plate or saucer. The rims have rounded lips, and a tendency towards convex exterior and convex interior profiles. The vessels average 7.1 mm thick at the lip, 11.0 mm thick at the upper rim (5 mm below the lip), and 11.3 mm thick at the lower body (generally 20 mm below the lip). They have an average vessel diameter of 7.0 cm, and a vessel height of 19.8 cm.

Type 2 is represented by six vessels with fairly short, vertical to outflaring and collarless rims on rounded bases. The form resembles that of a bowl. The rims have pointed or tapered rims, and convex exterior and concave interior profiles. The vessels average 5.3 mm thick at the lip, 6.6 mm thick at the upper rim, and 6.2 mm thick at the lower body. They have an average vessel diameter of 6.2 cm, and a vessel height of 2.4 cm.

Type 3 vessels (Figure 8) most closely resemble the "adult" ceramics described earlier. The three reconstructed vessels in this sample have fairly tall, slightly outflaring rims on both collared and collarless forms. They are attached to a globular-shaped body with a constricted neck. The rims have flat lips, and a tendency for slightly convex exterior and slightly concave interior profiles. When present, the collars are poorly developed with rounded bases. The vessels average 4.9 mm thick at the lip, 6.4 mm thick at the upper rim, and 7.5 mm thick at the neck. Two specimens have collars which average 29.1 mm high. They have an average vessel diameter of 8.7 cm, and a vessel height of 9.2 cm. These vessels are comparatively thin in construction and much taller in size than the other types.

The last vessel form - Type 4 - is represented by a single, conoidal-shaped body portion that stands at least 3.7 cm high. Although the neck is missing, it was probably once constricted with a vertical or outflaring rim.

Interior rims on the juvenile vessels are mostly undecorated (88.2 percent), but a few are either decorated with punctates (5.9 percent) or some kind of simple motif (3.9 percent). The upper rim or collar areas are also commonly undecorated (47.1 percent), but some are decorated with simple (13.7 percent), opposed or criss-crossed (15.7 percent) or horizontal (13.7 percent) motifs; the balance

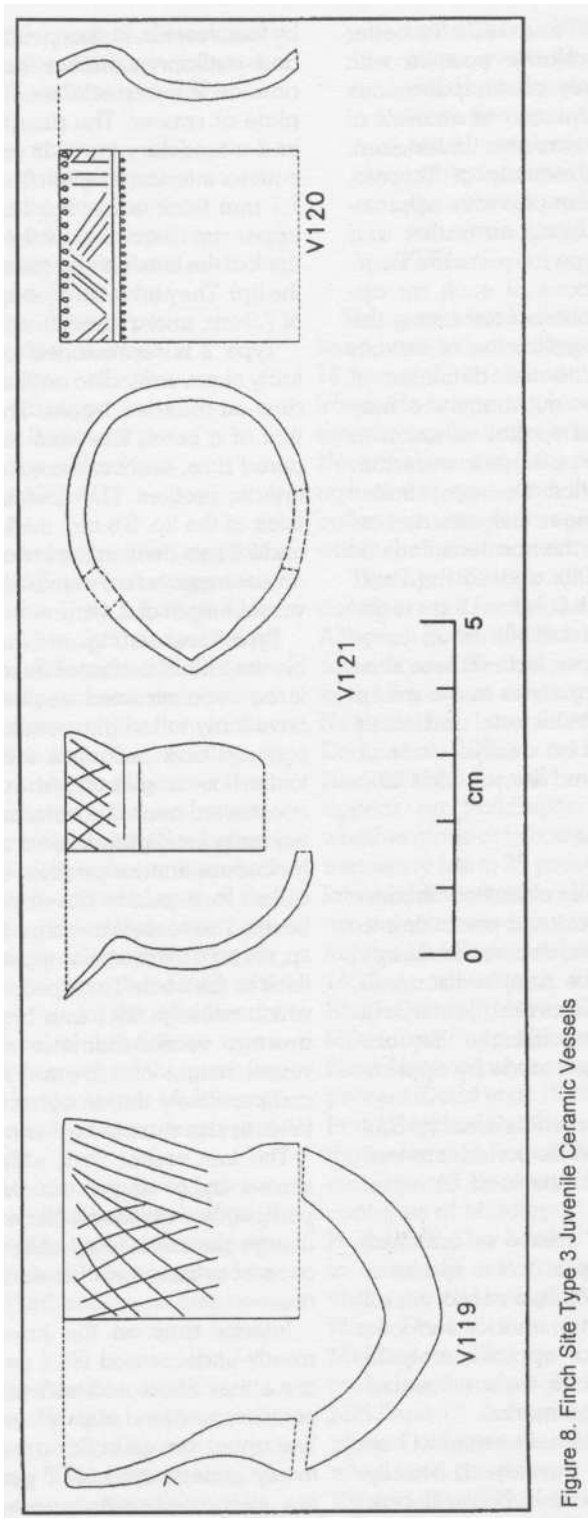


Figure 8. Finch Site Type 3 Juvenile Ceramic Vessels

consists of either complex motifs or a line of punctates. The lower body area (or neck area if it can be distinguished) is frequently undecorated (60.7 percent), but, when decoration does occur, it mostly consists of the motifs that appear on the upper rim area.

The motifs applied to juvenile ceramics are stylistically different and, without a doubt, inferior in execution to those vessels described in the preceding section. The motif classes employed vary enormously between the adult and juvenile samples. For instance, most (39 or 90.7 percent) of the vessels with undecorated, opposed or horizontal motifs on the collar or upper rim are considered juvenile ceramics, whereas most of the vessels with simple motifs on the collar or upper rim (28 or 80.0 percent) are adult vessels. Interestingly, none of the ceramic types identified for the adult sample is duplicated in the juvenile ceramics, despite some fairly sophisticated experimentation. While this is, as yet, unexplained, it may be that a few of the adult vessels were made and/or decorated by novice potters, thereby skewing some of the observations.

Ceramic Smoking Pipes

A total of 68 ceramic pipe fragments was recovered from the excavations (R. Pihl 1991:65-74), in addition to the several ground stone pipes discussed later. These were sorted into adult versus juvenile samples on the basis of manufacturing techniques and decoration.

The pipe sample was analyzed using an attribute code devised for the much larger Draper site pipe collection (von Gernet 1985:Appendix I). Given the limited size and nature of the Finch sample, only selected attributes were used. The present discussion will be limited to a description of the bowls.

Using characteristics of the bowl, the pipe fragments were sorted into sixteen analyzable pipes. In general, the pipes have a smoothed texture, and only one specimen showed any evidence of having been polished. Nine pipes lacked any visible tempering material, while the rest were tempered with a fine grit that was often only sparsely mixed into the paste. All of the pipes had a round bowl orifice which averaged 2.0(±0.6) cm in diameter. The bowls are mostly conical (9 or 56.3 percent) or barrel-like (5 or 31.3 percent) in shape, although one example each of a trumpet and vasiform shape was noted. Most of the lip areas (11 or 68.8 percent) were flat and level (only one actually sloped out), and the balance were rounded; lips averaged 4.4(± 1.1) mm in thickness.

While the bowl interior and lip area was always undecorated, various decorative motifs were applied to the exterior bowl, and most (12 or 75 percent) involved the use of horizontal elements including horizontals, incomplete horizontals, horizontals over punctates, and horizontals and punctates in combination. Two other pipes were undecorated, one had a cross-hatched motif and one had an opposed motif.

For purposes of inter-site comparison, reference was made to a series of pipe types first defined by Emerson (1954). The pipe types represented at the Finch site are listed in Table 3. Using pipes to compare and date Iroquoian sites is often a daunting task, since sample sizes are usually small and percentage frequencies are not as reliable as they are for rim sherd studies. Nevertheless, some useful information can be derived from the Finch pipe sample.

Typical Middleport pipes have longer bowls and stems than do Early Iroquoian or Uren substage examples. They have right-angled bowl-stem junctures, stems with circular cross-sections, and bowl forms featuring barrel, conical, or, less frequently, vasiform shapes (Wright 1966: 62-63). Bowl decoration consists of motifs with incised horizontal lines, often over a row of punctates, or finely incised op-posed lines, often arranged in complex triangular designs. Human and zoomorphic effigy pipes are rarely reported on Middleport sites (Dodd et al. 1990:339).

During the early Late Ontario Iroquoian period, conical and barrel-shaped pipe bowls continue into the fifteenth century, but there is a noticeable increase in flared varieties, especially the trumpet and vasiform types (Lennox and Fitzgerald 1990:419-420). Smith (1992:18-19) has suggested, however, that the relative frequencies of these types, within and between sites, may reflect their role as signifiers of individual community identity. Nevertheless, both trumpet and conical types are replaced by short, barrel-shaped varieties (i.e., Iroquois Ring and Acorn types) in the early sixteenth century. Human and zoomorphic effigy pipes persist throughout the fifteenth to seventeenth

Table 3. Finch Site Ceramic Pipe Type Frequencies.

PIPE TYPE	n	%
Conical Decorated	7	43.8
Iroquois Ring	5	31.4
Undecorated Trumpet	1	6.2
Decorated Barrel	1	6.2
Conical Plain	1	6.2
Collared Ring	1	6.2
TOTAL	16	100.0

centuries, increasing in popularity through time.

The Finch sample (Figure 9) is dominated by two pipe types - Iroquois Ring and Conical Decorated (these form 75 percent of the total) - that characterize both the Middle Iroquoian and early Late Ontario Iroquoian periods. The bowls are barrel and conical-shaped, and they are exclusively decorated with incised horizontal lines, often over a row of punctates. It should be noted that none of the pipe bowls are decorated with motifs featuring incised lines forming opposed triangles. The stems are long, undecorated, are either straight or tapered, and are round in cross-section. Also included in the sample is evidence of possibly one human effigy pipe, one decorated collared pipe and two pipes with flared bowls (one plain trumpet and one decorated vasiform).

Statistically, the Finch sample is too small to conduct inter-site comparisons with any precision. However, the high frequency of conical- and barrel-shaped bowls, together with the low but emergent frequency of flared bowls, suggests a temporal placement somewhere in the late Middle Iroquoian to early Late Iroquoian period, or circa A.D. 1375-1450. This is generally consistent with the temporal framework suggested by the analysis of the ceramic vessels.

Other aspects of the pipe sample require brief comment. First, the lack of complex incised motifs on the Conical Decorated sample is noteworthy. This may suggest that a type variant exists that is particular to this region of southwestern Ontario. Second, the ratio of conical to trumpet pipes (9:1) is high. This is potentially significant if, as Smith speculates (1992:18-19), there are stylistic differences between contemporaneous communities.

Finally, there are perceptible differences within the adult pipe sample, in terms of decorative style and bowl size which allow it to be sub-divided into two groups based largely on types. Group 1 contains nine pipes, and includes all of the Iroquois Ring specimens (5) and each one of the Conical Plain, Collared Ring (Figure 9c) and Decorated Barrel (Figure 9d) examples. All pipes in this group are well-made and "typical" in terms of bowl motifs, decorative technique and size. By contrast, Group 2 contains seven pipes and includes six of seven Conical Decorated specimens and the only Undecorated Trumpet pipe. Although generally well-made, these are much smaller when compared to typical versions from other sites, and the decoration is different (incised horizontals and punctates instead of incised opposed triangles), uneven, commonly incised with a sharp stylus and then smoothed. At this time, there is no adequate explanation for this obvious difference between pipe samples, although it is possible that juvenile pipe-makers were responsible for the latter.

A very unusual and interesting artifact is also present in the Finch assemblage. It appears to be the head of a human wearing a headdress (Figure 10a). It was modeled from finely knit, untempered clay and had been burnished. The effigy stands 21.8 mm high, and is 17.5 mm wide and 28.5 mm long. The specimen has been severed at the neck, just below

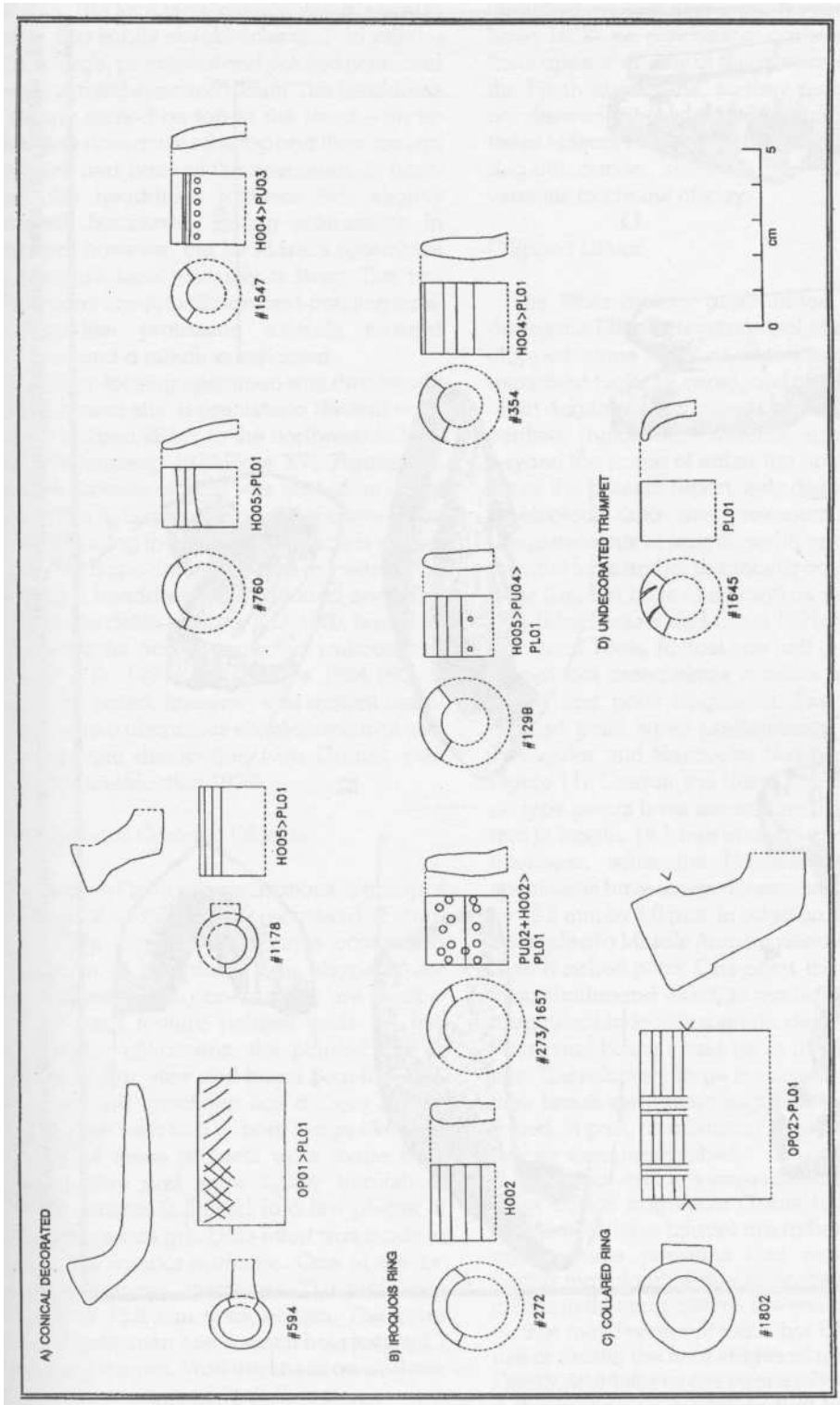


Figure 9. Motif and Profile Diagrams of Selected Finch Site Ceramic Pipes: Conical Decorated (a), Iroquois Ring (b), Collared Ring (c), Undecorated Trumpet (d)

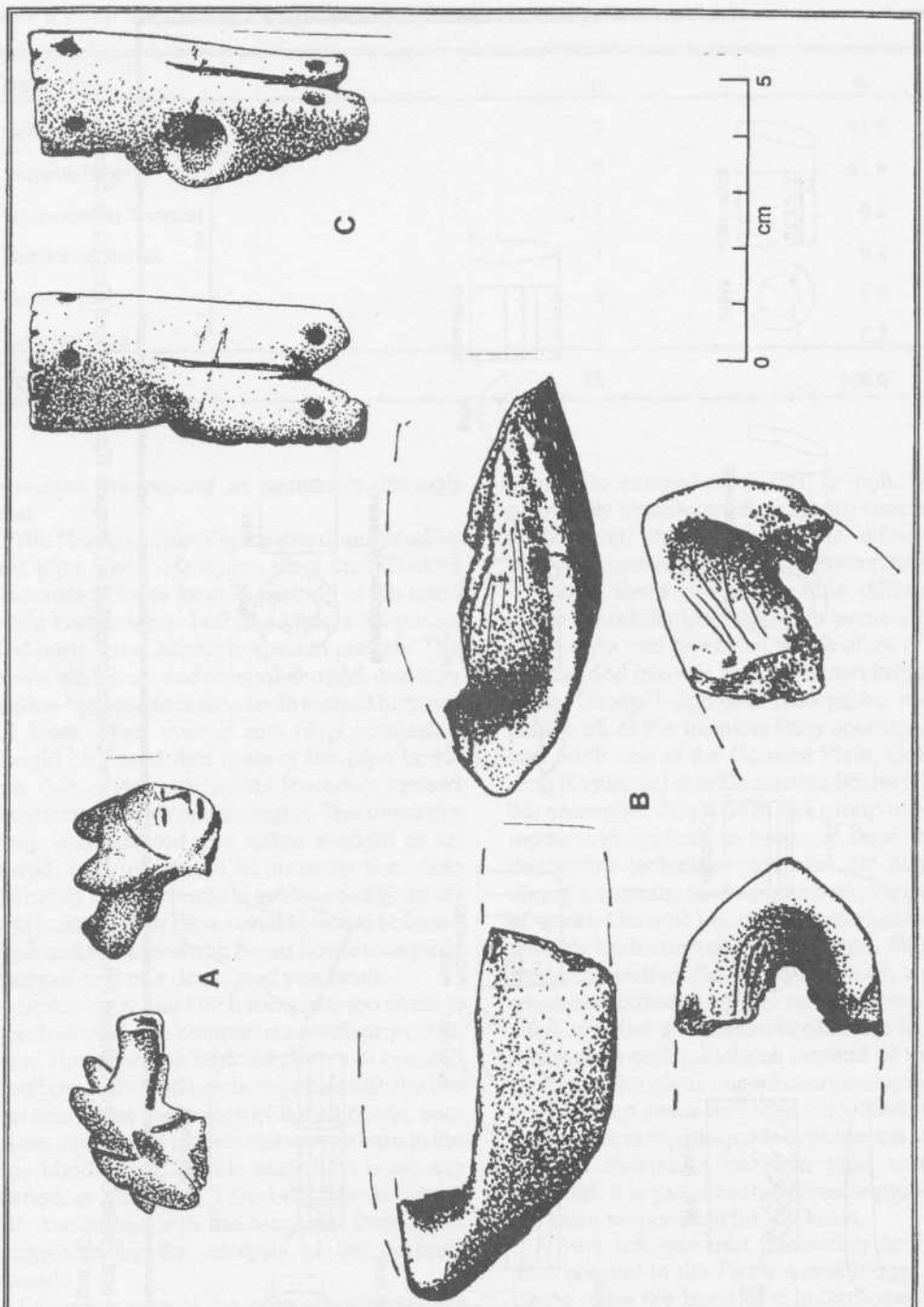


Figure 10. Miscellaneous Ceramic and Ground Stone Artifacts from the Finch Site: Ceramic Human Effigy (a), Ceramic "Boats" (b), Quartzite Pipe Bowl (c)

the chin. The face is expressionless: it is oval in shape, has subtle cheekbones and virtually no chin, a large, prominent and pointed nose, and deeply incised eyes and mouth. The headdress is clearly seated on top of the head - an incised line runs across the top and then around the back and base of the specimen. In front-view, the headdress features two, slightly rounded, backward-pointing protrusions. In rearview, however, the headdress resembles an animal's face, possibly a bear. The two protrusions are actually forward-pointing ears. A snout-like protrusion extends forward 11.8 mm, and a mouth is indicated.

A similar-looking specimen was discovered at the Lawson site, a prehistoric Neutral component located 28 km to the northwest in London (Wintemberg 1939:Plate XVI, Figures 18, 19). The Lawson artifact was part of an effigy pipe with a figure crouching at the elbow of the pipe and facing the smoker. The face is similar to the Finch specimen and also appears to be wearing a headdress with rounded ears. The Lawson site dates to circa. A.D. 1500, based on rim seriations and a corrected radiocarbon date of A.D. 1490± 100 (Pearce 1984:160). It should be noted, however, that animal headdresses are a ubiquitous shamanistic trait with a continental distribution (von Gernet, personal communication 1998).

Miscellaneous Ceramic Objects

During the Finch site excavations, a group of six unusual artifacts was recovered (Figure 10b). While these seem to have constituted some form of container, their shape is not typical of vessels. In general, they are shallow in depth and feature pointed ends: on two fragmentary specimens, the pointed end is tapered in plan view and has a boat-like side view; the third specimen has a more stubby point in plan view and a more barge-like side view. All of these artifacts were made from well-knit clay and were lightly burnished, however temper is limited to a few pieces of extremely coarse grit. Little effort was made to smooth the interior surfaces. One of the tapered specimens, measures 33.9 mm deep and has a 13.9 mm thick bottom. The other tapered specimen has a small hole located 7 mm below the rim. Wall thickness on all three specimens averages 6.0(± 1.2) mm.

While similar boat-shaped items have been identified as smoking pipe fragments (Mathews 1982), no residues or carbon encrustations appear on any of the interior surfaces of the Finch specimens, so they probably were not derived from functioning pipes. Because these objects bear a striking resemblance to a dug-out canoe, however, they may be toy versions made out of clay.

Chipped Lithics

The lithic artifact assemblage recovered during the 1989 excavations includes 88 formal chipped stone tools or tool fragments, 103 expedient tools, 19 cores, and almost 16 kg of chert debitage. As a complete, experimentally verified, functional attribute analysis was beyond the scope of either the original analysis or the present report, only descriptive and typological data are presented, including measurements of length, width and thickness of entire tools and/or diagnostic components of tools (i.e., the base of a point) as well as chert type (MacDonald and Chun 1991a:79-90).

Formal Tools. Almost one-half (n=40) of the formal tool assemblage consists of projectile points and point fragments. Two previously defined point types predominate: Nanticoke Triangular and Nanticoke Notched (Table 4; Figure 11). Overall, the Nanticoke Side Notched type points have mean dimensions of 34.1 mm in length, 16.1 mm in width and 4.4 mm in thickness, while the Nanticoke Triangular specimens have mean dimensions of 31.0 mm by 16.5 mm by 4.0 mm. In addition, there is one example of a Middle Archaic period Brewerton Side Notched point. One point, manufactured from Haldimand chert, is made from a small triangular blade with a single, deep side notch. Four point bases could be re-fitted with point tips. The relatively large number of points and their breakage pattern suggests the site functioned, in part, as a hunting base camp where arrows were refurbished.

Thirty-four artifacts were identified as bifaces or biface fragments (Table 5; Figure 12). Nineteen of these bifaces are rather crude and are perhaps preforms that were rejected during manufacture due to breakage or difficulties in thinning. Eleven are well-made pieces that may represent tools that broke during use or during the final stages of manufacture. Finally, four bifaces are so crudely worked that it is tempting to speculate that they are the

Table 4. Descriptive Data on Finch Site Projectile Points.

Cat. No.	Chert Type	Length (mm)	Width (mm)	Thickness (mm)	Comments
			Nanticoke Side Notched		
1200	Onondaga*	74.5	21.6	7.2	
1201	Kettle Pt.	33.0	16.4	4.5	
332	Onondaga*	33.0	8.1	4.0	
1240/1181	Onondaga	37.6	15.5	5.6	
421	Selkirk	25.0	10.7	4.7	
727	Onondaga	26.4	19.3	3.4	
361	Onondaga	17.4	13.2	3.7	prob. reworked
375/869	Haldimand	25.6	17.8	4.0	one notch only
1997	Onondaga	33.6+	22.2	9.0	tip missing
3000	Onondaga*	33.2+	13.0+	3.2	missing side
262	Onondaga			2.2	base only
1677	Onondaga	38.0+	17.8	4.5	base missing
260	Selkirk		15.3	3.4	base fragment
331	Onondaga	17.0+	14.0	3.4	tip missing
310	Selkirk		18.0	3.8	base fragment
452	Onondaga	23.0	10.0	5.0	
			Nanticoke Triangular		
259	Selkirk	27.2	12.8	4.0	
378	Onondaga	27.5	16.2	8.0	
333	Onondaga	29.4	24.7	9.0	
431	Onondaga	31.1	17.2	5.7	
1998	Onondaga*	23.0	16.2	5.0	
631	Onondaga	29.0	15.2	4.0	
1729/374	Onondaga	33.2	18.3	5.0	
767/1591	Onondaga	39.0	16.3	4.8	
531	Kettle Pt.*	37.7	13.0	8.8	
360	unidentified	33.6	11.4	6.0	
404	Onondaga	34.3	13.2	7.8	
1678	Onondaga*	33.5	24.0	7.2	
			Untyped Fragments		
441	Onondaga			4.0+	tip fragment
1205	Onondaga*			3.8+	tip fragment
257	Onondaga			3.4	tip fragment
258	Haldimand		14.4+	3.5	tip fragment
261	Onondaga			3.0+	tip fragment
1690	Onondaga*		24.0	6.7	base fragment
187	Onondaga		20.7	4.4	base fragment
950	Onondaga*		17.0	4.3	base fragment
256	Onondaga*		15.6	5.2	base fragment
728	Onondaga		12.6+	3.2	tip fragment
281	Onondaga		10.4+	5.5	tip fragment

*=thermally altered

Table 5. Descriptive Data on Finch Site Bifaces.

Cat. No.	Chert Type	Length (mm)	Width (mm)	Thickness (mm)	Comments
1141	Onondaga	27.2	21.5	8.2	triangular - knife?
2001	Kettle Pt.	31.3	21.5	7.0	rejected preform?
1648	Onondaga	40.5	26.2	10.0	rejected preform?
766	Onondaga*	37.0	21.3	8.2	triangular - knife?
2000	Onondaga*	27.0	23.0	9.4	triangular - crude
3039	Onondaga*	35.3	19.0	8.0	irregular - crude
473	Onondaga	27.3	14.7	6.0	rejected preform?
1960	Onondaga	27.4	15.8	8.0	triang. - rejected preform?
1790	Onondaga	35.0	15.0	6.4	rejected preform?
454	Onondaga*"	31.3	30.0	12.0	rejected preform - residue
1791	Kettle Pt.	16.8	9.6	4.2	drill? - heavy tip wear
199b	Haldimand		23.2	6.2	rejected preform?
286	Haldimand	34.3	30.0	13.0	ovate - missing tip - crude
377	Kettle Pt.	27.0+	19.7	9.5	base w/ side notch - crude
1521	Onondaga	30.0+	20.0	8.4	preform reject/broken tool?
440	Onondaga		23.0	5.3	preform reject/broken tool?
3050	Kettle Pt.		22.4	6.7	rejected preform?
376	Selkirk*		24.7	7.5	preform reject/broken tool?
249	Onondaga*		28.2	6.1	rejected preform?
1209	Onondaga*		19.5+	5.3	knife tip?
287	Onondaga*			4.5	biface tip fragment
1230	Onondaga			4.5	broken tool fragment?
284	Onondaga*			7.6	broken tool fragment?
334	Onondaga			4.1	rejected preform fragment?
3035	Onondaga*			4.3	rejected preform fragment?
247	Onondaga			4.5	rejected preform fragment?
1206	Onondaga			3.8	broken tool fragment?
199c	Onondaga				edge fragment
241	Onondaga			5.2	rejected preform fragment?
3053	Selkirk			4.0	edge fragment
3009	Onondaga		27.4	10.0	rejected preform fragment?
3040	Onondaga		35.4	10.6	rejected preform fragment?
3028	Onondaga		18.0	4.0	broken tool fragment?
1947	Onondaga		14.0	5.9	rejected preform fragment?

`*=thermally altered

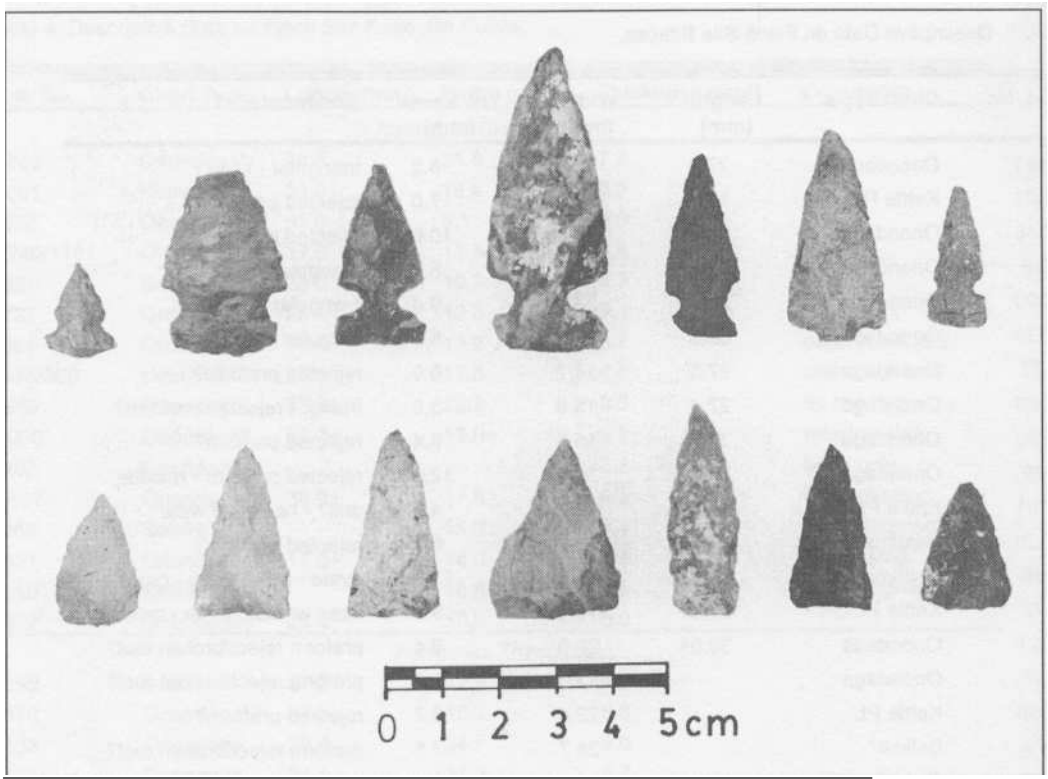


Figure 11. Selected Projectile Points from the Finch Site: Nanticoke Side Notched (top row), Nanticoke Triangular (bottom row)

products of a novice flintknapper.

Eight bifacial tools were identified as drills. Two are indistinguishable in form from Nanticoke Notched points, although tip wear clearly indicates use as drills. Three others are flakes with steep lateral retouch and heavy use-wear attrition at the tips. Two are pointed flakes with alternate retouch around the point. One of these has an unidentified residue visible along one of the retouched edges. The last drill is a thick, pointed biface with a rounded base. Since there is no wear evident on this piece, it may be a rejected projectile point preform.

One flake of Selkirk chert, measuring 32 x 33 x 5 mm, had been pressure flaked to produce a pointed graving tool.

As a class, the 19 scrapers in the assemblage exhibit considerable variability in both size and form (Table 6). Only five have evidence of purposeful design in their manufacture. The remainder are expedient tools manufactured by retouching the side, end, or both margins of a flake or an amorphous piece of shatter. Several have use wear, including polish, visible under low (l0x) magnification.

Expedient Tools. In addition to the expedient scraping tools, 89 flakes bear evidence of use in the form of intentional retouch and/or use-wear. These fall into four categories: straight edge (n =39), concave or notched edge (n = 18), convex edge (n=20), and pointed expedient tools (n=12). The latter group comprises several flakes with remarkably consistent features, namely, microflaking on alternate faces around the tip. This suggests that they served as drills or perforators and that they were used with a unidirectional twisting motion. However, these tools may be distinguished from the formal drill described above by their absence of purposeful retouch.

Cores. Nineteen chert fragments were identified as cores on the basis of size, presence of cortex, and the evidence of one or more apparently purposeful flake detachments. The latter criterion serves to differentiate cores from large, angular chert fragments that are merely a by-product of lithic reduction. Seven cores exhibited evidence of bipolar reduction. All of the cores appear to have been either exhausted or rejected due to flaws.

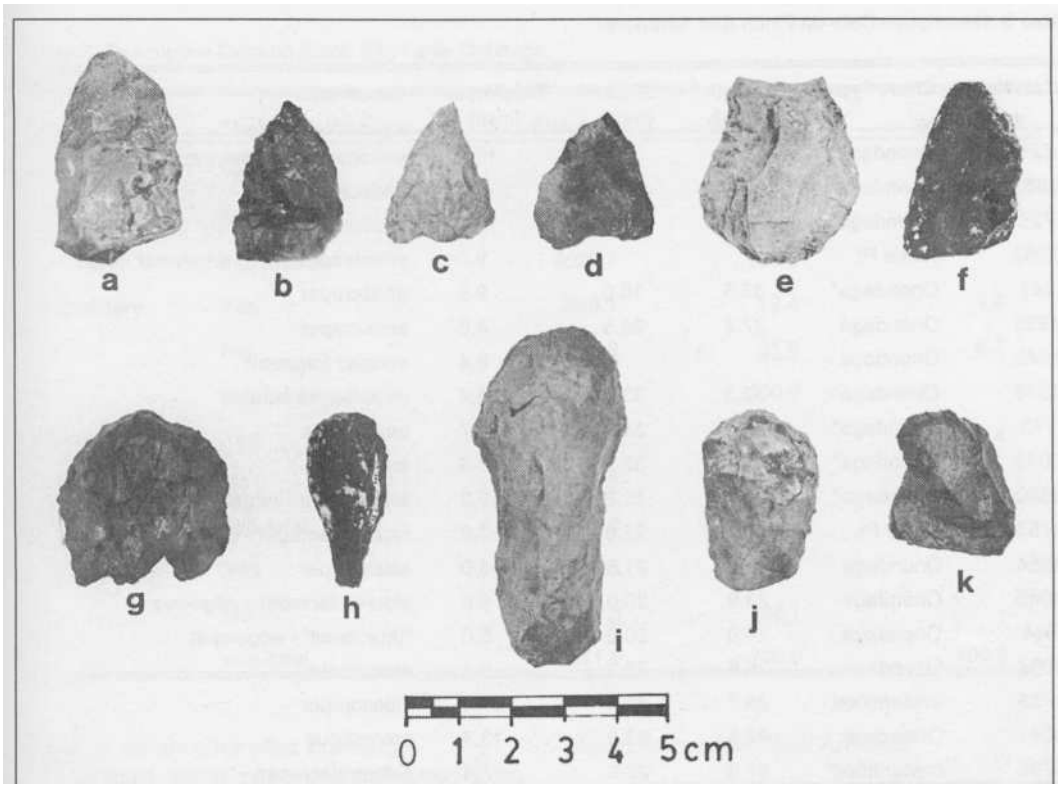


Figure 12. Selected Lithic Tools from the Finch Site: Possible Rejected Preforms (a, b), Possible Triangular Knives (c, f), Crude Triangular Biface (d), Crude Ovate Biface (e), Amorphous Scrapers (g, k), End Scrapers (h-j)

Debitage. Out of a total of 15.9 kg of chert debitage, 13.5 kg (85 percent) were analyzed in order to characterize the chipped stone industry practiced at the site. Three broad categories were adopted for this purpose: (1) primary reduction flakes, such as those produced during initial core reduction; (2) secondary reduction flakes, such as primary thinning flakes, secondary knapping flakes produced during semi-refined or refined biface reduction, or secondary retouch flakes produced during the final shaping or resharpening of refined bifaces or other formal tools; and (3) miscellaneous flake fragments, or shatter, that show no bulbs of percussion or other discernable characteristics of flaking. In addition, thermal alteration due to firing, as indicated by textural and colour changes and potlid fractures, was noted (Table 7). Such changes were observed in less than 15 percent of the sample and, since they adversely affect the flaking characteristics of the material, such visible thermal alteration clearly represents disposal of lithic debris in hearths rather than purposeful heat treatment.

The relative abundance of chert debitage and the predominance of primary reduction flakes (30 percent) and shatter (60 percent) over primary thinning, secondary knapping and secondary retouch flakes (10 percent) suggests that preliminary core reduction was an important aspect of the flintknapping industry.

Discussion. Overall, the chipped stone industry seems to have been a major activity during the occupation at the site. This may in part reflect an on-going need for serviceable cutting, piercing, and scraping tools at this resource exploitation camp.

A large number of the many projectile points recovered are broken, suggesting that retipping of arrows was carried out on site. The drills have extensive wear on the tips and many of the scrapers show the type of wear variability in form that is suggestive of expedient manufacture. The bifaces fall into two

Table 6. Descriptive Data on Finch Site Scrapers.

Cat. No.	Chert Type	Length (mm)	Width (mm)	Thickness (mm)	Comments
725	Onondaga	60.0	28.4	16.0	endscraper - edgewear noted
1553	Onondaga	33.7	22.2	9.1	endscraper
726	Onondaga*	32.0	15.0	10.0	endscraper
3052	Kettle Pt.			9.0+	endscraper frag. - edgewear noted
381	Onondaga*	33.5	16.0	9.6	endscraper
1939	Onondaga	27.2	25.5	4.6	endscraper
1943	Onondaga			9.4	scraper fragment
1933	Onondaga	32.3	33.3	6.4	multi-edged scraper
173	Onondaga*	33.8	34.5	9.7	amorphous
3043	Onondaga*	28.2	32.5	8.3	amorphous
1680	Onondaga*	50.7	15.8	10.0	sidescraper -edgewear noted
1753	Kettle Pt.	31.8	22.0	7.0	side/endscraper - edgewear
3054	Onondaga	53.0	21.6	18.0	sidescraper
2040	Onondaga	23.8	20.0	9.0	side/endscraper - edgewear
814	Onondaga	24.0	20.0	5.0	"thumbnail" - edgewear
1074	Onondaga	25.6	25.0	9.6	amorphous
1755	unidentified	25.7	22.0	11.4	sidescraper
3041	Onondaga	42.8	33.8	13.3	amorphous
1789	unidentified*	41.5	26.0	17.6	side/endscraper

* = thermally altered

major categories: possible preforms rejected due to breakage or other manufacturing difficulties, and refined tools such as knives that were broken during use. The large number of utilized flakes relative to the number of formal tools also suggests expediency rather than careful and intentional tool manufacture. The heavy use of the cores suggests that, while procurement of raw material may not have been a problem, chert was not wasted and every attempt was made to extract the maximum useable flakes from the material at hand. This is also evident in the predominance of primary reduction refuse in the chert debitage; good-sized secondary flakes were likely used for tool blanks. Overall the chipped stone tool assemblage seems to reflect a utilitarian industry.

Ground Stone

Although a ground stone industry is present, there is little or no evidence of the on-site manufacture of ground stone tools (MacDonald and Chun 1991b:91). The 15 ground stone objects recovered include three celts, an adze, four pendants (three of dark grey or black slate and one of buff slate or limestone), two anvil stones, a single abrader, a net-sinker, and portions of three pipes.

The first of the pipes is a limestone preform comprising the bowl and elbow portions. The outside has been pecked and partially ground, although neither the bowl nor stem hole has been drilled. The incipient shape is reminiscent of the bulbous ring type of ceramic pipes.

The second specimen is a limestone pipe stem fragment that is slightly ovate in cross section. The bore hole has been drilled unidirectionally and tapered in reverse from the outside diameter. This configuration suggests that drilling commenced at the mouthpiece, as would be expected. The surface of the stem is roughly but evenly pecked. An area of grinding with several linear striations and one large groove suggests the fragment was

Table 7. Descriptive Data on Finch Site Lithic Debitage.

Category	Thermal Alteration	Weight (g)	% of Class	% of Total
Primary	Yes	492.8	12.2	3.6
	No	3533.9	87.8	26.2
	sub-total	*4026.7*	*100.0*	
Secondary	Yes	245.1	18.4	1.8
	No	1087.9	81.6	8.1
	sub-total	1333.0	*100.0*	
Miscellaneous	Yes	865.4	10.6	6.4
	No	7286.5	89.4	53.9
	sub-total	*8151.9*	*100.0*	
Total	Yes	1603.3	11.9	
	No	11,908.3	88.1	
	sub-total	*13511.6*	*100.0*	*100.0*

used as an abrader after breakage.

The third stone pipe, manufactured from white quartzite (Figure 10c), is designed to be fitted with a wooden stem. Its overall height is 54 mm and the outside diameter of the bowl is 22 mm. The bore of the bowl at the lip is 13 mm in diameter and the bore of the stem hole has an outer diameter of 8 mm. From the side, the pipe has a roughly even diameter of 22.5 mm from top to bottom. From the front and back, however, it tapers from over 21 mm at the top to 6 mm at the bottom, giving the pipe a somewhat wedge-like appearance from the smoker's perspective. The base, which extended as far below the stem attachment hole as the bowl did above, is bifurcated to form two "legs." Indeed, markings immediately above the bifurcation, namely a V-shaped incision to the smoker's left and a vertical incision to the smoker's right, give the lower half of the pipe a distinctly anthropomorphic character. Damage to the pipe includes breakage of the bowl on the smoker's left, chipping around the stem hole, and breakage of one of the "feet." Additional design elements include drilled punctates on the front and rear of the "legs" and around the bowl. Also, notches appear around the bowl, and along both sides and on the bottom of the "leg" facing the smoker.

Bone, Antler *and Shell* Artifacts

Worked faunal items include nine artifacts present within the analyzed faunal sample and seven items identified during the processing of the unanalyzed portion of the faunal assemblage (Carscallen 199 lb: 119). Future examination of the latter will likely result in the identification of additional tools or the waste from their manufacture. Bone artifacts are dominated by awls or punches (n =5), manufactured from deer long-bones, perhaps indicating that hide-working was an activity carried out on the site. Three bone beads were recovered, two of which were manufactured from avian long-bones (one of which is possibly from a raptor) while the third was made from a raccoon ulna. A fourth small, flat rectangular shell bead was also recovered.

Seven modified shells (six made from small *Elliptio dilatatus or E. cornplinatus* specimens) were recovered from the excavated portion of the midden. These possibly served as scrapers for hide-working or, taking into account the large quantities of piscean remains present at the site, as fish-scaling tools. Among the other finds was a beaver incisor chisel or scraper, and an antler tine tool with battering and spalling at the butt end and pitting at the tip.

PLANT REMAINS

Eighty samples of plant remains were manually collected during the excavation, while an additional 17 samples of midden fill were collected for flotation and analysis (Monckton 1991:127-132).

The manually collected plant remains consist of maple (Acer sp.), beech (Fagus *grandifolia),* ash *(Fraxinus sp.),* elm *(Ulmus americana),* ironwood *(Ostrya virginiana),* and pine *(Pin us* strobus) wood charcoal, Eastern Eight Row maize *(Zea mays)* kernels and cob fragments, as well as pincherry (Prunus *pennsylvanica),* plum (Prunus *nigra),* and acorn shell (Quercus sp.).

Not surprisingly, the flotation samples produced a more varied range of plant taxa. Almost the full range of native cultigens - including maize, bean (Phaseolus vulgaris), sunflower *(Helianthus* annuus), and tobacco *(Nicotiana rustica)* - was recovered. Although cucurbit (Cucurbita pepo) is absent, it should be noted that this species is rarely recovered from Iroquoian sites, most probably as a result of the structure of the seeds and the methods used to cook this food (Monckton 1992:37-38). Collected plant taxa include bramble *(Rubus sp.),* strawberry *(Fragaria sp.),* black nightshade (Solanum nigrum), pincherry, plum, purslane *(Portulaca* oleracea), cat-tail *(Typha latifolia),* and acorn. None of the wood charcoal from the flotation samples was identifiable.

With respect to the environmental setting in which the site was established, Monckton (1991) has noted that

> Wood charcoal is dominated by maple, followed by elm and beech, suggesting that the Finch settlement was in the midst of mixed hardwood forest. The pre-dominance of hardwoods and rather weak representation of successional species such as pine suggests that the forest cover may have been relatively mature. While the range of plant taxa recovered was fairly broad, the frequency of seed remains from the flotation samples was small (n=93); many samples contained none. This thin accumulation of refuse might also suggest that settlement duration was relatively short, or not extensive. Longer site duration, or a larger settlement would promote the growth of successional species such as pine in addition to producing larger quantities of plant refuse (Monckton 1991:128).

FAUNAL REMAINS

Introduction

The original faunal analysis was carried out by Charleton Carscallen and Stephen Cox Thomas (Carscallen and Thomas 1991:95-118). The following is a summary of the results of Thomas' re-examination of the material. The faunal material was analyzed at the comparative zooarchaeological laboratory of the Department of Anthropology, University of Toronto, using procedures in accordance with the professional standards outlined by Cooper et al. (1995:25-35) and the Joint Committee on Archaeology (1992:16-17). Analysis of fish scales, fish vertebrae, and osteometry were beyond the scope of this project.

The basic unit of quantification used in the analysis is the number of identifiable specimens (NISP) as it is a real, empirical unit rather than one built on inference, such as the minimum number of individuals (MNI) (e.g., Grayson 1984:20-24). The concept of "ubiquity" is used in combination with NISP to provide another measure of the site-wide importance of particular taxa or species. Minimum number of individual (MNI) estimates are provided, however, for material believed to represent burial deposits.

No attempt was made to identify land snail specimens because these aestivate, and may represent recent intrusions. Similarly, a small quantity of very small mammal material was omitted from the analysis because there was evidence that it was intrusive.

Joined specimens from the same provenience unit were allocated a single catalogue number in order to reduce the degree of

interdependence between specimens, and to increase the value of the NISP as the basic unit of quantification.

Taxonomy follows Clarke (1981) for pelecypods, Godfrey (1986) for birds, Mandrak and Crossman (1992) for fish, and Banfield (1981) for mammals. Dog (Canis *familiaris)* and wolf (Canis *lupus)* elements were differentiated on the basis of size, taking into account developmental age. Anatomical terminology follows Miller et al. (1964) for mammals and Howard (1980) for birds.

As noted previously, the midden deposit was excavated in one-metre units, and soils were shovelled directly through six-millimetre mesh. Articulations between bones and information on other fine scale spatial relationship are, therefore, generally not available.

The analyzed sample, selected by Charleton Carscallen, was chosen from four squares representative of various parts of the midden (Figure 13), and equalled approximately one quarter of all recovered faunal material by weight. The two more peripheral units (212-550 and 214-550) yielded a total of 45 specimens, while the more centrally placed units (218-553 and 220-551) yielded 381 specimens, for a total of 426 analytically useful specimens. Both major stratigraphic zones are represented in the sample, including 75 specimens from the humus-like Zone A, and 341 specimens from the ashy Zone B. In addition, eight specimens were derived from Zone C in unit 218-553.

In general, preservation of the faunal material ranged from very good to excellent so that delicate structures and surface textures were well preserved. Favourable preservation undoubtedly contributed to the substantial quantity of fish remains in the assemblage. Favourable taphonomy also preserved fine traces left on bone surfaces by light chert butchering tools, as well as traces of use wear on the edges of bone tools. Five percent of the sample had been rodent- or carnivore-altered, while 11 percent had been charred or calcined. The high frequency of thermal alteration may reflect the predominantly ashy nature of the surrounding matrix below Zone A. Further analysis of a larger sample could explore the potential relationship between the generally high level of thermal alteration and the mode of food processing, as well as the issue of site seasonality.

Zooarchaeological Findings

Table 8 presents a basic overview of the number of identified specimens in the analyzed sample. Fish bone dominates the sample, accounting for 48 percent of the unworked specimens identified to a useful taxonomic level. Mammal elements-generally more robust and more resistant to taphonomic and excavation stress than fish, bird and amphibian-constitute 38 percent of the unworked bone. Bird remains account for approximately 11 percent, followed by amphibia (2 percent, all frogs or toads), and freshwater mussel (1 percent). No reptile remains were encountered in the sample. As noted above, nine of the specimens in the sample were worked, including three identified to class level only. In the following section the more significant taxa in the faunal assemblage are discussed.

Pelecypods. Six shells or shell fragments of at least three freshwater mussel (family Unionidae) species were identified (Table 9). Given the generally good to excellent preservation, and the hardness and robusticity of the shells, it is likely that there is an over-representation of unionids in relation to other groups, including fish, birds, or small mammals. Two of the analyzed shell specimens were modified into scraper-like tools. Given this fact, and their overall scarcity within the assemblage, it appears that unionids were more important as raw materials for implements than as a food resource.

Fish. Class osteichthyes, the bony fish, dominates the assemblage. Of 201 elements identified to an analytically useful level, 112 were taken to species, 81 to genus, and 8 to the family level. Eleven species were recognized (Table 10).

The genus Stizostedion comprises 65 percent of the fish assemblage. The yellow walleye is morphologically similar to the sauger, so 29 of the 43 sauger specimens and 7 of the 16 walleye elements were identified to the probable level (e.g., Stizostedion cf. canadense). A further 72 specimens could only be identified to the genus level. Taking taxon and size into account, a minimum of 10 individuals are represented. The greater part of the material (96.2 percent) was concentrated in Zones A, B and C of unit 218-553.

Carscallen and Thomas (1991:105) noted

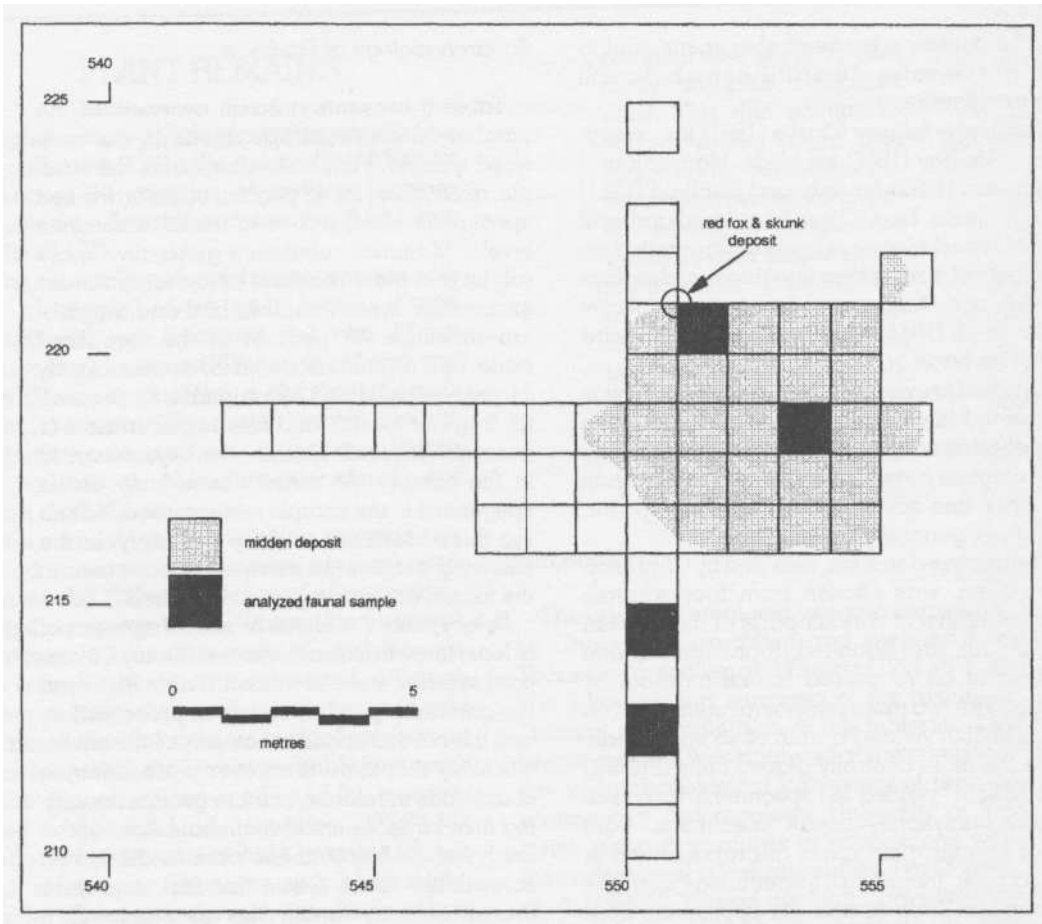


Figure 13. Finch Site Midden Excavation Area, Showing Location of Units Sampled for the Faunal Analysis

that a significant number of Stizostedion elements were small relative to the available laboratory reference specimens. This raises the possibility that some *Stizostedion* elements are attributable to the blue walleye, *Stizostedion* vitreum glaucum. At one time, the blue walleye was thought to be a separate species, based on its appearance, relatively small size, and reproductive isolation (Stone 1948:136). Now extirpated from Lakes Erie and Ontario, or entirely extinct, it was once among the most important commercial species in Lake Erie (Scott 1967:ix, 99), and may have been an important resource when the site was occupied.

The blue walleye had a later spawning period than the yellow walleye. In Lake Erie, the spawning period of the blue walleye averaged from May 10 until June 1, while the yellow walleye spawns approximately two weeks earlier, from April 10 to April30 (Stone 1948:54).

Salmonid bones, all from coregonine species (i.e., cisco or lake whitefish), comprise 7 percent of the sample. The salmonids and Sitzostedions together account for 72.2 percent of the total for fish species which are not resident in Catfish Creek. This fall-spawning, lake-dwelling coregonine contingent is of interest. Frequencies of salmonid cranial elements tend to severely under represent the relative importance of salmonids. There is a preservation bias against salmonid cranial bones because in salmonids the bone density of most cranial elements is low in comparison to their vertebrae (Butler and Chatters 1994). To assess the true significance of salmonids in an assemblage, it is therefore necessary to look at fish vertebra data (Thomas 1995b), which was a

Table 8. Analyzed Finch Site Faunal Material by Zoological Class.

Zoological Class	Number of Identified Specimens		
	Unworked	Worked	Total
Pelecypoda (all are Freshwater Mussels)	4	2	6
Osteichthyes (Bony Fishes)	201	0	201
Amphibia (all are Frogs or Toads)	7	0	7
Reptilia	0	0	0
Aves (Birds)	47	1	48
Mammalia (Mammals)*	158	6	164
Total	417	9	426

*64 of the mammal elements are believed to be derived from primary deposition of two carcasses or major portions of two carcasses.

Table 9. Finch Site Unionid Assemblage.

Common Name	Taxon	NISP		
		Un-Worked	Worked	Total
Lady Finger or Spike	*Elliptio dilatata*	0	1	1
Probable Eastern Elliptio	*Elliptio complanata*	1	0	1
Probable Elliptio	Unionidae cf. *Elliptio* sp.	3	0	3
Probable Button Shell (Maple-Leaf or Warty Back)	Unionidae cf. *Quadrula* sp.	0	1	1
Total		4	2	6

task beyond the scope of this analysis.

The fish assemblage also includes a diverse range of species in the catfish family, accounting for approximately 18 percent of the assemblage. Among bullheads, the dominant species is the yellow bullhead, while the brown bullhead - the most frequently-occurring species in many archaeological assemblages (e.g., Thomas 1978, 1995a, 1995b, 1996b, 1998) - is absent. However, the presence of yellow bullhead and the absence of brown bullhead, are consistent with modern fish data for Catfish Creek (Erling Holm, personal communication, 1996).

Some deep water fish species, such as lake sturgeon, Atlantic salmon, lake whitefish, lake herring and longnose sucker, can be procured more efficiently during their spawning runs because they congregate in more accessible shallows or travel up watercourses in large numbers. With Late Woodland fishing technology, some deep water lake species could only be caught while spawning. The timing of spawning events is, therefore, an important

Table 10. Finch Site Fish Assemblage.

Taxon	Common Name	NISP	Percent
Coregonus artedii	Cisco	10	5.0%
Coregonus sp.	Probably Cisco or Lake Whitefish	1	0.5%
Semotilus atromaculatus	Creek Chub	3	1.5%
Catostomus commersoni	White Sucker	2	1.0%
Moxostoma sp.	Redhorse Sucker sp.	1	0.5%
Ameiurus natalis	Yellow Bullhead	5	2.5%
Ameiurus sp.	Bullhead sp.	1	0.5%
Ictalurus/Ameiurus sp.	Small Channel Catfish or Large Bullhead	8	4.0%
Ictalurus punctatus	Channel Catfish	19	9.5%
Noturus flavus	Stonecat	3	1.5%
Ictaluridae cf. *Noturus* sp.	Probable Stonecat or Madtom	1	0.5%
Morone *chrysops*	White Bass	7	3.5%
Cf. *Morone* sp.	Probable Temperate Bass Family	1	0.5%
Lepomis sp.	Sunfish sp.	2	1.0%
Micropterus dolomieu	Smallmouth Bass	1	0.5%
Micropterus sp.	Small- or Largemouth Bass	1	0.5%
Pomoxis sp.	Crappie, Black or White	1	0.5%
Perca flavescens	Yellow Perch	3	1.5%
Stizostedion canadense	Sauger	43	21.4%
Stizostedion vitreum	Walleye	16	8.0%
Stizostedion sp.	Sauger or Walleye	72	35.8%
TOTAL		201	100.0%

* For clarity of presentation, probable identifications—such as *Stizostedion* cf. *canadense* or "*Stizostedion*, probably sauger"—have been merged with positive identifications.

element in interpreting the utilization of fish resources.

There are, however, two problems inherent in using the season of spawning as an interpretive tool. First, spawning behaviour does not increase the availability of all species equally. In the case of those species that neither school nor migrate to more accessible locales, spawning does not significantly in-crease their vulnerability to capture by humans. Secondly, the uncritical use of calendrical spawning dates can produce misleading results. The spawning dates in the Ontario ichthyological literature are based on research done in diverse locations throughout Canada and the northern United States. A published spawning date for one species might come from Lake Erie research, while the date cited for another species might be from a Lake Nipigon study. Since the conditions that trigger

spawning are more closely linked to water temperature than to the calendar, a species that spawns in the spring will spawn earlier in the southern part of its range than in the north. Lake Erie spawning dates could not be located for the most economically important species in the assemblage, so in an effort to reduce distortion, the Finch spawning sequence has been reconstructed on the basis of spawning temperature data rather than on published spawning dates (Thomas 1989). Figure 14 presents a histogram of the fish assemblage arranged by spawning temperature and distinguishes between species for which spawning behaviour makes a decisive difference to their availability, species for which it makes no significant difference, and intermediate species.

Another way to look at a fish assemblage system is to sort the exploited species according to environmental preference (cf. Cleland 1966:224-244). In Figure 15, habitat preferences are given according to a system devised by Jude and Pappas (1992). Using correspondence analysis to process abundance data from 16 fish census studies, they arranged 113 fish species on an open water to coastal wetland habitat preference continuum (Jude and Pappas 1992:655). Rank order scores were assigned so that the species most closely associated with open water habitat received a score of 1, and the species most closely associated with coastal wetland habitat received a score of 113. Among taxa familiar to Ontario zooarchaeologists, the coregonines, lake trout and lake sturgeon scored 14 and below, and burbot and Atlantic salmon scored 20 and 24, respectively. At the high end, pumpkinseed, largemouth bass, brown bullhead, and grass pickerel were ranked 83, 86, 93, and 109, respectively. Jude and Pappas did not consider inland marsh and watercourse habitat in their research. It appears safe to assume, however, that the part of the Catfish Creek drainage within the immediate Finch catchment area would support many species in the coastal wetland end of the continuum. The species on the Jude and Pappas continuum have been divided into five class intervals to make better use of the data.

The most striking feature of Figure 15 is that 75 percent of the fish elements in the sample, which are attributable to coregonines and *Stizostedions,* fall into the two class intervals in the open lake water end of the continuum. This emphasis on lotic species is surprising, given the upstream site location.

Just as interesting is the meagre number of elements from the two class intervals at the coastal wetlands end of the spectrum. The meanders and abandoned channel of Catfish Creek in the immediate vicinity of the site are characteristic of a mature watercourse. One would expect to find an abundance of the quiet, backwater habitats favoured by creek chub and various sunfish and bullhead species near the site, but only 9 percent of identified elements fall into these two class intervals. Similarly, there is an absence of taxa indicative of marshland exploitation, such as northern pike, grass pickerel, bowfin, or longnose gar.

Amphibians. Seven anuran elements were encountered in Zone B of unit 218-553. All were small relative to mature bullfrog *(Rana catesbeiana)* reference material. Six of the seven specimens were pectoral limb elements. On the basis of the sizes of the elements, at least three individuals are represented.

Birds. In comparison to fish and mammal remains, relatively few bird elements were identified. The most salient feature of the avian assemblage (Table 11) is that 42 of the 47 unworked items (89 percent) are attributable to upland game species. The sample contained 29 passenger pigeon elements and one wild turkey element, all from Zone B of unit 218-553. At least three passenger pigeon individuals are represented. Twelve ruffed grouse elements, representing at least two individuals, were recovered from the two central midden squares. The wild turkey element came from Zone B of unit 218-533.

The high concentration of passenger bones in one level of a single square suggests a harvest or mass procurement event. While all passenger pigeon bones appear to be fully formed and of mature size, three bear traces of juvenile cortex. If the concentration of elements was, indeed, derived from a single procurement event, then a fall migration is indicated.

Mammals. The mammals, summarized in Table 12, comprise the second most numerous zoological class in the assemblage. The relative importance of the various species is complicated by what appear to be two primary depositions of whole carcasses or major portions of whole carcasses in Zone B of unit

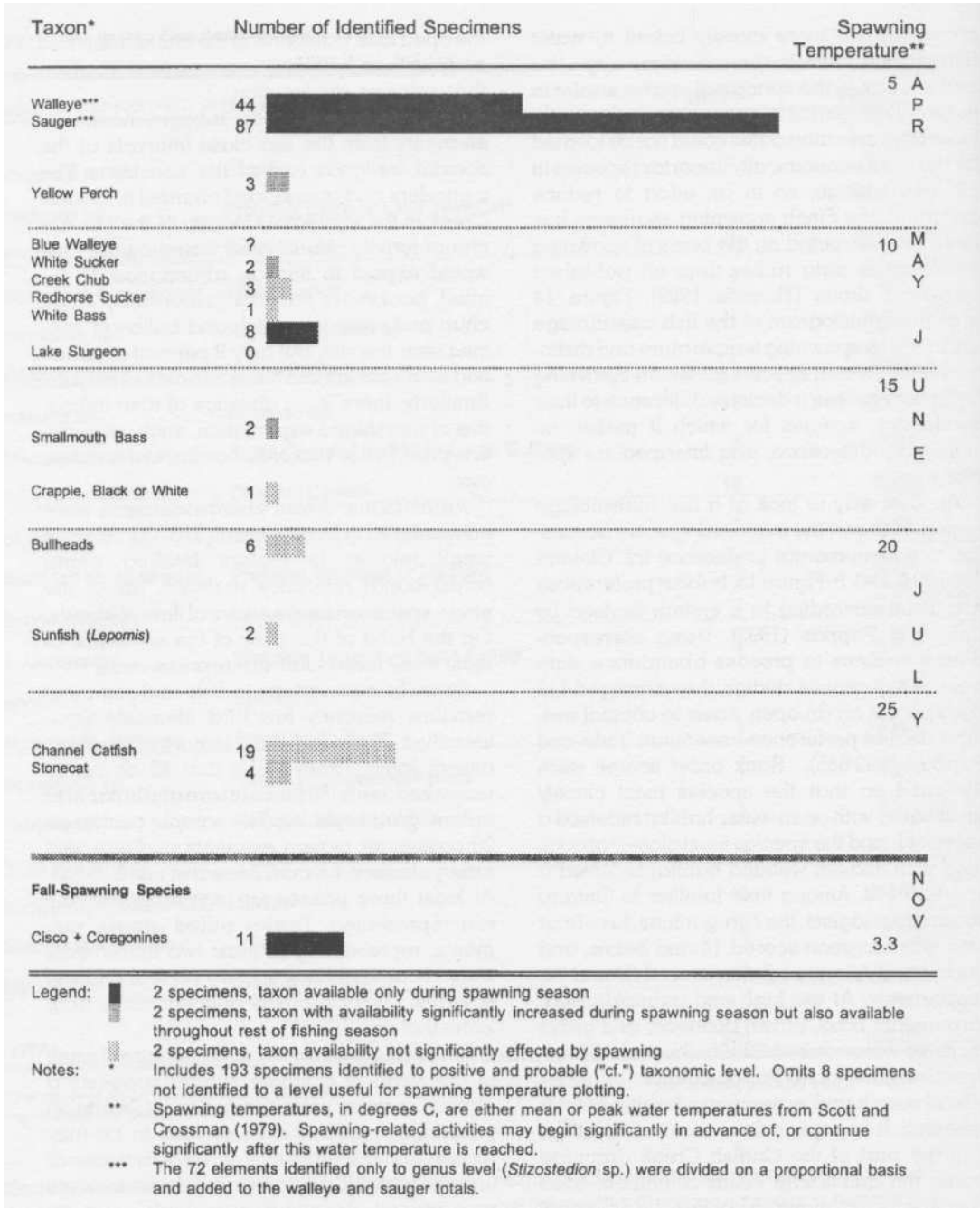
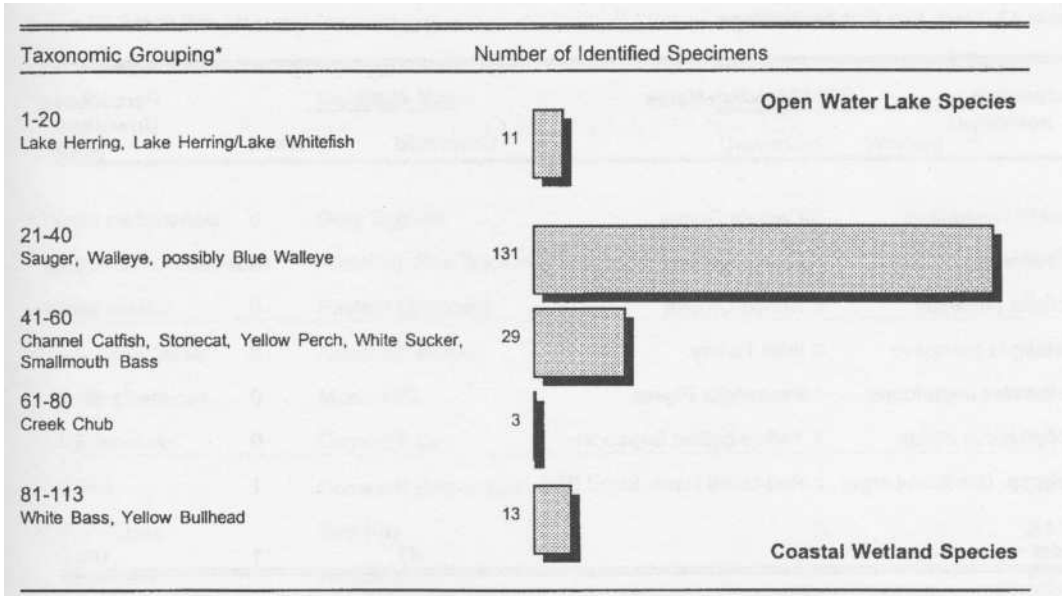


Figure 14. Finch Site Fish Assemblage Arranged in Spawning Sequence



Note:
Within each class interval, taxa are listed in descending order of abundance. NISP values combine both positive and probable ('cf.') identifications. Taxa selected Include 93% of **the** fish assemblage. These include identifications to the level of genus if all members of the genus fell within the same class interval. The remaining 14 generic and family level identifications, 7% of the fish assemblage, included taxa spread among two or more class intervals. Identification of these elements to species level would slightly increase totals in the upper three class intervals.

Figure 15. Taxonomic Distribution of Fish by Habitat Rating (after the habitat preference rating system presented by Jude and Pappas [1992:656-658]).

220-551 (Figure 13). These remains have been treated separately from secondarily deposited subsistence debris.

The white-tailed deer has the highest frequency of elements found outside of the equivalent of a burial context, accounting for 36 percent of the subsistence remains. The body part representation pattern is characterized by a proportionately large number of postcranial axial elements, and a somewhat low number of miscellaneous appendicular and head elements (Figure 16). Body portion representation patterns have been used to address the question of whether a prey assemblage represents long distance or local procurement of large game resources such as deer. For example, Perkins and Daly (1968:104) used the leg to foot bone ratio to examine the question of long distance transport. More recently, Uerpmann (1973) proposed a ratio that appears to be more sensitive to the issue of long distance transport. Elements are grouped into three sets depending on the amount of meat associated with each: group 1 includes the upper leg bones, the pectoral and pelvic girdles, and all vertebrae except the caudals; group 2 includes bones of the lower leg, brain case, the mandibles, ribs, and sternum; and group 3 includes the facial bones, caudal vertebrae, and bones of the manus and pes (Uerpmann 1973). The ratio for the analyzed sample from Finch (15:7:11) indicates an emphasis on Uerpmann's high meat value, but low industrial value, group 1 category.

Small rodents account for 26.6 percent of the mammal assemblage. The most abundant is the grey squirrel, (17 percent) followed by red squirrel (6.4 percent) and eastern chipmunk. One red and six grey squirrel elements were at least partially charred.

Twelve elements attributable to fur-bearing rodents were identified, including 11 muskrat (11.7 percent). As the single beaver element (a scoop-shaped incisor chisel) has been worked, it is not considered part of the subsistence assemblage.

Ten *Canis* specimens were recovered, including seven elements identified as domestic dog on the basis of their size. Size assessment could not be made for the remaining

Table 11. Finch Site Bird Assemblage.

Taxon	Common Name	NISP		Percent of Unworked NISP
		Unworked	Worked	
Branta canadensis	Canada *Goose*	3	0	6.4
Anserini sp.	Goose species	1	0	2.1
Bonasa umbellus	Ruffed Grouse	12	*0*	*25.5*
Meleagris gallopavo	Wild Turkey	1	0	2.1
Ectopistes migratorius	Passenger Pigeon	*29*	0	61.7
Sphyrapicus varius	Yellow-bellied Sapsucker	1	0	*2.1*
Aves sp. (Medium-Large)	Red-tailed Hawk-Sized Bird	0	1	0.0
Total		47	1	100.0

three elements, but given the relative scarcity of wolf elements in Ontario Iroquoian faunal assemblages, it is more probable that they represent domestic dog rather than wolf. All were derived from Zones A and B of unit 218-553. While none bore traces of animal alteration or butchering, eight were burned.

Eight raccoon elements, including one worked specimen, were recovered. Of these, all but one were derived from Zones A and B of unit 281-553. None bore traces of animal gnawing or tool marks, but two were burned.

Primary Deposits of Carcasses. Forty-seven red fox elements were found in a cluster in the northwest corner of unit 220-551 in Zone B. All body areas were represented: 4 head, 13 postcranial axial, 13 pectoral limb, 14 pelvic limb, and 3 miscellaneous appendicular elements. No element duplication was noted within this unit, and these bones are consistent with a single individual in development and relative size. Two additional fox elements recovered from elsewhere in the midden area do not appear to be related to this grouping.

Carnivore gnawing was noted on three of the fox elements (6.4 percent) from the clustered deposit, whereas it was found on 33.3 percent of the 94 unworked mammal elements from non-burial contexts. The extent of articular relationships between bones is unknown, but light cut marks, noted on both hip bones and the left tibia, indicate at least partial disarticulation. Disarticulation may have advanced further than the cut mark evidence suggests because a small- to medium-sized mammal carcass can be completely butchered using small, unhafted, expedient stone tools in combination with joint-smashing, without leaving cut marks (William Irving, personal communication, 1973). Brief comparison between faunal assemblages from three prehistoric Iroquoian villages and one historic site, where metal tools were available, lends some credence to this suggestion. The ratio of butcher marks noted on the mammal bones from the prehistoric sites (Hubbert [BbGw-9] and Dunsmore [BcGw-10], located in the City of Barrie, and Norton [AfHh-86] located in the City of London) ranges from 1.4 to 5.7 percent, whereas at the La Vase Island site (CbGu-5), a late eighteenth to early nineteenth century site fur trade post and camp located in the City of North Bay, 36 percent of the analyzed sample bore cut marks (Thomas 1992:69-70, 1996a:Appendix D, 1996b:128-132; 1996c:Appendix E).

Seventeen striped skunk elements were associated with the cluster of red fox elements. These comprise all of the striped skunk remains in the analyzed sample. Again, all body areas were represented: two head, five postcranial axial, five pectoral limb, and five pelvic limb elements. No cut marks were noted, but five elements (29.4 percent) bore traces of

Table 12. Finch Site Mammal Assemblage.

Taxon*	Common Name	NISP		Percent Unworked
		Unworked	Worked	
Sciurus carolinensis	Grey Squirrel	16	0	17.0
Tamiasciurus hudsonicus	American Red Squirrel	6	0	6.4
Tamias striatus	Eastern Chipmunk	3	.....	3.2
Castor *canadensis*	American Beaver	0	1	0.0
Ondatra zibethicus	Muskrat	11	0	11.7
Canis *familiaris*	Domestic Dog	7	0	7.4
Canis sp.	Domestic Dog or Wolf	3	0	3.2
Vulpes vulpes	Red Fox	2	0	2.1
Procyon lotor	Raccoon	7	1	7.4
Martes americana	American Marten	1	0	1.1
Odocoileus virginianus	Virginia White-tail Deer	34	0	36.2
Cervidae cf. *O. virginianus*	Deer Family, Probably White tail Deer	0	1	0:0
Cervidae sp.	Deer Family, Antler	4	1	4.3
Mammalia sp. (Large)	Deer-sized Mammal	0	1	0.0
Mammalia cf. *O. virginianus*	Large Mammal. Possibly Whitetail Deer	0	1	0.0
TOTAL		94	6	100.0
Probable Whole Carcasses or Major Portions of Whole Carcasses				
*Vulpes vulpes***	Red Fox	47	0	
*Mephitis mephitis***	Striped Skunk	*17*	*0*	
TOTAL INCLUDING WHOLE-CARCASS DEPOSIT		158	6	

* For clarity of presentation, probable identifications of unworked elements—such as *Canis* cf. *familiaris* or "dog/wolf family, probably domestic dog"—have been merged with positive identifications.

** A deposit of related elements, apparently representing major portions of a red fox and a striped skunk carcass, was found within Zone B in the northwest corner of square N220-E551. Because of the high interdependency factor between elements within this cluster, these remains are excluded from percentage calculations for subsistence remains found in the midden.

carnivore tooth marks, close to the rate noted for unworked mammal bone in non-burial contexts.

The cut mark evidence leaves no doubt that the red fox deposit has a cultural association. If found in isolation, one might interpret the skunk remains as an intrusive cache deposited by a dog or fox (Banfield 1981:300), either during or after the primary occupation of the site. The association of the skunk remains with the red fox, however, suggests a link to cultural activity. More complete recovery of both carcasses would have led to a stronger interpretation, but carnivore tooth marks observed on parts of each individual suggest dispersal of parts of each carcass. It is also possible that some of this deposit is located in parts of adjacent, unexcavated, units (Figure 13).

It should be noted that red fox interments have been encountered on other Iroquoian sites of approximately the same period. For example, the cremated remains of a red fox were found buried inside a longhouse at the Over site (Thomas 1995b), a Late Iroquoian site in the northern reaches of the Don River drainage (Sutton and Poulton 1994:6), while an articulated red fox burial was found on the Grandview site, a late Middle to Late Iroquoian village in Oshawa (Austin 1998).

The available information on the red fox and skunk deposit is inconclusive, and the possibility that it represents subsistence debris cannot be rejected. Nevertheless, because this deposit appeared to contain major portions of two carcasses, with a consequent high degree of element interdependence, the remains have been treated separately from the rest of the faunal data in Table 12.

Discussion

A striking aspect of the analyzed assemblage is its apparent uneven distribution or patchiness. For example, 96.2 percent of the 131 Stizostedion elements were recovered from one unit, and all 29 passenger pigeon elements were derived from a single level of one unit. Similarly, all seven anuran and all ten *Canis* elements came from a single square. Given that the analyzed sample is derived from a relatively small part of the midden, the apparent uneven distribution of taxa suggests that while the analyzed sample is representative of certain aspects of subsistence practices at the site, it is not necessarily representative of the full range and relative importance of all activities that may have occurred there.

Ubiquity is one measure of the regularity with which various subsistence resources were tapped. At a site utilized as part of a seasonal subsistence round, it is assumed that taxa that were utilized year after year will tend to be more ubiquitous and, consequently, are more likely to be represented in a larger number of units. Conversely, taxa that were infrequently exploited will tend to have a more uneven or "patchy" distribution. Ubiquity is subject to the problem of differential preservation, as are other measures of taxonomic significance. Larger species tend to withstand taphonomic factors better than smaller species; fish and amphibian remains tend to deteriorate more rapidly than bird and mammal remains; and because preservation conditions tend to be better in the ash-rich centre of the Finch midden than at the periphery, species with more ephemeral elements will tend to be under represented in peripheral squares.

Table 13 presents the distribution of selected taxa from three areas: the midden periphery; near the midden core but on the periphery of ashy Zone B deposits; and Zone B in the midden core. Among the most evenly distributed resource taxa are deer as well as red and grey squirrels. Among the least evenly distributed are passenger pigeon and Stizostedions. Ruffed grouse and muskrat remains seem to be broadly distributed, while salmonid and Canis bones seem to be unevenly distributed, but the specimen counts for these species are too low to permit a secure interpretation.

Deer hunting along the north shore of Lake Erie would have been a productive subsistence activity. The Finch catchment area is rated as having a high potential with only slight limitations for ungulate productivity (Canada Land Inventory 1971). Fall is an auspicious time for deer hunting as they are fattened for the oncoming winter, their hides are in prime condition, and rutting behaviour causes them to congregate and be less wary. The deer body part representation in the Finch assemblage is consistent with carcass reduction for drying or smoking meat for transport to a permanent settlement, along with the more industrially important skeletal elements.

Squirrels would probably never have been a major subsistence resource, but they would be

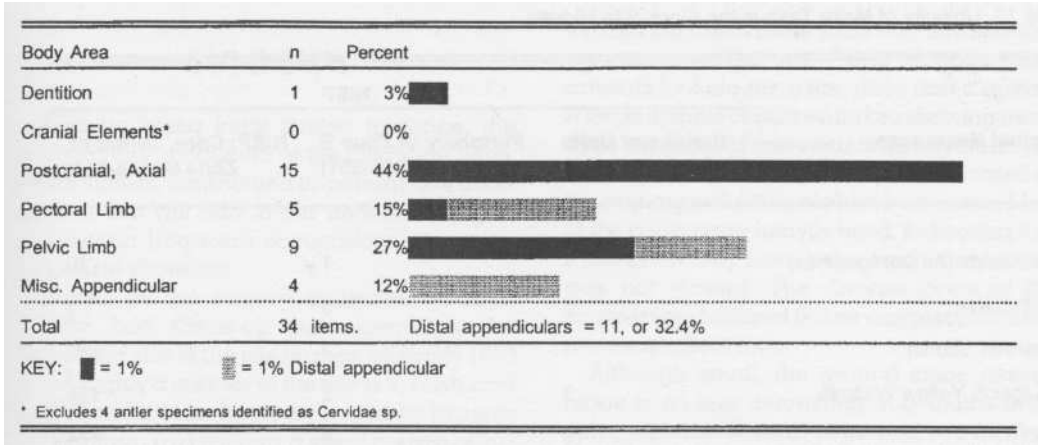


Figure 16. Finch Site White-tailed Deer Body Portion Representation

constantly available and could be effectively procured with traps. Steward (1968:326) equates this pattern of small game procurement with food collecting, because specialized activity groups would not be required to leave the main site for protracted lengths of time to exploit resources of this type.

The coregonines, which are almost certainly under represented in this assemblage, link Finch to the fall lacustrine salmonid fishery. On the other hand, spring-spawning lacustrine species dominate the fish assemblage. Yet, if Stizostedion spawning beds either in Catfish Creek or on the shoals of Lake Erie were exploited in the spring, the assemblage should contain substantial quantities of white sucker, perch, white bass, and probably lake sturgeon. No lake sturgeon elements were identified, and the other species in this group comprise a mere 6.5 percent of the assemblage. A spring date for Stizostedion exploitation is inconsistent, therefore, with the other fish data.

Carscallen's original analysis of the fish data led to the suggestion that, if the occupants of the site did not take Stizostedions in the spring, it is possible that they were taken as a byproduct of the fall lacustrine salmonid fishery. In fall, schools of Stizostedions move closer to the lake shore and, at least in some contexts, they occupy salmonid spawning beds (Raney and Lachner 1942; MacCrimmon and Skobe 1970: 109). It is possible, therefore, that the Finch Stizostedions were taken, in the autumn, on cisco and lake whitefish spawning beds (cf. Carscallen and Thomas 1991:114). The occurrence of 96.2 percent of the Stizostedion remains in the same unit that also produced all but one of the coregonine elements is consistent with this suggestion.

The Finch occupants may have staged fishing trips to the lake for salmonids and Stizostedions, either to supplement the fall deer hunt, or to replace it in years when deer were scarce. The appearance of an uneven, discontinuous distribution for both the salmonid and Stizostedion resource groups tends to support the second alternative. At the fifteenth-century Over site, for example, the lacustrine salmonid fishery appears to have fully eclipsed the fall deer hunt (Thomas 1995b).

The presence of coregonines and Stizostedions indicates long distance transport of fish procured from lake waters or - in the case of Stizostedion - probably from lake waters, but certainly no closer to Finch than locations far downstream on Catfish Creek. Excavation of recent ethnographically recorded sites has demonstrated that off-site processing of harvested fish resources can change the ratios of cranial to axial elements found on archaeological sites (Stewart and Gifford-Gonzalez 1994: 242, 244-245). Analysis of fish vertebra data can also be used to detect off-site processing of fish species involved in long distance transport to a village site (Thomas 1995b), although such research was beyond the means of this study.

Passenger pigeon remains occurred exclusively in Zone B of unit 218-553. While passenger pigeons would have nested in the area and would have been available on an opportunistic basis throughout the summer, the quantity of remains involved suggests a larger scale

Table 13. Ubiquity of Major Taxa in the Finch Site Midden.

	NISP		
Faunal Resources	Peripheral (212-550, 214-550)	Periphery of Zone B (220-551)	NISP: Core, Centre of Zone B (218-553)
Salmonids (All Coregonines)	-	1	10
Bullheads	2	3	1
Channel Catfish	1	2	16
Sauger & Yellow Walleye	3	2	126
Fish	19	8	174
Ruffed Grouse	-	4	8
Passenger Pigeon	-	-	29
Unworked Bird	-	7	41
Grey & Red Squirrels	3	4	16
Muskrat	8	-	3
Canis	-	-	10
White-tail Deer	9	3	22
Unworked Mammal*	21	9	64

* Excludes primary deposits of carcass, whole or major portions

procurement event. The presence of three elements with persisting juvenile characteristics suggests that, at Finch, they represent the fall passenger pigeon migration.

From the perspective of faunal procurement, the Finch site appears to have been a processing centre for resources procured by far ranging special activity groups. To explore this hypothesis further, a larger sample must be examined, and fish vertebrae must be included in the analysis. Concerning the large component of lacustrine fish, presumably caught in Lake Erie, there remains the issue of whether it was dried and smoked at the site, or whether this location served as a drop-off point for fish processed elsewhere. To address that question, it would be necessary to analyze faunal remains from a village site within the general area in order to obtain comparative data.

The site could also have served as a base for the special activity groups that ranged farther afield to procure these resources, and as a temporary residence for those processing meat. While the occupants may have worked to provide meat for a home village, to feed themselves they could have relied on locally available resources - resources that may not have been as readily preserved. Almost 90 percent of the avian assemblage consists of locally available, upland game birds (ruffed grouse, passenger pigeon, and wild turkey). Almost half of the mammal remains come from small- to medium-sized game species that were likely available within the immediate vicinity of the site (grey and red squirrels, chipmunk, muskrat, and raccoon). A certain proportion of the fish assemblage (creek chub, yellow bullhead, stonecat, and various members of the sunfish family) would also fall into this category.

SUMMARY

Despite being fairly limited in scope, the excavations conducted at the Finch site have, nevertheless, contributed important new information that will add to our understanding of prehistoric Iroquoian occupations along the Lake Erie shoreline.

Based on the surface collections, test-pit survey, and follow-up test excavation, the estimated size of the site is approximately 1650 m^2. Roughly a quarter of the site is in bush, and less than half has been disturbed by modern agriculture. To date, only a small portion of this estimated settlement area (50 m^2) has been excavated, including 30 m^2 of the midden. With the exception of the midden and a few scattered post moulds and small pit-like features, no meaningful settlement patterns were exposed.

The dominant utilitarian ceramic vessel type recovered from the site was Pound Necked. Within this basic type, however, there was considerable range in vessel form and the use of decorative motifs, which may reflect either temporal or regional variation. The relatively modest quantity of Lawson Incised pottery, the near absence of Ontario Horizontal and Middleport Oblique, and the presence of "foreign" types such as Parker Festooned are also noteworthy. Together, the data suggest a temporal placement during the early Late Ontario Iroquoian stage, between circa A.D. 1400 and 1450. The primary cultural affinities would be to the prehistoric Neutral, although there may have been peripheral ties to the Western Basin area.

Ceramic pipes offer another line of evidence for the suggested temporal placement. Iroquois Ring and Conical Decorated pipe types dominate the Finch sample, while Trumpet, Human Effigy and other later types are scarcely present. Together, the evidence suggests a temporal span between circa A.D. 1350 and 1450. Noteworthy is the human head wearing a headdress (which is assumed to be from a pipe), and a series of smaller, poorly deco-rated pipes which do, nevertheless, represent established types.

The sample of chipped lithics contains a large number of Nanticoke Notched and Nanticoke Triangular projectile points. An associated biface industry is also present, suggesting that the use of these tools was an important component of the site. Other chipped stone artifacts include scrapers, drills and a graver. A large sample of utilized flakes showing many different zones of use-wear is also evident. The debitage sample is large and predominated by the primary reduction of chert from cores. Most of the cores were heavily used, indicating that while chert may have been easily procured it was not wasted. The diverse forms of the scrapers and utilized flakes suggest that these were expedient tools.

Although small, the ground stone assemblage is no less interesting. It contains three celts, an adze, several pendants, two finished pipes and a pipe preform, an abrader, a net-sinker and two anvil stones.

Bone artifacts are dominated by awls or punches, but several beads were also recovered. The presence of the former suggests that hide-working was a site activity. Numerous freshwater mussel shells were used as scrapers, possibly for hide-working, or, taking into account the large amount of fish remains present, for de-scaling fish.

Plants remains include cultigens such as maize, beans, sunflower and tobacco. Although cucurbit is absent, this taxon is rarely recovered from prehistoric Iroquoian sites. Wild plants include pincherry, plum, acorn, bramble, strawberry, black nightshade, purslane and cat-tail. Identified wood charcoal includes maple, beech, ash, elm, ironwood, and pine. Despite the small size of the samples, this evidence suggests a mature, mixed hardwood forest in the vicinity of the site.

While faunal remains from only four of the one metre excavation units were analyzed, some noteworthy results were obtained. First, fish were particularly important and included high frequencies of *Stizostedion* sp. (sauger and walleye), coregonines (cisco or lake whitefish), and channel catfish. The presence of the former two taxa, which make up almost 75 percent of the fish assemblage, are important in that they are lake dwellers and imply that they were brought to the site, in the fall, from Lake Erie, possibly for further processing (i.e, smoking or drying).

These autumn activities may have coincided with deer exploitation. The deer body portion profile of the analyzed sample suggests that carcasses were partially processed, with the hides, dressed meat, and industrially valuable

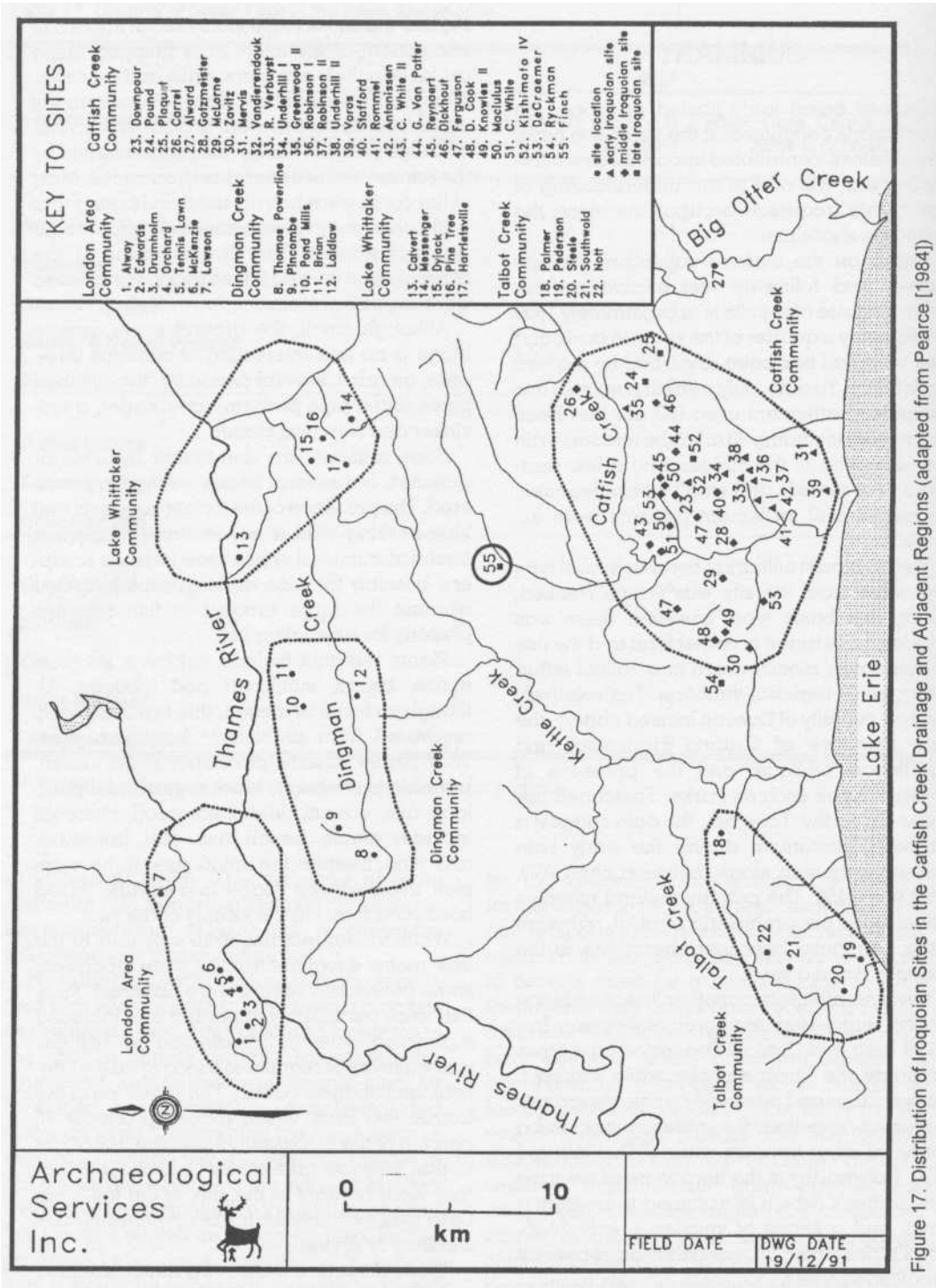


Figure 17. Distribution of Iroquoian Sites in the Catfish Creek Drainage and Adjacent Regions (adapted from Pearce [1984])

elements - crania (deer brains were commonly used in hide-tanning [Driver and Massey 1957:343-344]), metapodials (cannon bones) and phalanges, as well as the proximal appendicular elements that are rich in marrow fat - being transported back to a permanent settlement.

If the Finch site did, in fact, serve as an autumn base camp for fishing and hunting parties setting out from a permanently occupied village, it remains to be determined where the parent community was located. The Finch site is located on the northern periphery of a group of Iroquoian sites centred on the Catfish Creek drainage (Figure 17). These sites, which have been documented over the past 40 years (Connoy 1979; Kapches 1977; Lee 1951, 1952; McWilliam 1977, 1978; Poulton 1980; Wright 1966), represent all of the major Iroquoian periods.

The Early Iroquoian sites are situated in a fairly tight cluster centred on the lower portion of the drainage and just north of the shoreline. The Middle Iroquoian sites are located in an east to west trending arch stretching across the middle tributaries of the creek and north of the earlier sites. Finally, the Late Iroquoian sites are located at the outer reaches of the drainage basin, on the smallest tributaries, and are widely distributed to the west and east. The Finch site, lying in apparent isolation to the north, is situated in an area which has not been investigated in the course of regional archaeological surveys. If the West Catfish Creek drainage were to be investigated, however, it is expected that other middle to late period sites (including villages) would be located in the immediate vicinity. Pearce (1984:377-388) has postulated a series of regional Iroquoian developments in the vicinity of London and St. Thomas, each of which is believed to be a community evolving within a specific drainage basin. Given the site densities which have been recorded for the Catfish Creek drainage basin, however, it is possible that more than one community was present in this region.

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