

THE WILCOX LAKE SITE (AIGu- 17): MIDDLE IROQUOIAN EXPLOITATION OF THE OAK RIDGES MORAINÉ

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The multi-component Wilcox Lake site (AIGu-17) is situated beside a large kettle lake in the Oak Ridges Moraine physiographic region, approximately 35 km north of Toronto. The principal occupation is identified as a 1.2 ha Iroquoian village dating to the early fourteenth century. Late Archaic and Middle Woodland components have also been documented. The available evidence related to the Iroquoian component indicates year-round occupation of the village between circa A.D. 1300 and 1320, and the site is beginning to provide data on a previously unknown regional expression of the Early to Middle Iroquoian transition.

INTRODUCTION

Between 1988 and 1990, Archaeological Services Inc. conducted limited mitigative excavations at the Wilcox Lake site (AIGu-17), an early Middle Iroquoian village with additional components related to the Late Archaic and Middle Woodland periods. Located in the Town of Richmond Hill, Regional Municipality of York, Ontario (Figures 1 and 2), the site is situated in Sunset Beach Park, on the eastern shore of a large kettle lake in the Oak Ridges Moraine physiographic region. The site was found and registered in 1984 by Mr. Gordon Dibb.

Further attesting to the lake's attractiveness to prehistoric peoples, at least six other prehistoric sites are located within a one-kilometre radius: the multi-component Paleo-Indian and Middle Woodland Esox site (AIGu-99), the Middle Archaic Lupus site (AIGu-104), the Middle Woodland Lost Brant site (AIGu-110), and the prehistoric Aquila (AIGu-103), Argo (AIGu-105) and Sunset Beach (AIGu-106) sites (Burgar 1990; Williamson and Austin 1991; Williamson and Cooper 1988).

SITE ENVIRONMENT

The topographic cross-section shown in Figure 3 illustrates the prominent elevation of the lake and the site, which lie at approximately 300 m above sea level. Wilcox Lake is the largest of a series of kettle lakes which dot the crest of the interlobate Oak Ridges Moraine. At its widest point, this belt of sand and gravel encompasses the area from just beyond the East Don River north to the Town of Newmarket (see Figure 1). From west to east, the moraine extends from the Niagara Escarpment to the Trent River, a distance of more than 160 km. Given its elevation with respect to the surrounding landscape, the Oak Ridges Moraine is an effective divider of the Lake Ontario and Lake Simcoe watersheds. From east to west, Lynde and Duffins Creeks, and the Rouge, Don and Humber Rivers all flow southward from the central portion of the moraine into Lake Ontario. One of the tributaries of the Humber River arises near Lake St. George to the northeast of the site, drains into Wilcox Lake, and then extends west for some 17 km before turning southward to join the main river. Along the north slope of the central moraine, Pefferlaw Brook, along with the Beaverton, Black, and Holland Rivers, drain northward into Cooks Bay and Lake Simcoe proper. The Wilcox Lake site lies near the centre of a large tract of Brighton Sandy Loam stretching out along the elevated eastern shoreline of the lake, which is characterized by smooth, gently sloping topography. Although prone to drought and of low natural fertility, these soils are well-drained with good agricultural capability. Prior to its current use as a public park, horticultural crops were grown in the Sunset Beach Park area on small garden plots associated with private cottages.

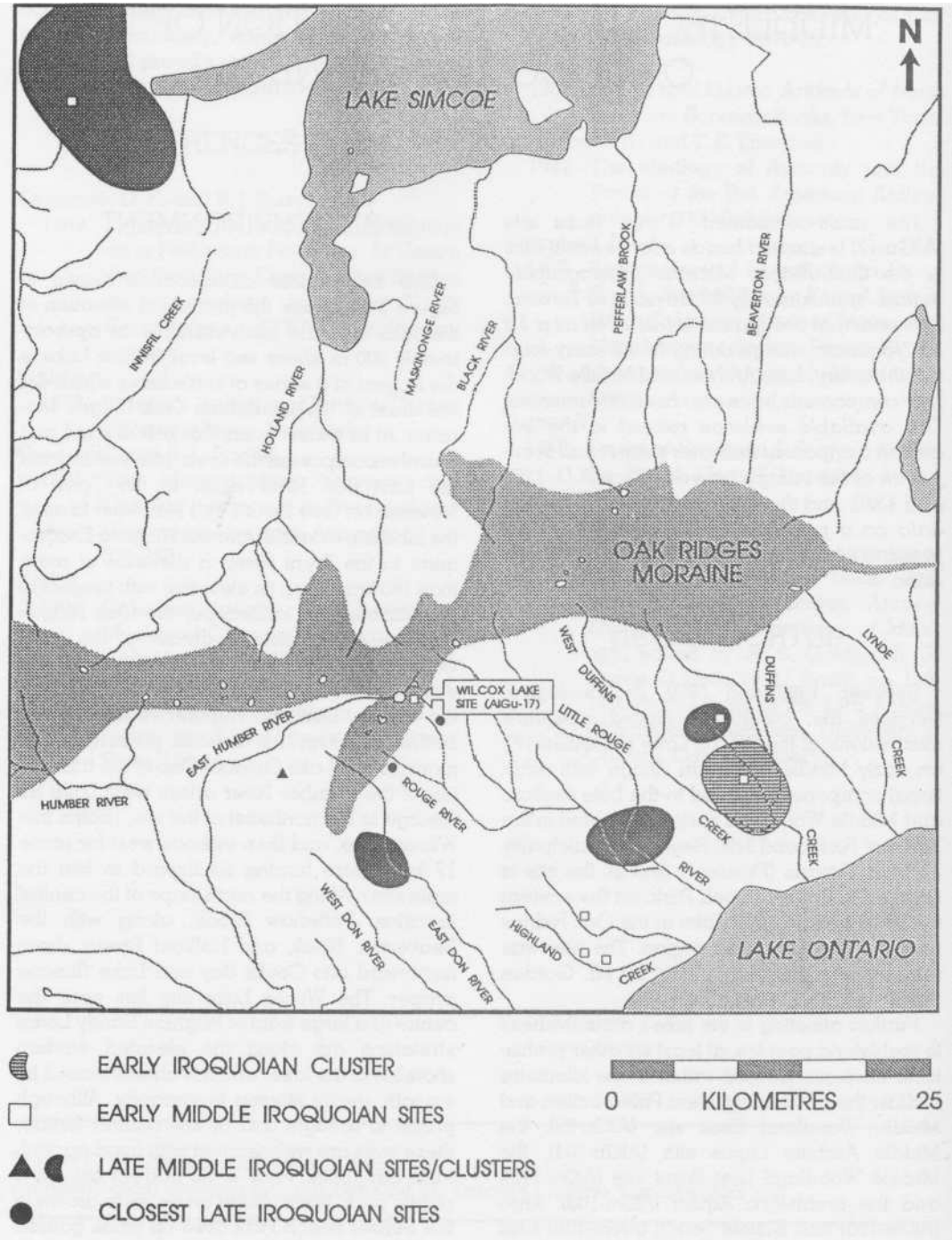


Figure 1. Location of the Wilcox Lake Site (A1Gu-17) on the Oak Ridges Moraine

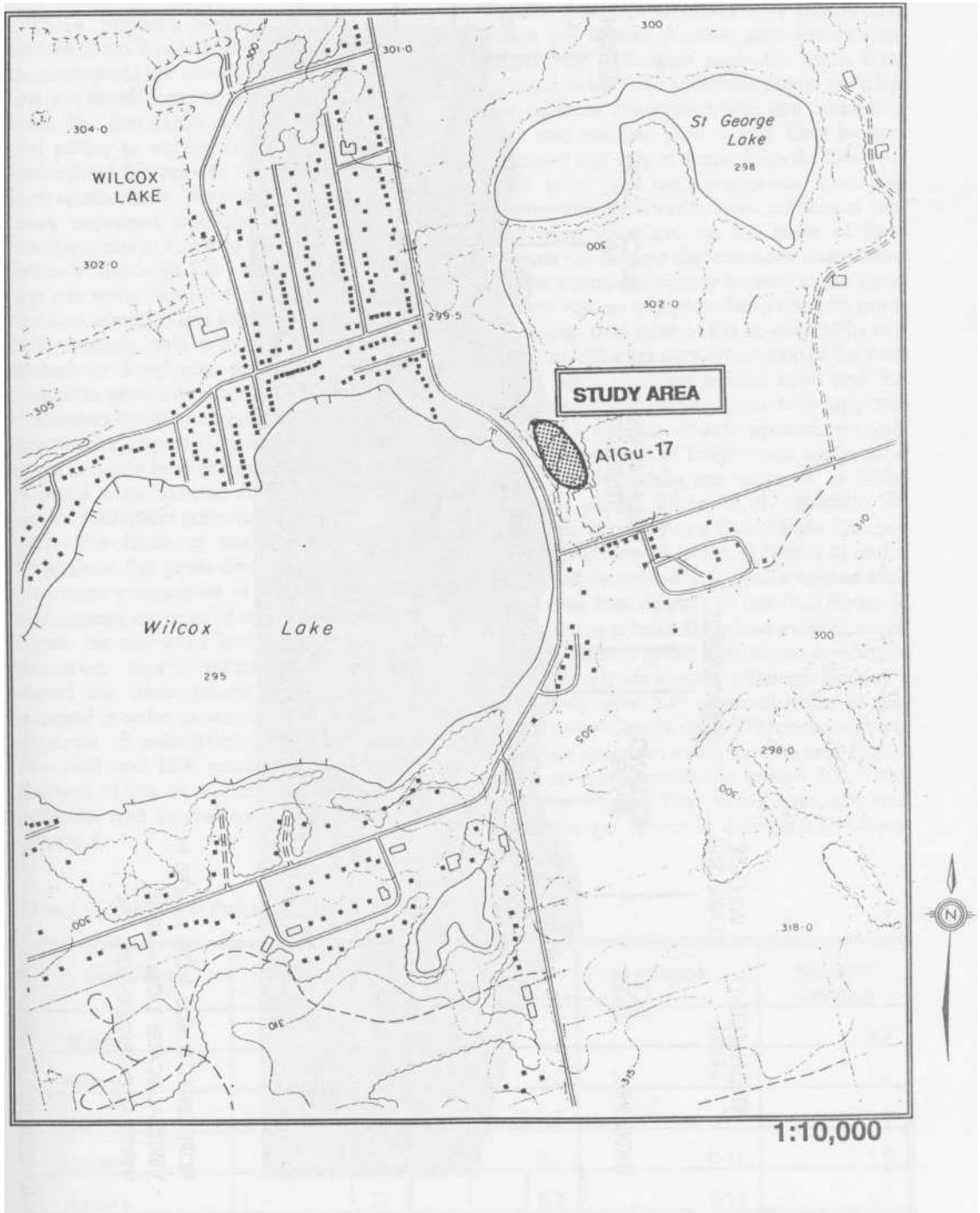


Figure 2. Location of the Wilcox Lake Site (AIGu-17) (1:10,000 Scale)

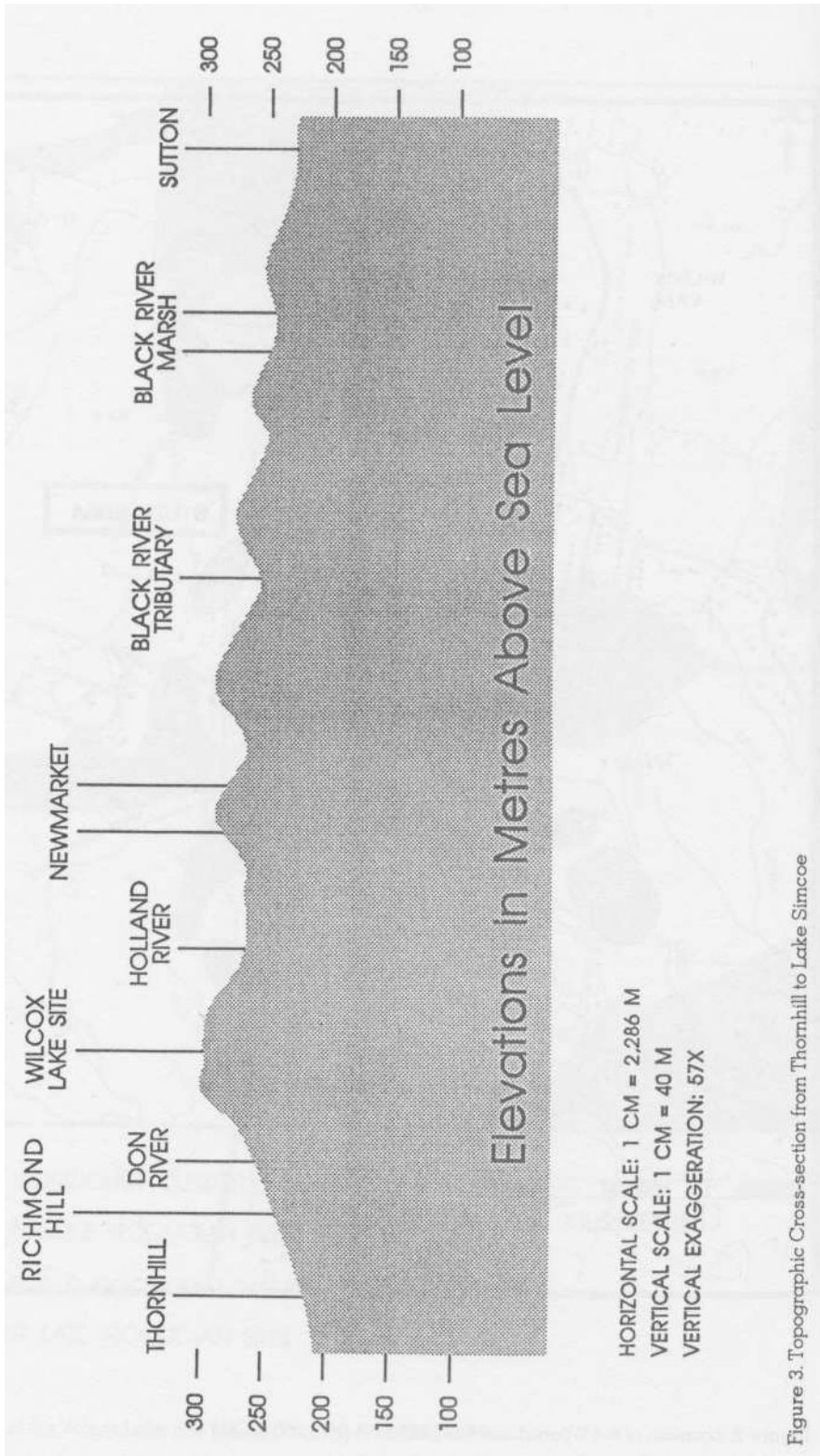


Figure 3. Topographic Cross-section from Thornhill to Lake Simcoe

SETTLEMENT PATTERNS

Excavation Methods

Three hundred and eighty-three square metres of the Wilcox Lake site were excavated in advance of the installation of a playground unit and washroom sewer line in Sunset Beach Park. The first stage of investigation involved test pitting to subsoil at five-metre intervals throughout the park in order to establish the site's spatial limits. The soil fills from all test pits were screened through six-millimetre wire mesh in order to facilitate the recovery of small artifacts. Although the precise locations of all test pits were recorded, none of the "positive" (artifact bearing) test pits was found to correlate spatially with a specific prehistoric pit feature or longhouse structure when these elements were later defined within the areas excavated for the playground unit and sewer line corridor (Figure 4). Hence, the provenience of all artifacts from the preliminary test pits is referred to as "indeterminate" with respect to known settlement patterns.

On the basis of preliminary test pitting throughout the grass-covered park area, the Iroquoian component of the site appears to encompass an area of approximately 1.2 ha. Since the site area had once been plough disturbed, topsoil within the limited areas slated for development was mechanically removed in order to expose, record, and hand-excavate all subsurface settlement features. The 1988 and 1990 excavations documented portions of five, or possibly six, longhouses, a palisade, and 54 prehistoric cultural features (Figure 4).

Not all of these features, however, were related to the Iroquoian occupation of the site. As described more fully below, two features and one post mould yielded exclusively Middle Woodland dentate stamped body sherds (one with a coil break). Another post mould contained only a Vanport projectile point. Late Archaic Lamoka-like projectile points were the only artifacts associated with two other features and another post mould. One feature contained not only a single Lamoka-like projectile point, but also numerous Iroquoian ceramic sherds. Twenty-three additional features were identified, on the basis of their contents, as historic disturbances associated with the cottages formerly located in the park.

There are no complete house length measurements, and most of the house widths are conjectural. The primary orientation of the long axis of each structure is east-west, and the average structural width seems to be approximately 5.5 m. The closely spaced, roughly parallel alignment of longhouses suggests a village of the Middle (as opposed to Early) Iroquoian period (Dodd et al. 1990:343), although the recovery of a Glen Meyer Oblique rim from Feature 52 (north of House 2) and a body sherd decorated with cord-wrapped stick impressions from Feature 59 (south of House 2) may indicate a brief Early Iroquoian occupation of the site. Typical inter-house spacing is approximately six metres, although Houses 4 and 5 may have had adjacent walls, as discussed below. Dodd's (1984:272) comparison of longhouse attributes noted that the average for wall post diameters in the period A.D. 1300-1450 was 7.1 cm. The Wilcox Lake site wall posts average 7.6 cm in diameter. The mean

Table 1. House Interior Post Mould Diameters (cm)

Provenience	Number	Mean	Range	Standard Deviation
House 1	21	7.4	4-14	2.3
House 2	63	6.2	4-11	1.5
House 3	6	5.7	4-7	1.0
House 4	22	8.1	6-11	1.9
House 5	27	8.2	5-12	2.0

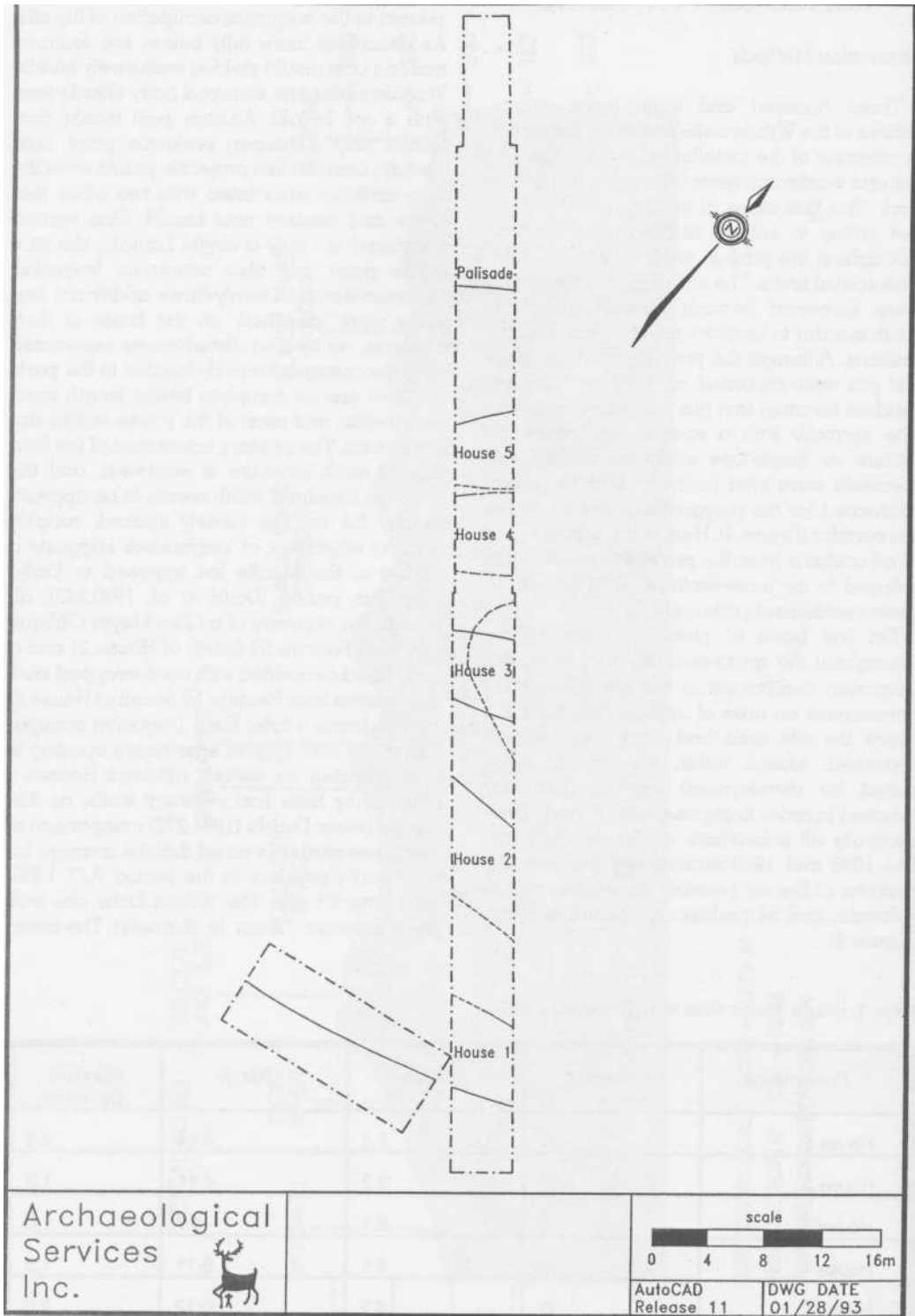


Figure 4. Wilcox Lake Site: Projected Settlement Patterns

Table 2. House Wall Post Mould Diameters (cm)

Provenience	Number	Mean	Range	Standard Deviation
House 1 Walls	57	8.1	4-15	2.1
House 2 Walls	11	6.8	5-9	1.4
House 3 Walls	20	7.2	4-15	2.2
House 4 Walls	6	7.7	5-10	2.0
House 5 Walls	19	8.1	5-13	1.8
Palisade Wall	66	11.0	6-18	2.8

diameter of interior posts is 7.1 cm (Table 1).

A palisade is represented at the northern end of the site by a linear formation of post moulds found at a slight break in the slope (Figure 5). These post moulds were all consistently larger than the longhouse wall posts to the south, their mean diameter being 11 cm (Table 2).

House 1 and Activity Area to the Southwest (Figure 6)

The south wall of House 1 is located in the rectangular area shown in Figure 3, and continues into the trench along the northern edge of Feature 74. House 1 provides sufficient lateral exposure to permit a reliable estimate of house wall post mould densities: 4.2 posts per metre, with a standard deviation of 1.5. Within the structure, a fairly random distribution of probable support posts (defined as being over 10 cm in diameter) can be discerned.

A variety of feature types was encountered, including 13 refuse pits (Features 9, 10, 12, 16, 17, 21, 22, 26, 29, 31, 32, 69, and 71), two pits containing one or more fired soil layers (Features 23 and 28), one formal hearth (Feature 78), and five ash pits (Features 6, 24, 25, 27, and 30). Settlement evidence for a large portion of House 1 was destroyed by a tree root system and six intrusive historic features (Features 14, 15, 18, 70, 72, and 73).

Feature 10 was the largest and most complex of the identified features. Although the south wall of House 1 seems to have over-lapped the southern fringe of Feature 10 (see Figure 6), it is suggested that House 1 and

Feature 10 were contemporaneous, as the portion of the feature that was intersected by House 1 wall posts was comparatively thin (3 cm) and ephemeral. Feature 10 measured 2.7 m in length, 2.4 m in width, and reached a depth of .6 m on the interior side of the House 1 wall. A flat-bottomed profile and six soil layers or lenses were recorded. Only the bottom stratum appeared to have been undisturbed. It was primarily composed of dark brown, organic soil mottled with subsoil and charcoal, but also contained a lens of fired soil. The dark soil within this thick basal layer yielded ceramic fragments from three separate Iroquoian vessels. Pottery sherds were found in clusters, and fragments of one pot in the northwest corner were found in association with fish bones, one of which was adhering to the interior of a sherd. Since the same layer also contained a Late Archaic Lamoka-like projectile point, it might be speculated that Feature 10 was first excavated some 3,000 years prior to the Iroquoian occupation of the site. Alternatively, one of the early fourteenth-century inhabitants of the site may simply have discovered this artifact at another location and deposited it within the feature.

Features 23 and 28 were identified as areas where one or more episodes of burning had occurred. These "hearth events" are distinguished from regular hearths by their characteristic profiles of alternating strata of fired and unfired lenses or layers. An example of a formal hearth is Feature 78. Both "hearth event" features and hearths were situated over one metre from the nearest house wall. Four ash pits formed a cluster at the western end of the excavated area (Features 6, 24, 25, and 27).

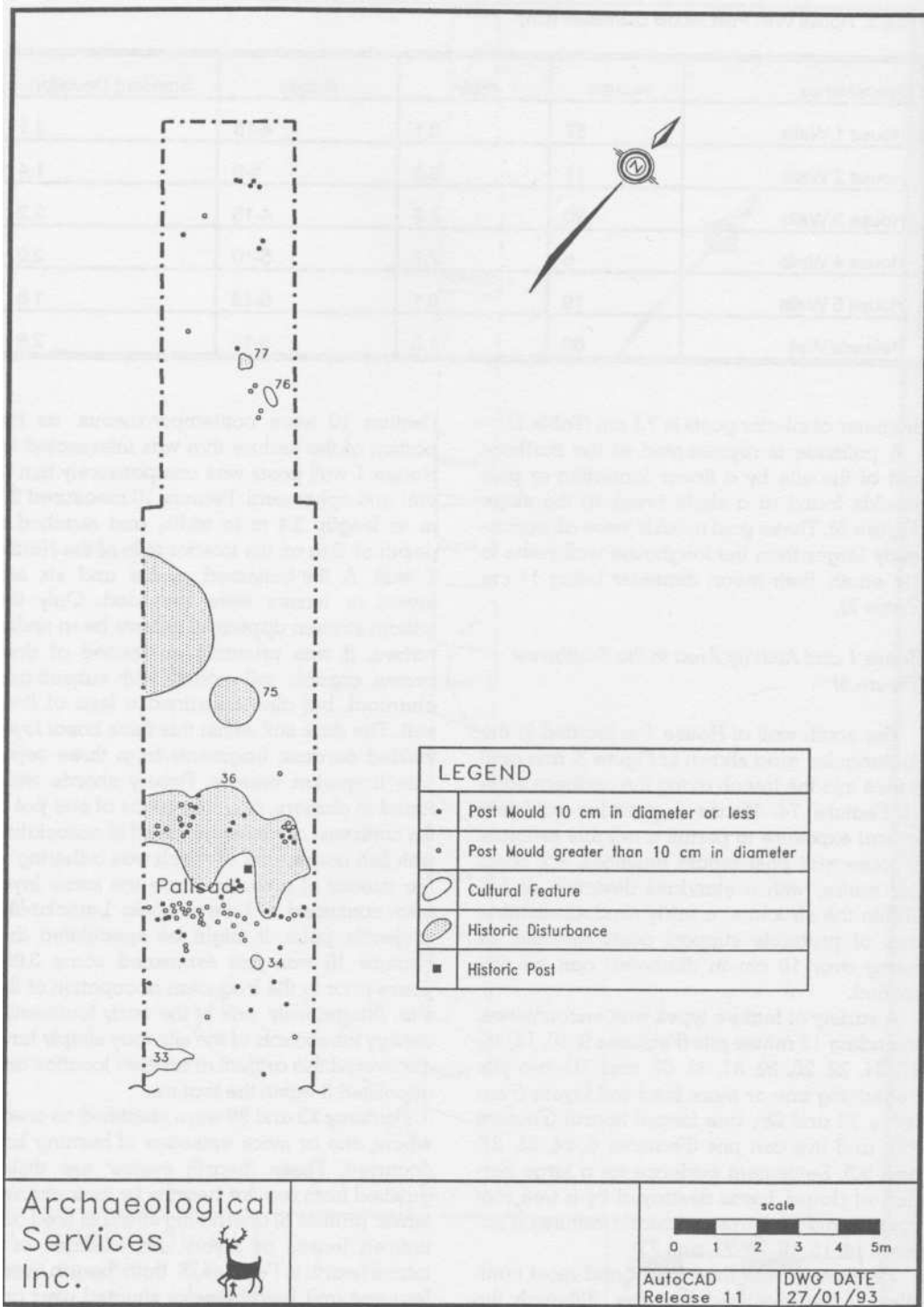


Figure 5. Wilcox Lake Site: Palisade

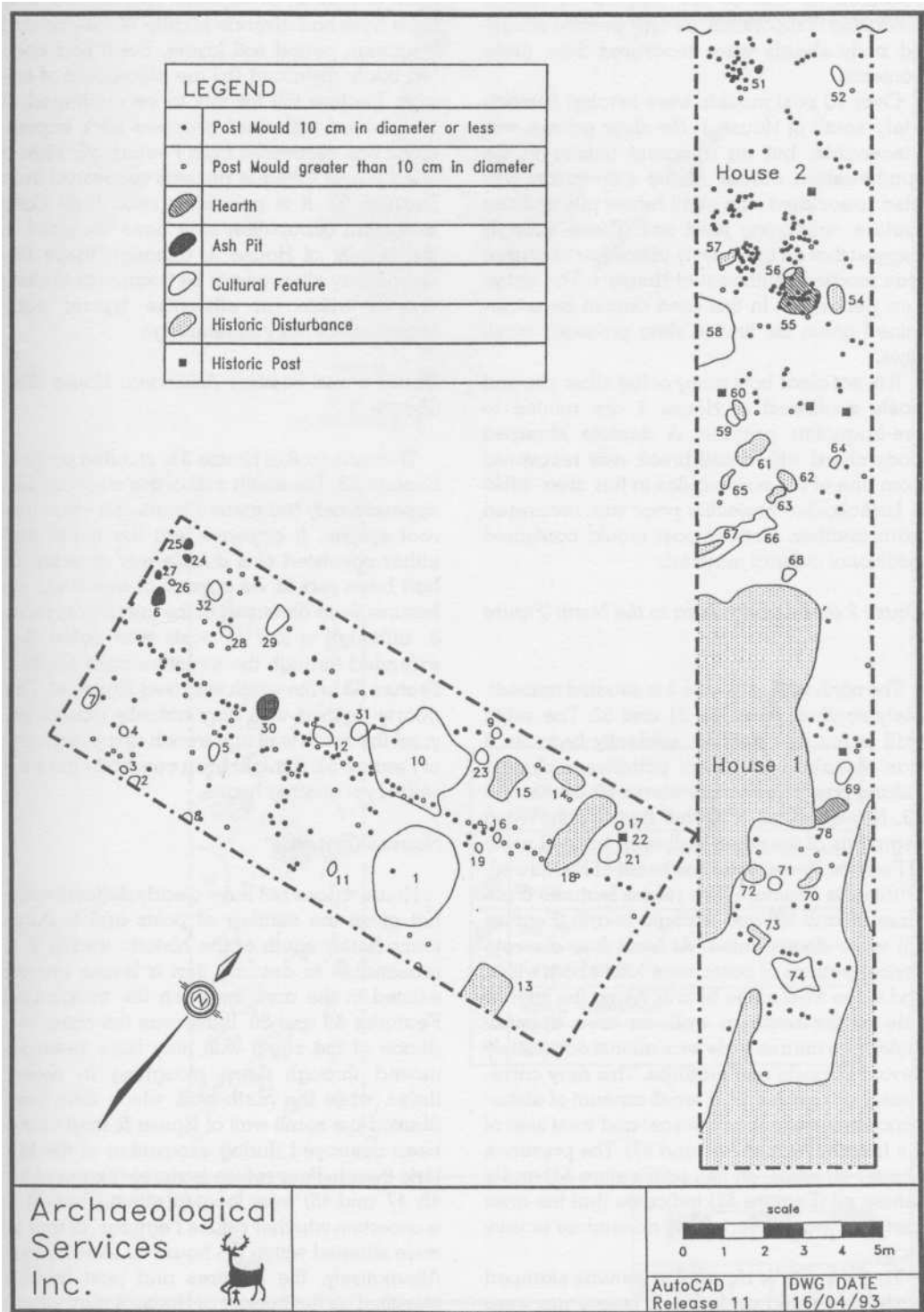


Figure 6. Wilcox Lake Site: House 1 and Southwest Activity Area

Features 28 and 30 are defined as Middle Woodland components, as only dentate stamped body sherds were recovered from these contexts.

Over 70 post moulds were located immediately south of House 1. No clear pattern was discernible, but an apparent cluster in the southwestern corner of the excavation was also associated with eight refuse pits and one feature containing fired soil. These strongly suggest that an intensively utilized activity area was located southwest of House 1. The activities performed in this area cannot be ascertained given the limited data presently available.

It is not clear how many of the other pits and posts southwest of House 1 are related to pre-Iroquoian peoples. A dentate stamped body sherd with a coil break was recovered from one of the post moulds in this area, while a Lamoka-like projectile point was recovered from another. Neither post mould contained additional cultural material.

House 2 and Activity Area to the North (Figure 7)

The north wall of House 2 is situated immediately south of Features 51 and 52. The south wall is not well defined, evidently because it was disturbed by recent activities, including historic post holes and Features 60, 61, 62, and 63. Nevertheless, it seems that two surviving segments of the south wall were located north of Feature 60 and east-northeast of Feature 62. Within the structure, two refuse features (Features 56 and 58) and a single hearth (Feature 55) were documented. At least four discrete concentrations of posts were found both within and to the west of the hearth. Along the interior side of the northern wall, an area approximately two metres wide was almost completely devoid of posts and features. This may correspond to a bunk-line. A small amount of disturbance was evident on the east and west side of the hearth (Features 54 and 57). The presence of over 20 posts, an ash pit (Feature 51) and a refuse pit (Feature 52) indicates that the area north of House 2 served as an outdoor activity locus.

To the south of House 2, a dentate stamped body sherd and an Iroquois Linear rim were recovered from Feature 66. This mixing of Middle Woodland and Late Woodland cera

amics is difficult to explain. The feature may once have had discrete Middle Woodland and Iroquoian period soil layers, but it had been too badly disturbed (by the placement of historic Feature 67) for this to be confirmed. A body sherd with cord-wrapped stick impressions was recovered from Feature 59, while a Glen Meyer Oblique rim was recovered from Feature 52. It is possible that a brief Early Iroquoian occupation may have occurred in the vicinity of House 2, although these few sherds may alternatively be fragments of older vessels within an otherwise typical early fourteenth-century assemblage.

House 3 and Possible Additional House Wall (Figure 7)

The north wall of House 3 is situated south of Feature 53. The south wall of this structure lies approximately two metres south of a large tree root system. It appears that the south wall either consisted of a double row of posts, or had been rebuilt. As a result of tree roots, no features were observed in the interior of House 3, although a line of posts was noted that extended through the structure from south of Feature 53 to the south wall (see Figure 4). This poorly defined wall may actually extend beyond the south wall and trench at a point north of Feature 52. It might even constitute the west wall of yet another house.

House 4 (Figure 8)

House 4 does not have clearly defined walls, but given the number of posts and features immediately south of the historic trench, it is reasonable to assume that a house interior existed in the area between the trench and Features 49 and 50. If this was the case, evidence of the south wall may have been re-moved through deep ploughing in recent times, while the north wall, which may have abutted the south wall of House 5, might have been destroyed during excavation of the historic trench. Four refuse features (Features 45, 46, 47, and 48) were located within House 4. It is uncertain whether refuse Features 49 and 50 were situated within the house or exterior to it. Alternatively, the features and post moulds identified as the interior of House 4 may simply constitute an intensively utilized outdoor activity area to the south of House 5.

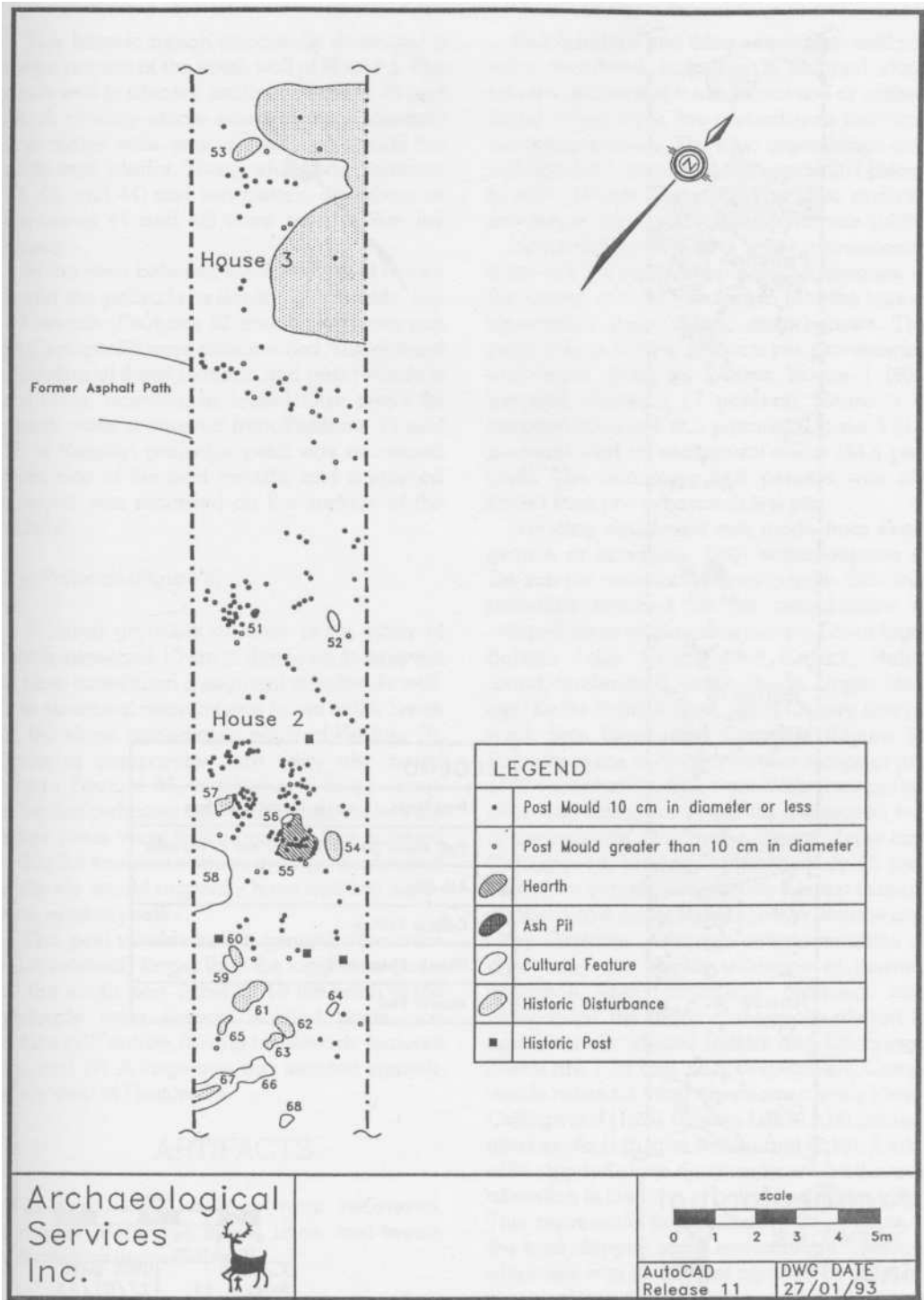


Figure 7. Wilcox Lake Site: Houses 2, 3 and Activity Area North of House 2

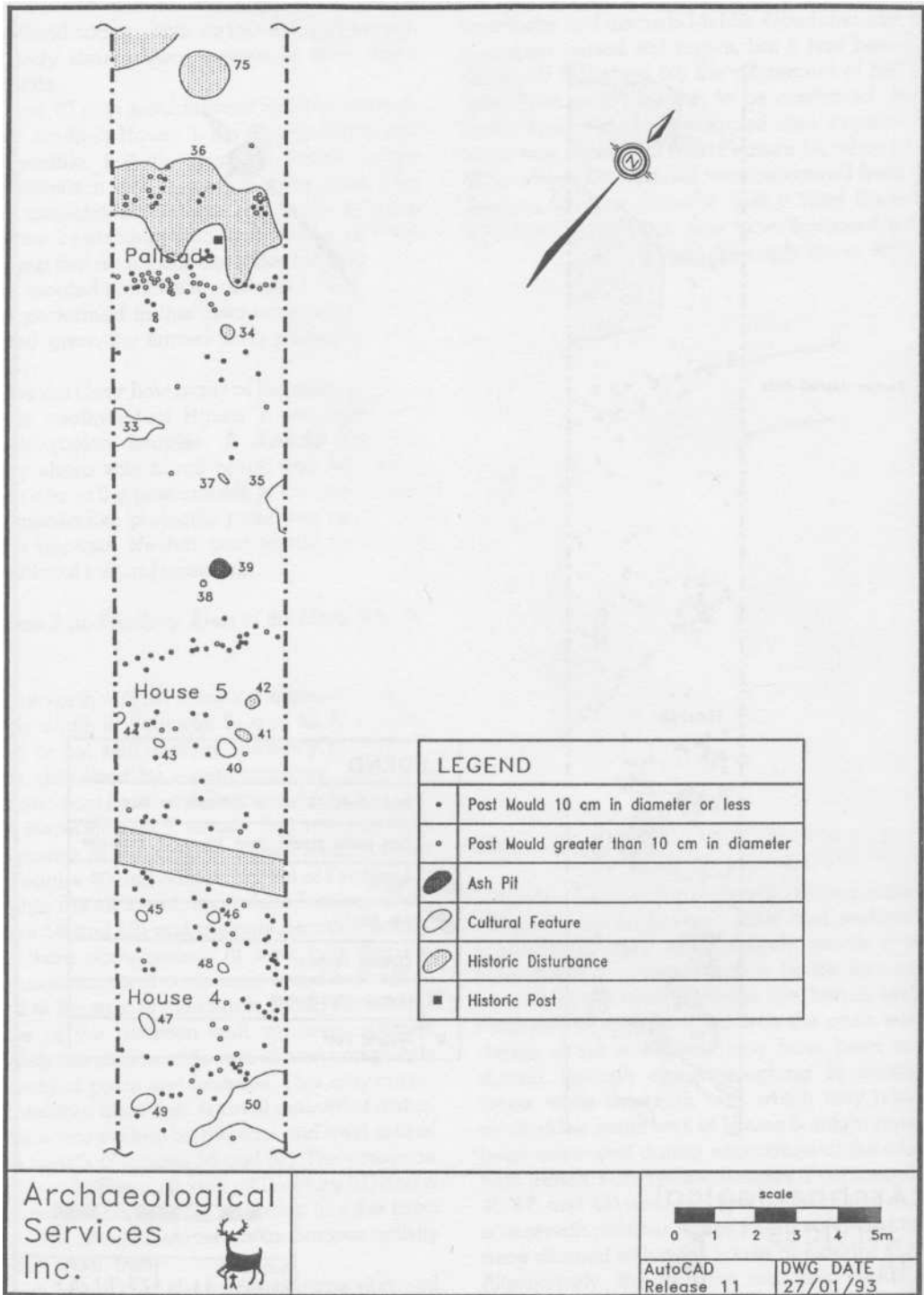


Figure 8. Wilcox Lake Site: Houses 4 and 5 and Northern Activity Area

House 5 and Northern Activity Area (Figure 8)

The historic trench apparently destroyed a major portion of the south wall of House 5. The north wall is situated south of Features 38 and 39. A virtually sterile corridor, approximately one metre wide, was identified alongside the north wall interior. Three refuse pits (Features 40, 43, and 44) and two historic disturbances (Features 41 and 42) were noted within the house.

In the area between the north wall of House 5 and the palisade, a dozen post moulds, two refuse pits (Features 33 and 35), and one ash pit (Feature 39) were documented. The cultural affiliation of these features and post moulds is not clear, however, as Lamoka-like projectile points were recovered from Features 33 and 35, a Vanport projectile point was recovered from one of the post moulds, and a spurred scraper was recorded on the surface of the subsoil.

The Palisade (Figure 5)

A linear grouping of large posts, many of which exceeded 10 cm in diameter, is believed to have constituted a segment of palisade wall. This structural remnant was found at the break in the slope immediately south of Feature 36. Posts of comparable size were also noted within Feature 36, which was a large, deep, irregularly-shaped tree root disturbance. If the latter posts were wall remnants that survived within the tree root system, then the designated palisade would originally have had two separate rows of posts.

The post moulds in this general area were all consistently larger than the longhouse posts to the south (see Table 2). To the north of the palisade were several isolated posts, one refuse pit (Feature 76) and two historic features (75 and 77). A large tree was situated immediately west of Feature 75.

ARTIFACTS

In total, 1,545 artifacts were recovered, including ceramics, lithics, bone, and twentieth-century items (Table 3).

Lithic Analysis

Four hundred and thirty-seven lithic artifacts were recovered, including 36 chipped stone bifaces and formal tools, 68 worked or utilized flakes, seven cores, two groundstone tools and two hammerstones. The lithic assemblage also includes 115 non-utilized flakes and 207 pieces of chert shatter (Table 3). The lithic analysis procedure employed followed Thomas (1989).

Individual houses and other provenience units are not equally represented because of the limited area of excavation and the loss of information from historic disturbances. The percentages of lithic artifacts per provenience unit broke down as follows: House 1 (30.6 percent), House 2 (.7 percent), House 3 (0 percent), House 4 (8.6 percent), House 5 (1.2 percent), and all extramural areas (44.4 per-cent). The remaining 14.6 percent was obtained from pre-excavation test pits.

Grinding equipment was made from slate, granite or limestone. Both hammerstones in the sample were made from granite. Silicious materials selected for the manufacture of chipped stone implements include Onondaga, Balsam Lake, Collingwood, Selkirk, Haldimand, unidentified, exotic cherts, Upper Mercer, Kettle Point, Jasper, Scott Quarry (Michigan), Bois Blanc, and Quartzite (Figure 9). Since there are no known local outcrops of any of these materials, they were likely transported over long distances to the site. Moreover, two of the minority chert types-Balsam Lake and Collingwood, totalling approximately 15 per-cent of the sample-suggest an interest in more northerly raw material sources, in Simcoe and Grey Counties. Although certain varieties of chert may not display evidence of thermal alteration (e.g., potlidding, crinkling, and vitrification), the ratios of thermally altered to non-thermally altered Selkirk and Onondaga cherts are 1.3:1 and 1:3.5, respectively. Comparable ratios for other cherts are clearly lower: Collingwood (1:20), Balsam Lake (1:14), unidentified exotic (1:8), and Haldimand (0:10). A total of 86 chipped stone specimens exhibit thermal alteration in the form of potlidding or crinkling. This represents approximately 20 percent of the total chipped stone assemblage. Thermal alteration was clearly not affected by chipped stone tool type or by the degree of modification of a flake. In other words, much of the thermal alteration on this site does not seem to have

Table 3. Artifact Frequencies and Percentages

Classes	Frequency	Percentage
CERAMICS		
Body Frags.	773	87.84
Neck/Shoulder Frags.	54	6.14
Rim Sherds/Frags.	47	5.34
Juvenile Vessels	4	.45
Pipe Frags.	2	.23
Subtotal	880	100.00
LITHICS		
Shatter	207	47.37
Flakes	115	26.32
Chipped Stone Tools	36	8.24
Utilized Flakes	34	7.79
Worked Flakes	34	7.79
Cores	7	1.60
Groundstone Tools	2	.46
Hammerstones	2	.46
Subtotal	437	100.03
FAUNA		
Osteichthyes	92	49.00
Mammalia	87	46.00
Mollusca	6	3.00
Aves	2	1.00
Reptilia	1	.50
Subtotal	188	99.50
MISCELLANEOUS		
Charcoal Samples, Historic Artifacts	40	100.00
TOTAL	1,545	99.88

been intentional. The ratio of thermal alteration to non-thermal alteration is: 1:3.5 for formal

flaked tools; 1:4.7 for retouched and utilized flakes; 1:5.1 for primary and secondary flakes;

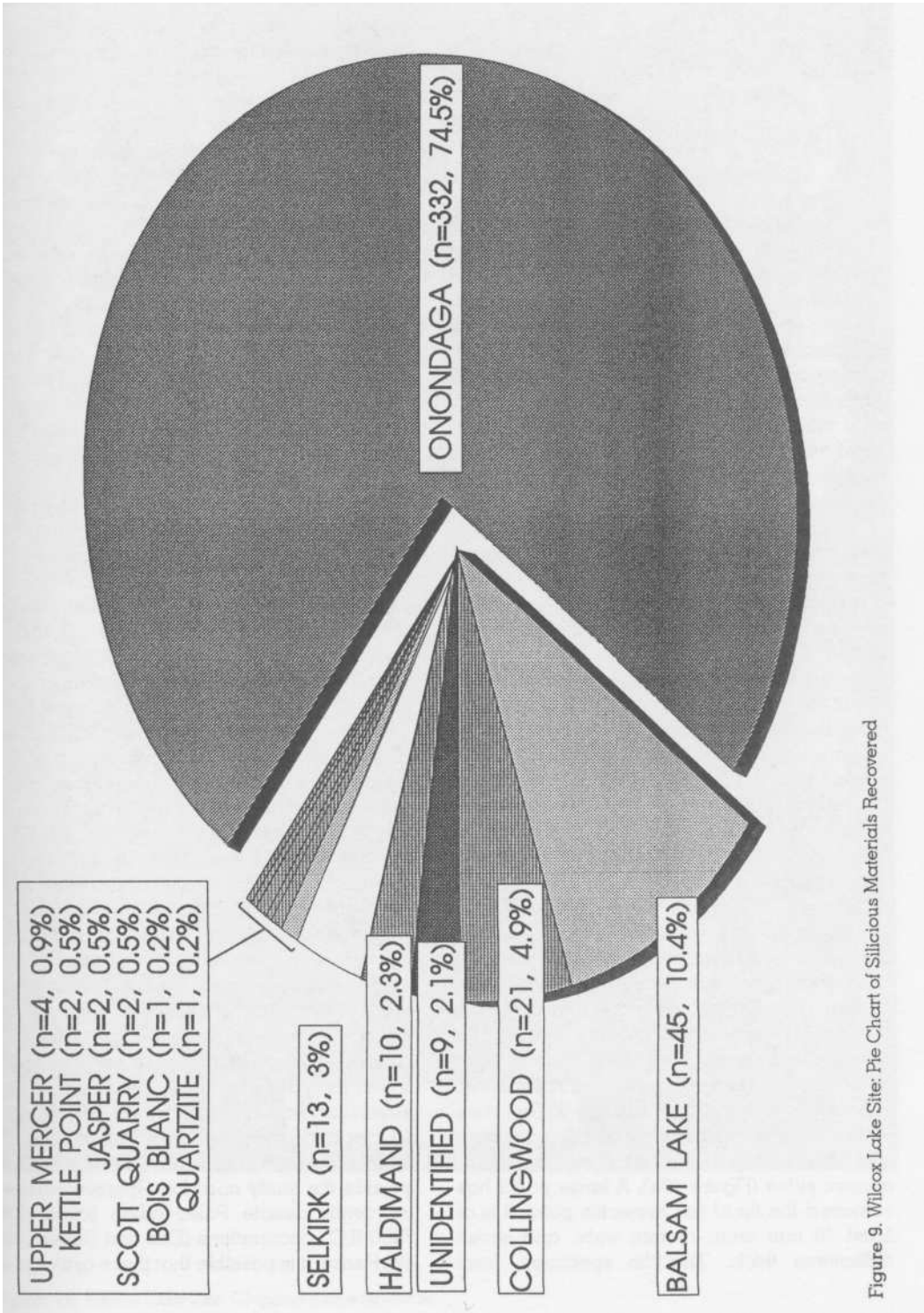


Figure 9. Wilcox Lake Site: Pie Chart of Silicious Materials Recovered

and 1:3.6 for shatter and cores.

Projectile Points. Eight diagnostic projectile points have been identified, including a characteristic Early Archaic Bifurcate Horizon Point (circa 7000-6000 B.C.), Late Archaic Narrow Points (circa 2500-1800 B.C.), and Middle Woodland (circa 300 B.C.-A.D. 700) forms (Ellis et al. 1990:78-80, 94-99; Justice 1987:91-95; Ritchie 1971:51, 108-109; Ritchie and Funk 1973:130-135).

The specimen shown in Figure 10i was recovered from one of the test pits placed outside the study corridor and is a Bifurcate Horizon point similar to the LeCroy Bifurcate type. It is manufactured from Collingwood chert and exhibits basal thinning on an expanding stem. It has a length of 48 mm, a width of 18 mm, and a thickness of seven millimetres. It is impossible to speculate on an in situ Early Archaic occupation at the Wilcox Lake site, as only one diagnostic Early Archaic projectile point was recovered, and the context of this artifact with regard to surrounding settlement patterns is uncertain.

Five Lamoka-like Narrow Points of Onondaga chert were recovered. Three of these have been subjected to extensive thermal alteration. The first example, recovered from Feature 33 (in the extramural area between House 5 and the palisade), is narrow and elongated with an expanding stem and pronounced potlidding (Figure 10j). A portion of the base has been broken off. It has a length of 46 mm, a width of 18 mm, and a thickness of seven millimetres. The second specimen, recovered from a post mould in the extramural area southwest of House 1, is a basal point fragment with narrow shoulders. It has an expanding stem and a ground convex base with basal cortex (Figure 10i). It is over 20 mm in length, 20 mm wide, and five millimetres thick. The third point, recovered from the sub-soil surface (indeterminate provenience), has shallow side notches near the base and convex lateral margins (Figure 10m). The tip is missing. It has a length of over 29 mm, a width of 17 mm, and a thickness of five millimetres. The fourth example, from Feature 35 (between House 5 and the palisade), is heavily potlidded, and has an expanding stem and straight to convex sides (Figure 10o). A large potlid has removed the tip of this projectile point. It is at least 36 mm long, 18 mm wide, and seven millimetres thick. The fifth specimen, from

Feature 10 (House 1), is an expanding-stemmed point with convex lateral margins and basal cortex (Figure 10p). It has pronounced potlidding. A large potlid has removed a portion of one lateral margin. It has a length of 29 mm, a width of 15 mm, and a thickness of five millimetres.

One Steubenville Stemmed point basal fragment (late Early Woodland-early Middle Woodland) was recovered from the subsoil surface and is of indeterminate provenience (Figure 10k). The intact section has asymmetrical shoulders and an expanding stem. It is at least 25 mm long, 25 mm wide, and seven millimetres thick. A Vanport (circa A.D. 0-200) projectile point (Figure 10n) was uncovered in a post mould in the extramural area between House 5 and the palisade. This side to corner-notched point was manufactured from Onondaga chert and has numerous potlids. It also has flat flaking and fine edge retouch. It is 46 mm long, 26 mm wide, and six millimetres thick.

End Scrapers. There are eight steeply re-touched end scrapers in the assemblage. Three were recovered from the surface of the subsoil in extramural areas: southwest of House 1 (Figure 10a), north of the palisade (Figure 10h), and between House 5 and the palisade (Figure 10d). One was recovered from Feature 1 in the extramural area south-west of House 1 (Figure 10e). Two were recovered from the subsoil surface within House 2 (Figure 10b,f). Two were recovered from preliminary test pits that had been placed outside the study corridor in order to ascertain the spatial limits of the site. On average, the scrapers are 33.6 mm long, 23.9 mm wide, and 8.3 mm thick. Six were manufactured from Onondaga chert, and two from Balsam Lake chert.

Two scrapers exhibit spur-like protrusions that may have served as graving edges. One is made from Onondaga chert and measures 23 mm by 21 mm by six millimetres (Figure 10d). This specimen was recovered from the subsoil surface in the extramural area between House 5 and the palisade. The other was manufactured from Balsam Lake chert and measures 48 mm by 20 mm by 10 mm (Figure 10c). This artifact was recovered from a test pit placed outside the study corridor. Spurred scrapers frequently denote Paleo-Indian (circa 9000-7000 B.C.) occupations (Ellis and Deller 1990:-48). Hence, it is possible that these artifacts are

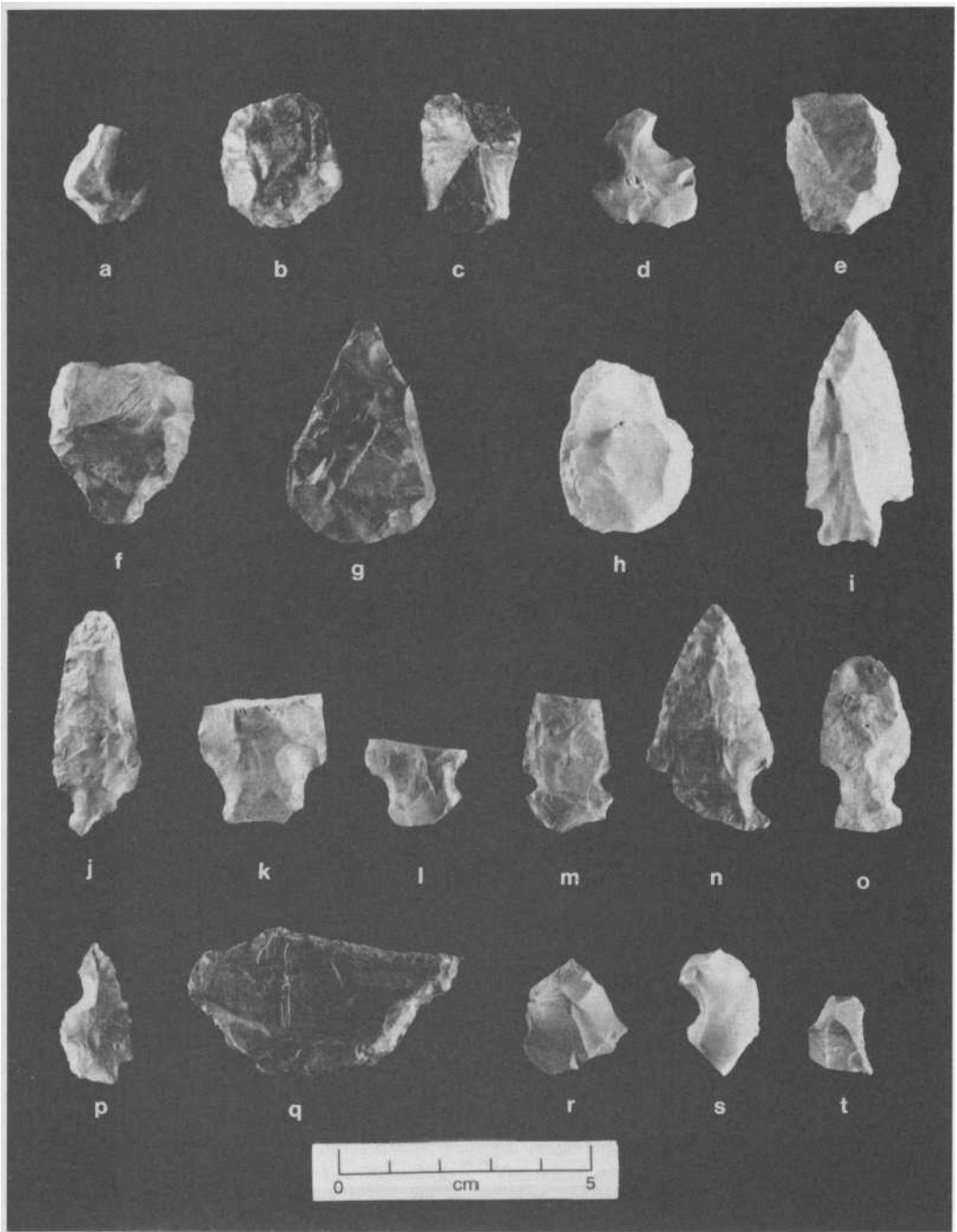


Figure 10. Wilcox Lake Site: Chipped Stone Artifacts

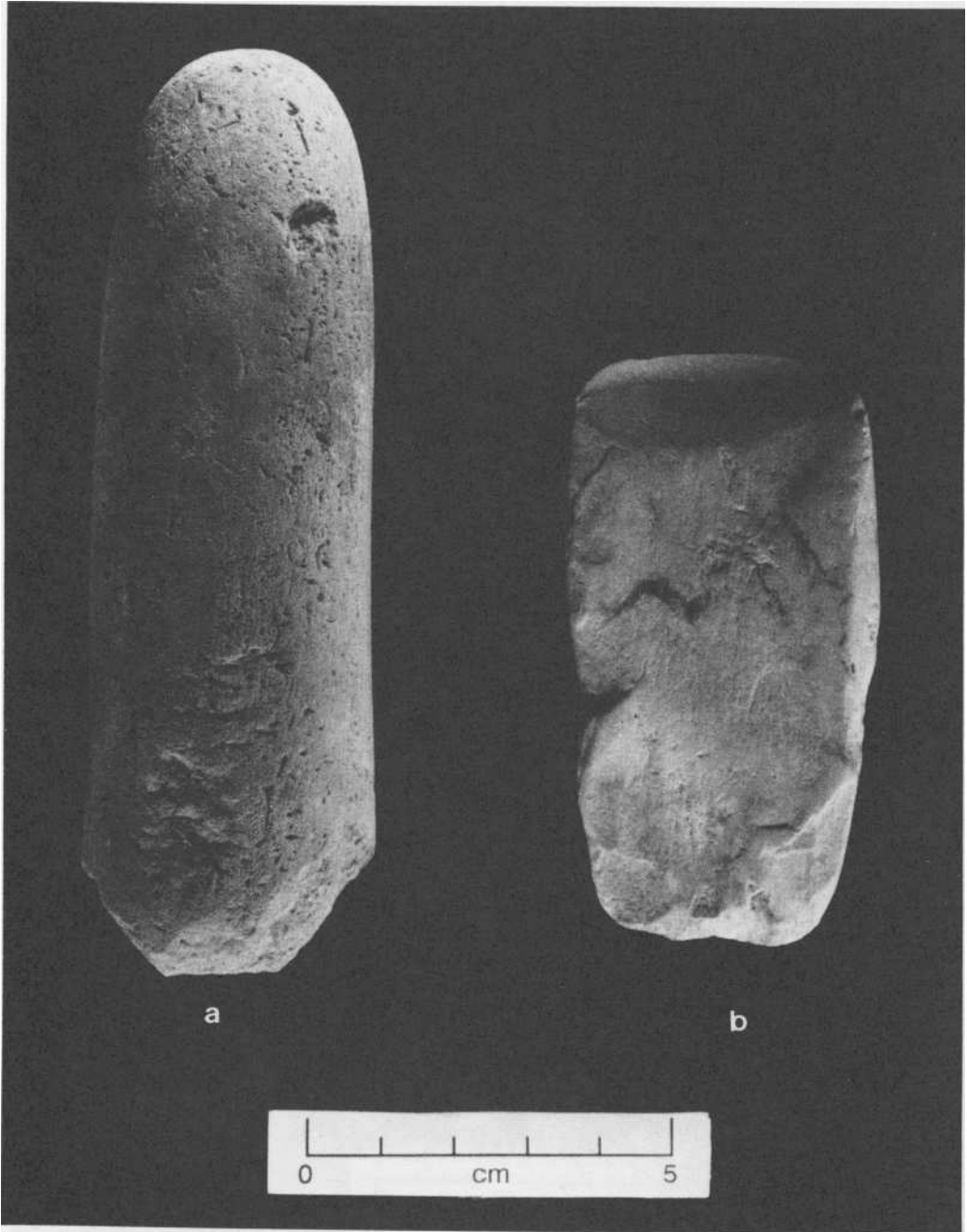


Figure 11. Wilcox Lake Site: Groundstone Artifacts

related to the Paleo-Indian component of the Esoc site, which is situated less than 500 m to the east. Although the frequency of Coiling-wood chert is five percent, the lack of additional Paleo-Indian material argues against an in situ Paleo-Indian component at the Wilcox Lake site.

Spokeshaves and Gravers. A spokeshave of Onondaga chert, manufactured from a secondary knapping flake, was recorded from a test pit placed outside the immediate study area prior to the excavation (Figure 10s). The cutting edge forms one-half circle and the rounded striking platform shows evidence of use wear. It measures 25 mm in length, by 17 mm in width, by six millimetres in thickness. The only graver recorded was uncovered from the subsoil surface (Figure 10t). Formed from the distal portion of a secondary knapping flake of Kettle Point chert, this artifact not only has a graving spur, but also unifacial flaking along five margins. It measures 16 mm in length, by 14 mm in width, by four millimetres in thickness.

Celts, Hammerstones and Grinding Tools. A celt, a hammerstone poll, and a grinding stone fragment were found on the subsoil surface in the extramural area between House 5 and the palisade. The granitic cell was flaked and partially ground (Figure 11b). Grinding striations are visible in the central area of the flatter face. Pecking can also be seen on both sides of the tool near the bit, perhaps from use as a hammerstone. This artifact measures 82 mm, by 43 mm, by 14 mm.

The limestone hammerstone poll is flat and smooth on one side and has fossil inclusions (Figure 11a). The opposite side is round and smooth. Pitting is evident on all surfaces near the broken end. This artifact measures 130 mm, by 41 mm, by 27 mm. The sedimentary grinding stone fragment shows longitudinal striations in the central area of one face. The opposite face is missing. All intact faces are rectangular in cross-section, suggesting that it may be a historic whetstone. This artifact measures 77 mm, by 39 mm, by 14 mm.

A granitic hammerstone was recovered on the subsoil surface within House 1. Small flakes had been removed from one end. There is discolouration on one narrow edge of the stone, which may have been caused by grinding. There are clear peck marks in the centre of one of the two flat sides. This artifact mea-

sures 80 mm, by 48 mm, by 20 mm.

Ceramics

The ceramic vessel assemblage consists of 773 body sherds and unanalyzable fragments, 54 neck and/or shoulder sherds, and a total of 47 rim sherds and rim fragments. Rim sherds were considered analyzable when they exhibited both interior and exterior surfaces, the lip, and enough of the outer rim-neck surface to ascertain decorative styles and techniques.

The minimum number of vessels represented in the ceramic assemblage was ascertained by sorting and reconstructing rim, neck and shoulder sherds into vessels as far as possible. Following reconstruction, 17 vessels with analyzable rims were identified. This is a small sample compared to those from more extensively excavated Early and Middle Iroquoian sites (Dodd et al. 1990; Ramsden and Williamson 1994; Williamson 1985, 1990). The analysis of vessel necks and shoulders only included those present on the sorted and mended rims.

The following formal attributes were re-corded for vessels: collar development, rim form, rim orientation, interior profile, exterior profile, lip form, and angle of lip to interior. Observations were made concerning design motifs and decoration techniques on rim exteriors, lips and interiors, as well as on necks and shoulders mended to rims. Castellation form, and punctation and bossing incidence were also observed.

Formal and Secondary Decoration Attribute Frequencies. Formal attributes related to collar development, rim orientation, interior rim profile, exterior rim profile, vessel lip form, and lip angle to interior are outlined in Table 4. Castellation, punctation and bossing frequencies are presented in Table 5.

Metric Attributes. Vessel mouth diameters were calculated for six vessels. The range is from 24-40 cm, with a mean of 29.7 cm. Lip widths were recorded for 16 vessels. The range is from 7-11.2 mm, with a mean of 8.8 mm. Identical collar heights of 3.6 cm were measured on the two vessels that have true collars.

Body Treatments. All body sherds over 20 mm in diameter were inspected for textural variability data. In all, 347 sherds were examined. The following treatments were recorded: ribbed paddled (n=155, 44.7 percent); check

Table 4. Formal Attribute Frequencies

Attributes	Frequency	Percentage
COLLAR DEVELOPMENT		
True Collar	2	11.8
Incipient Collar	7	41.2
Uncollared	8	47.1
RIM ORIENTATION		
Vertical	12	70.6
Outflaring	4	23.5
Insloping	1	5.9
INTERIOR RIM PROFILE		
Concave	5	29.4
Straight	5	29.4
Convex	4	23.5
Concave-Convex	2	11.8
Indeterminate	1	5.9
EXTERIOR RIM PROFILE		
Convex	10	58.8
Straight	6	35.3
Concave	1	5.9
VESSEL LIP FORM		
Flat	14	82.3
Rounded	2	11.8
Indeterminate	1	5.9
LIP ANGLE TO INTERIOR		
Obtuse	8	47.1
Right Angle	4	23.5
Acute	4	23.5
Indeterminate	1	5.9

stamped (n=75, 21.6 percent); smoothed over ribbed paddled (n=28, 8.1 percent); smoothed over check stamped (n=27, 7.8 percent); plain (n=25, 7.2 percent); cord roughened (n=22, 6.3

percent); dentate stamped (n=9, 2.6 percent), cord-wrapped stick (n=3, .9 percent), and smoothed over cord (n=3, .9 percent). The dentate stamped specimens also exhibit inter-

Table 5. Castellations, Punctuation and Bossing Frequencies

Attributes	Frequency	Percentage
CASTELLATIONS		
Incipient Pointed	2	11.8
PUNCTATION		
1-Row? Interior Circular Punctates with Exterior Bosses	7	41.2
Circular Interior Punctates with Exterior Bosses Segregated by Exterior Linear Punctates	1	5.9

Table 6. Ontario Oblique Series (MacNeish 1952:18) (Figure 12, 13a-e, 15a,gj)

Vessel No.	Exterior Rim	Lip of Rim	Interior Rim	Comments
1 (Figure 12, 13a)	Two Bands of Linear Stamped Obliques. Straight Profile.	One Band of Linear Stamped Obliques. Flat. Obtuse Angle to Interior.	One Band of Linear Stamped Obliques Above Shallow Linear Punctates. Convex Profile.	Uncollared. Incipient Pointed Castellations. Outflaring.
2 (Figure 13b, 15a)	Two Bands of Linear (Fingernail?) Stamped Obliques. Convex Profile.	One Band of Linear (Fingernail?) Stamped Obliques. Flat. Right Angle to Interior.	One Band of Linear (Fingernail?) Stamped Obliques. Straight Profile.	Incipient Collared. Vertical.
3 (Figure 13c, 15g)	One Band of Fingernail Stamped Obliques above One Partial Boss. Convex Profile.	One Band of Fingernail Stamped Obliques. Flat. Right Angle to Interior.	One Band of Fingernail Stamped Obliques. Straight Profile.	Incipient Collared. Vertical.
4 (Figure 13d)	One Band of Linear (Fingernail?) Stamped Obliques over One Partial Boss. Convex Profile.	• One Band of Fingernail Stamped Obliques. Flat. Obtuse Angle to Interior.	One Band of Fingernail Stamped Obliques above One Partial Punctate. Convex Profile.	Pinched Incipient Collar. Outflaring.
17 (Figure 13e, 15j)	One Band of Linear Stamped Obliques over One Boss. Convex Profile.	One Band of Linear Stamped Obliques. Flat. Obtuse Angle to Interior.	One Band of Linear Stamped Obliques above One Linear Punctate. Convex Profile.	Pinched Incipient Collar. Outflaring. Light Colour and Paste.

Table 7. Ontario Horizontal Series (MacNeish 1952:16) (Figure 13f-l, 14, 15b,c,d,f,h)

Vessel No.	Exterior Rim	Lip of Rim	Interior Rim	Comments
5 (Figure 13f, 14)	Three Incised Horizontals. Straight Profile.	Plain. Flat. Obtuse Angle to Interior.	One Band of Fingernail Stamped Obliques. Convex Profile.	Uncollared. Incipient Pointed Castellations. Outflaring.
8 (Figure 13g)	Two Trailed Horizontals. Convex Profile.	One Band of Linear Stamped Obliques. Flat. Obtuse Angle to Interior.	Plain. Straight Profile. Uncollared. Vertical.	Uncollared. Vertical
9 (Figure 13h, 15b)	Four Incised Horizontals above Two Incised Obliques. Convex Profile.	One Band of Linear Stamped Obliques. Rounded. Obtuse Angle to Interior.	Plain. Concave Profile.	Collared. Vertical.
10 (Figure 13i, 15c)	Three Trailed Horizontals Above Two Trailed Obliques. Convex Profile.	Plain. Flat. Obtuse Angle to Interior.	One Band of Linear Stamped Obliques. Concave Profile.	Uncollared. Insloping.
11 (Figure 13j, 15d)	Three Trailed Horizontals. Straight Profile.	One Band of Linear Stamped Obliques. Shallow Notches on Inner Lip Edge. Flat. Right Angle to Interior.	Plain. Straight Profile.	Uncollared. Vertical. Three Bi-Conically Drilled Mending Holes.
14 (Figure 13k, 15f)	Four Incised Horizontals Above 1-Row of Circular Bosses. Straight Profile.	One Band of Cord-Wrapped Stick Obliques. Flat. Obtuse Angle to Interior.	One Band of Cord-Wrapped Stick Obliques. Concave - Convex Profile.	Incipient Collared. Vertical.
15 (Figure 13l, 15h)	Two Trailed Horizontals Above One Band of Linear Stamped Obliques Above 1-Row of Circular Bosses Segregated by Linear Punctates. Convex Profile.	Linear Stamped Obliques. Flat. Right Angle.	Plain. Concave Profile.	Uncollared. Vertical.

Table 8. Glen Meyer Oblique Series (Wright 1966:26, 114-115) (Figure 13m)

Vessel No.	Exterior Rim	Lip of Rim	Interior Rim	Comments
6 (Figure 13m)	Opposed Bands of Cord-Wrapped Stick Obliques. Concave Profile.	One Band of Linear Stamped Obliques. Flat. Acute Angle to Interior.	Plain. Concave-Convex Profile.	Incipient Collared. Vertical.

Table 9. Iroquois Linear Series (MacNeish 1952:18; Wright 1966:43-44) (Figure 13n,o,f-1, 15i)

Vessel No.	Exterior Rim	Lip of Rim	Interior Rim	Comments
7 (Figure 13n)	At Least Three Push-Pull Horizontals. Convex Profile.	Plain. Flat. Acute Angle to Interior.	Plain. Concave Profile.	Uncollared. Vertical.
16 (Figure 13o, 15i)	Four Push-Pull Horizontals Over 1-Row of Circular Bosses at the Level of the Third Horizontal Down from the Lip. Straight Profile.	Destroyed.	Destroyed.	Incipient Collared. Vertical.

Table 10. Middleport Criss-Cross Series (MacNeish 1952:17) (Figure 13p, 15e)

Vessel No.	Exterior Rim	Lip of Rim	Interior Rim	Comments
12 (Figure 13p, 15e)	One Band of Hatched Linear Stamps Above 1-Row of Circular Punctates Above Two Incised Horizontals Over One Circular Boss. Convex Profile.	One Band of Linear Punctates. Flat. Acute Angle to Interior.	Plain. Concave Profile.	Uncollared. Vertical.

Table 11. Uren Noded Series (MacNeish 1952:18) (Figure 13q, 16)

Vessel No.	Exterior Rim	Lip of Rim	Interior Rim	Comments
13 (Figure 13q, 16)	Four Incised Horizontals Over Incised Obliques Above 1-Row of Circular Bosses. Straight Profile.	One Band of Linear Stamped Obliques. Rounded. Acute Angle to Interior.	Plain. Concave Profile.	Collared. Vertical. One Mending Hole.

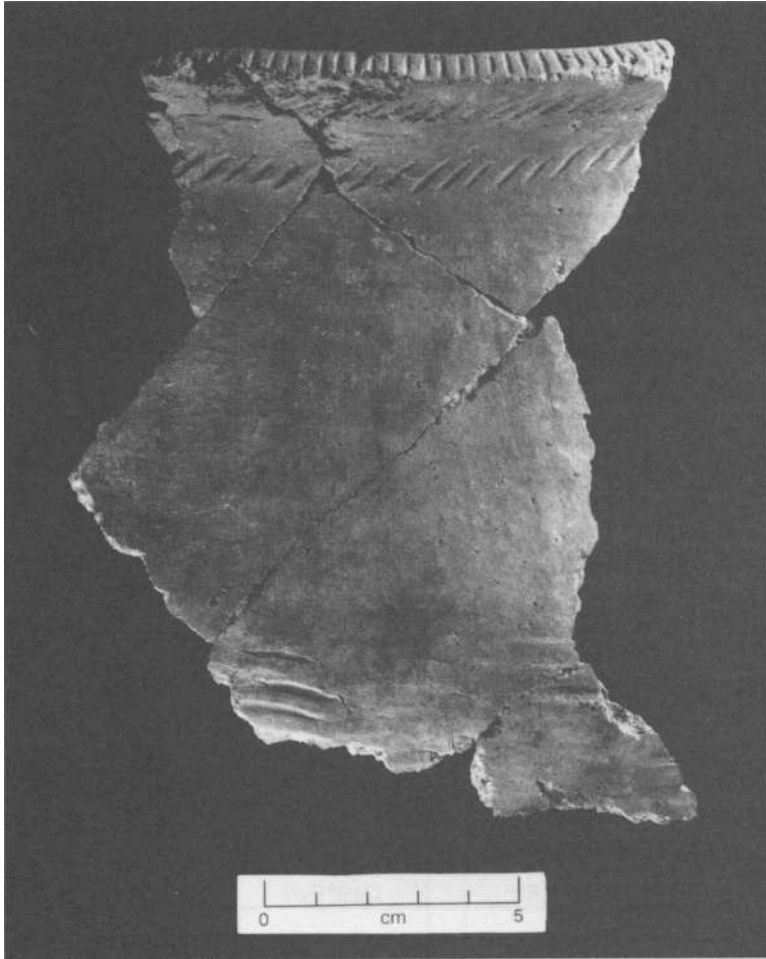


Figure 12. Wilcox Lake Site: Ontario Oblique Rim

ior combing, and one example displays a coil break. These sherds likely relate to an in situ Middle Woodland component, as they were recovered from Features 28 and 30 (in House 1), 66 (south of House 2), and Post 22 in the extramural area southwest of House 1. No Iroquoian ceramics or lithics were recorded

from these contexts apart from an Iroquois Linear rim from Feature 66.

Neck and Shoulder Decoration. Six of the seventeen vessels were sufficiently reconstructed to examine neck decoration. Shoulders were also mended on five of these six vessels. While two vessel necks showed wiping

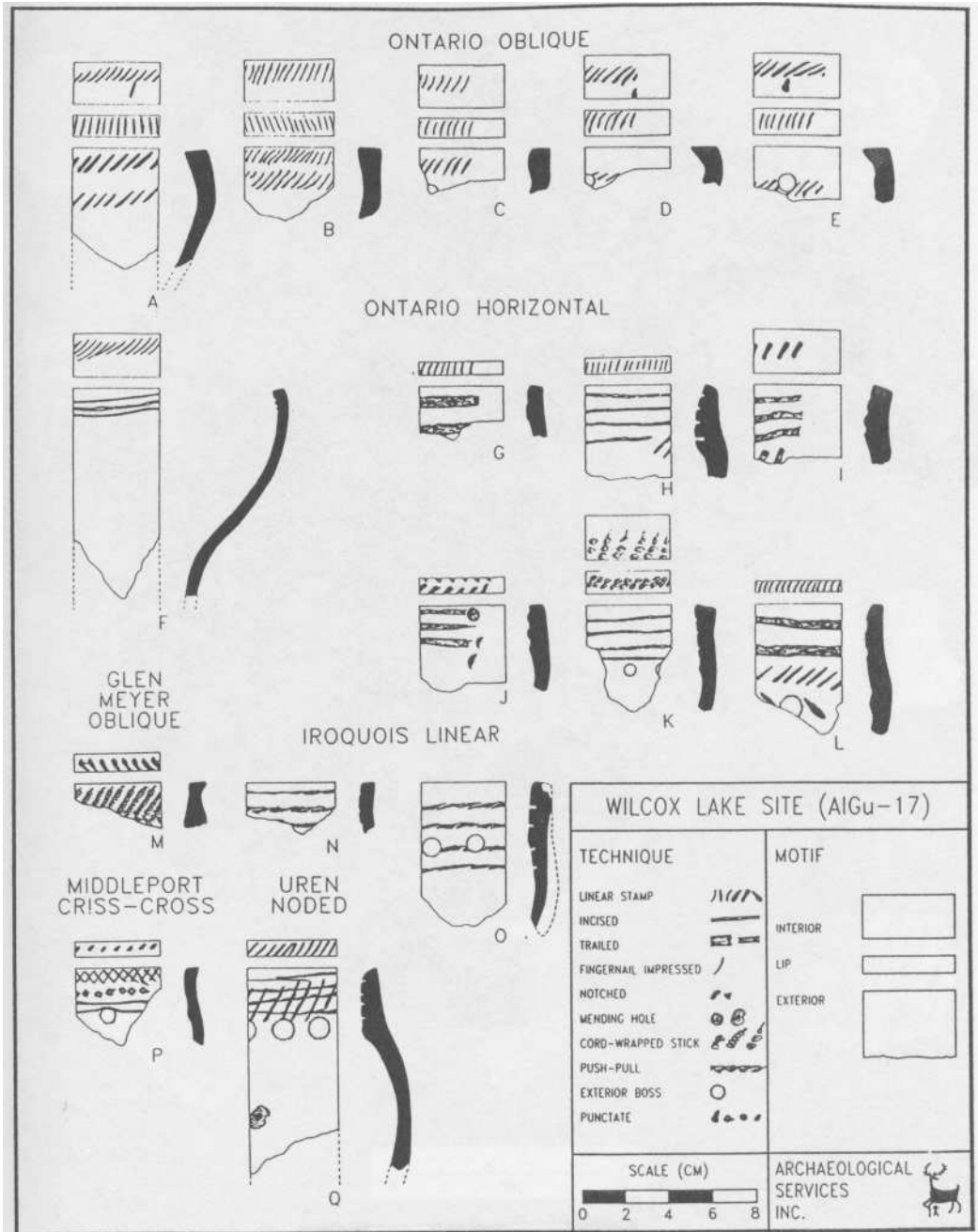


Figure 13. Wilcox Lake Site: Rim Plans and Profiles



Figure 14. Wilcox Lake Site: Ontario Horizontal Vessel

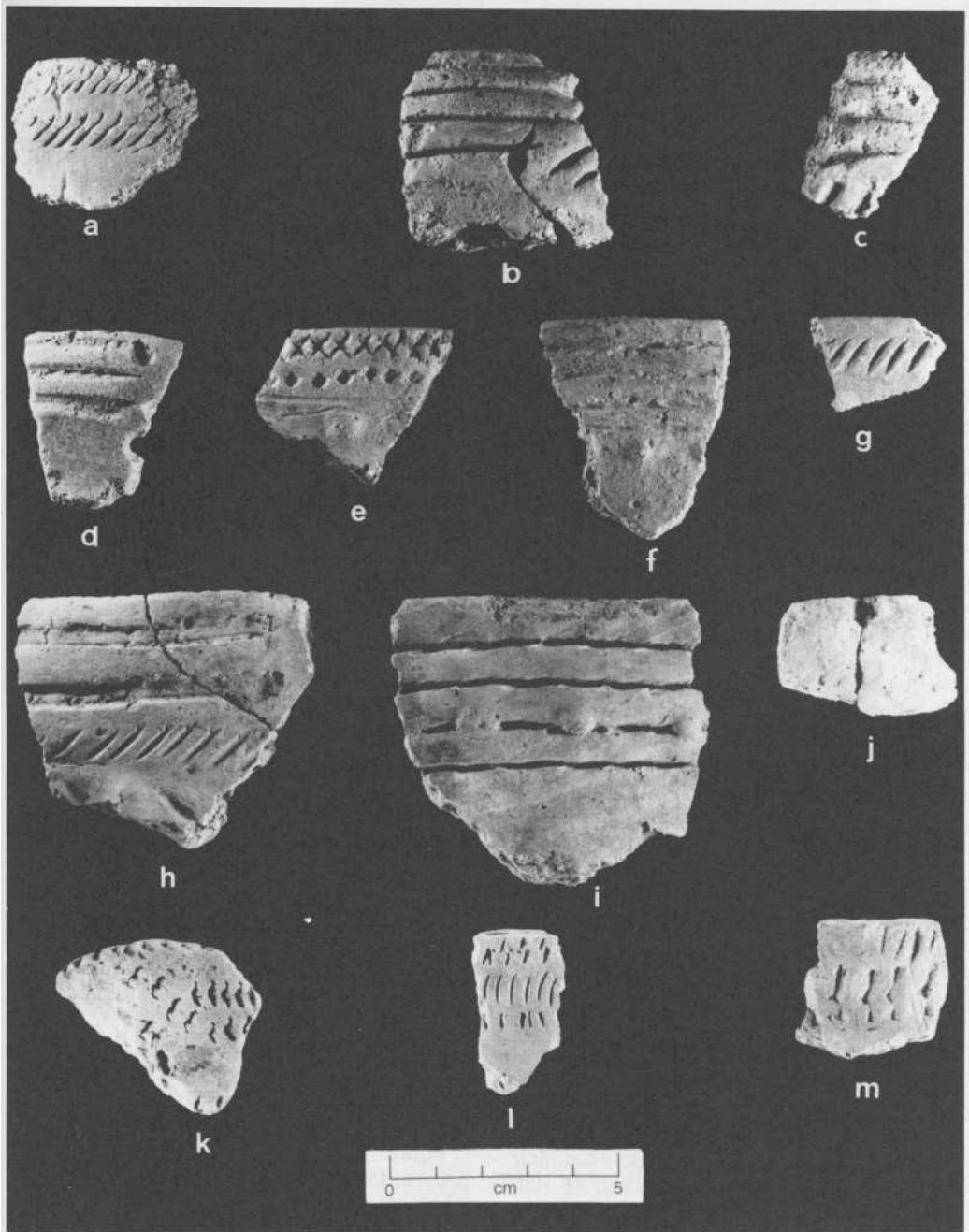


Figure 15. Wilcox Lake Site: Sample of Rim Varieties

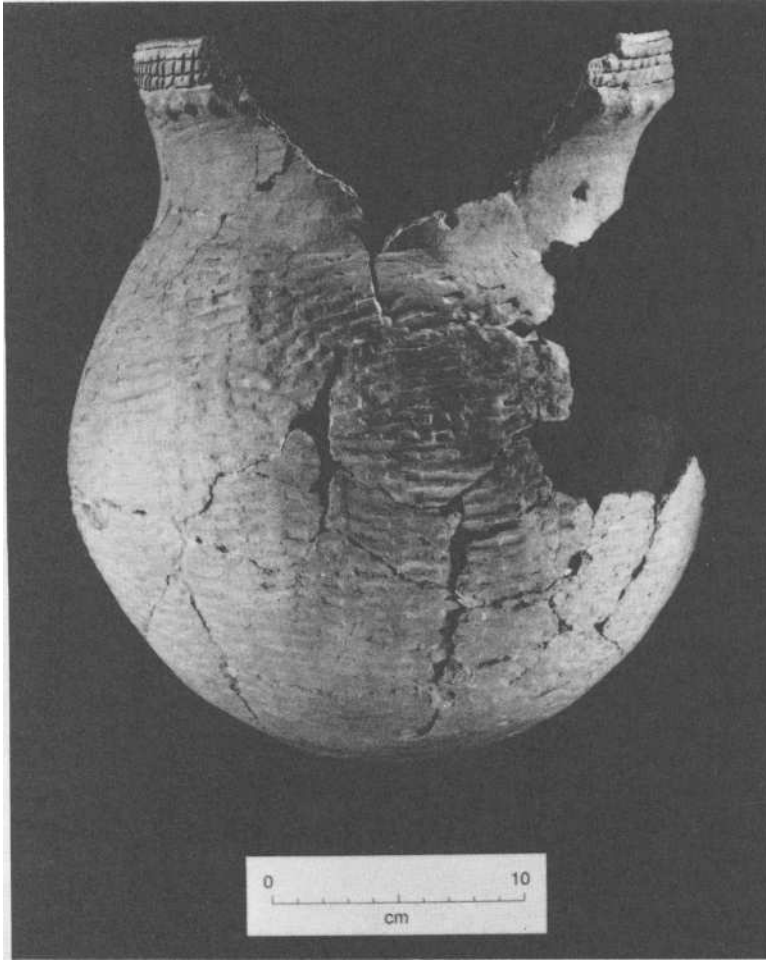


Figure 16. Wilcox Lake Site: Uren Noded Vessel

striations, none displayed formal decorative motifs. The mended shoulders were ribbed paddled (n=2), checked stamped (n=2), or smoothed over cord roughened and checked stamped (n= 1).

Ceramic Vessel Descriptions. Pertinent details regarding each of the rims from the 17 identified vessels are provided in Tables 6 through 11.

Juvenile Vessels. Four juvenile vessels were recovered. Specimen 1 displays an encircling incised groove on the lip surface (Figure 15l). The exterior surface is decorated with two rows of linear punctates above two bands of small fingernail impressed obliques. Stamped obliques (unknown tool) are found on the lip and upper exterior surface of Specimen 2 (Figure 15k). The exterior of Specimen 3 (not

illustrated) is partially exfoliated. The basal portion of the exterior of this rim is decorated with a band of dragged stamp impressions above which is a band of alternating punctates and bosses. Above this are two parallel, horizontal incisions. The lip has an encircling, incised groove. The lip and exterior of Specimen 4 are linear stamped at uneven intervals. The interior has a closely-spaced double band of linear punctates (Figure 15m).

Pipes. Two pipe elbow fragments were recovered from the basal layer of Feature 10 (House 1). These fragments are too small to permit formal analysis.

Ceramic Trends. Due to the relatively small, and possibly unrepresentative, sample of ceramics from the site, it would be unwise to attempt to conduct a comparative inter-site an-

Table 12. Ceramic Vessel Types

Type	Frequency	Percentage
Ontario Horizontal	7	41.2
Ontario Oblique	5	29.4
Iroquois Linear	2	11.8
Uren Noded	1	5.9
Middleport Criss-Cross	1	5.9
Glen Meyer Oblique	1	5.9
TOTAL	17	100.1

alysis. The limited available data have been crucial, however, in helping to define the early Middle Iroquoian component on the site. The combined frequency of Ontario Horizontal, Ontario Oblique and Iroquois Linear vessel types at the Wilcox Lake site is 82.4 percent (Table 12), indicating an early Middle Iroquoian (Uren substage) occupation (Dodd et al. 1990; Wright 1966:54). In conjunction with the settlement pattern evidence of closely spaced, parallel houses (Dodd et al. 1990:343), the ceramics from the Wilcox Lake site point to an occupation during the early fourteenth century (circa A.D. 1300-1320).

Faunal Remains

The recovery of faunal remains from features was not deliberately selective; all bone encountered was retained. Moreover, as the soil fills from all features were trowel sorted and screened through six-millimetre wire mesh, the sample of fish bones and other small faunal elements should be fairly complete. Nearly 200 faunal elements were recovered from a variety of surface and feature contexts from across the site. Preliminary examination and partial analysis by Thomas (1991:49-56) suggests that the Iroquoian inhabitants of the Wilcox Lake site exploited mainly fish and deer, but also utilized freshwater mussels and turtles, as well as beaver and bear (Table 13). Thomas' overall impressions of the Wilcox lake site faunal assemblage are summarized as follows:

... a number of proveniences yielded historic intrusive remains, thereby precluding clear interpretations of the balance of the assemblage from those contexts. For example, while Test Unit D yielded only historic cow and chicken remains, Feature 15 yielded cow and fish bones and Feature 10 yielded fish, bear, turtle, but also pig remains. More-over, both historic and prehistoric remains were recovered from surface contexts. While Feature 15 may be interpreted as a recent intrusive feature with prehistoric materials redeposited in a secondary context, Feature 10 contained considerable quantities of undisturbed prehistoric cultural debris underlying a recent disturbance which probably resulted in the deposition of the pig bone... the remainder of the feature context assemblage was recovered from prehistoric pits only. Assuming that all of the recovered fish remains are prehistoric, over 50% of the assemblage attests to the considerable exploitation of lake resources including fish, turtle, and clam. The identified species include perch, pickerel, sucker, and snap-ping turtle... there was also a considerable quantity of mammal remains, including white-tailed deer... thirty-five percent of the mammal bone was extremely fragmented and calcined and largely unidentifiable to species [Thomas 1991:49-52].

Table 13. Wilcox Lake Site Preliminary Faunal Examination

Provenience	No.	Element	Class	Size	Species	Comment
Subsoil Surface	4		Fish			
	1		Reptile		Turtle	Calcined
	1		Mammal	Large		Sawn
Test Pit D	2	Vertebrae	Mammal		Cow	Sawn
	1		Bird?		Chicken?	Carnivore Gnawed
Feature 58	1		Mammal			Calcined
	1		Unknown			Calcined
Feature 56	1	Vertebra	Fish			
	5		Fresh-water Mussel			
Subsoil Surface (455-295)	2	Limb	Mammal		Deer	Calcined, One with Chart Knife Cut Mark
	1		Mammal	Small	Muskrat?	Calcined
	10		Mammal	Medium/Large		
	1		Reptile		Turtle	
Feature 49	1	Limb	Mammal		Deer	Calcined
	3		Mammal	Large		Calcined
	9		Mammal	Medium/Large		Calcined
	1	Mandible	Mammal	Small/Medium		Cut Mark, Calcined
	1	Thoracic Vertebra	Mammal	Small/Medium		Calcined
Subsoil Surface (455-300)	1	Incisor	Mammal		Woodchuck/Muskrat	Calcined
	1		Mammal	Medium		Calcined
Subsoil Surface (500-405)	1	Tooth	Mammal		Domestic Cat	
	3	Crania	Mammal		Domestic Cat	Juvenile
	2		Unknown			Charcoal
Feature 9	3		Fish			

Provenience	No.	Element	Class	Size	Species	Comment
	1		Mammal	Large		Fresh Bone Fracture
	1	Phalanx	Mammal		Deer	
	2		Unknown			
Feature 10 (L.1)	1	Tusk	Mammal		Pig	
	25		Mammal	Large		Calcined, Two Sawn
Feature 10 (Basal Level)	83		Fish		Four Perch, Four Pick-erel	
	1	Mandible	Mammal		Bear	
	1		Reptile		Snapping Turtle	
	1		Mammal		Artyodactyle	
	1	Maxillary Incisor	Mammal		Vole-Sized Rodent	
	1	Wing Digit	Bird		Robin-Sized	
	1	Egg Shell	Bird or Reptile			
	1	Carpal	Mammal	Medium		
	6		Unknown			
Feature 23	1		Fish		Sucker	
Feature 15	2	Operculum	Fish			
	1	Rib	Mammal		Cow	Juvenile, Sawn
Feature 18	1	Cranial	Mammal	Medium/Large		Calcined
Feature 20	1		Mammal			Calcined

FLORAL ANALYSIS

The following two sections represent summaries of Stephen Monckton's (1991:43-49) analysis of the carbonized plant remains from the Wilcox Lake site.

Method

Charred remains of plant material were collected and analyzed in order to interpret plant-related subsistence activities and fire

wood use at the site. Such remains also provide information on the local environment of the village and environmental responses to human disturbance. Soil samples were collected from as many different feature types as possible. Thirteen flotation samples were recovered and floated using the bucket method. This yielded a total of 800 g of light fraction. After drying, each fraction was passed through a series of screens measuring 4.00 mm, 2.80 mm, 2.36 mm, 2.00 mm, 1.40 mm, 1.00 mm, .710 mm, .425 mm, and .212 mm. Of these, the three most coarse screen contents were sorted into

components including wood charcoal, other plant parts, minerals, uncharred organic materials, bone, and artifacts. Contributions of these components to the entire sample were estimated based on these particle size categories. The entire sample was defined as all material above the collection screen which measured .425 mm. Material below this was collected fortuitously. Below 2.36 mm, only charred seeds were extracted.

Discussion

For the most part, the carbonized seeds represent fleshy fruits, such as bramble (*Rubus* sp.), strawberry (*Fragaria* sp.), pincherry (*Prunus pennsylvanica*), hawthorn (*Crataegus* sp.), and elderberry (*Sambucus* sp.), and were distributed fairly evenly between interior and exterior longhouse features.

Maize (*Zea mays*) is the only confirmed cultigen, comprising about two percent of all seeds recovered. Most maize kernels were derived from features within houses. Maize is lacking in House 2, but is represented by a small kernel fragment in House 4 (Feature 48). Maize is most strongly represented in House 5 where both kernels and cupules appear in all three sampled features (Monckton 1991:48). Other non-cultigens represented include bush-honeysuckle (*Diervilla lonicera*), goose-foot (*Chenopodium* sp.), two possible legume seeds, and a possible wild rice grain (*Zizania aquatica*).

To date, wild rice grains have been reported from three prehistoric sites in southern Ontario: the Late Archaic McIntyre site, on the north shore of Rice Lake (Yarnell 1984:98), the fifteenth-century Iroquoian Seed site near the Town of Woodbridge (Crawford 1985), and the Late Iroquoian Parson site on Black Creek in the City of North York (Stephen Monckton, personal communication 1993). Wild rice has also been recovered from the protohistoric Highland Lake site in the Madawaska High-lands (Alexander von Gernet, personal communication 1994).

The most abundant taxon, bush-honeysuckle (65 percent), has also been reported at the Early Iroquoian Kelly and Yaworski sites near London (Williamson 1985:204), at the Middle Iroquoian Dunsmore site near Barrie (Monckton 1990:12-13), and at the protohistoric Huron Auger and Bidmead sites elsewhere in Huronia (Monckton 1992:55). Bush-honeysuckle grows

all over southern Ontario and produces dry capsules containing many seeds (Gleason and Cronquist 1963:654; Soper and Heimbürger 1982:429). It should be noted that several uncharred seeds of bush-honeysuckle testify to the presence of this taxon near the site today.

Bush-honeysuckle seeds do not have much food value, but the leaves of this plant were used as a medicine by several historic Native groups in the Great Lakes area, specifically for venereal diseases and digestive disorders (Erichsen-Brown 1979:138; Smith 1932:360). It is also worth noting that most bush-honeysuckle seeds (87 percent) were recovered from exterior longhouse features, even though exterior proveniences constitute less than half of the samples. Fleshy fruit seeds, on the other hand, appear to be evenly distributed between interior and exterior longhouse features. The wood charcoal from features is dominated by white pine (*Pinus strobus*) and maple (*Acer* sp.), followed by beech (*Fagus grandifolia*), ash (*Fraxinus* sp.), elm (*Ulmus americana*), oak (*Quercus* sp.), and ironwood (*Ostrya virginiana*). The original forest cover in this area, according to Chapman and Putnam (1973:277), was a mixture of pines and hardwoods such as maple, beech, and red and white oak.

CONCLUSIONS

To summarize, the Wilcox Lake site is a very complex settlement, including a 1.2 ha early Middle Iroquoian village and at least two other earlier occupations related to the Late Archaic and Middle Woodland periods. The multi-component nature of the site has made it extremely difficult to identify contemporaneous clusters of pits and post moulds. This problem is particularly troublesome within three of the four exterior house activity areas, tentatively related to the early Middle Iroquoian occupation. For example, while 44 percent of the lithic sample was recovered from extramural pits and post moulds, few of these settlement features can be firmly related to the early Middle Iroquoian component, and six pits produced diagnostic Late Archaic or Middle Woodland artifacts.

Outdoor activity areas, a common element of many Middle and Late Iroquoian settlements, were also inferred at the Wilcox Lake village. At the Myers Road site (AiHb-13), a settlement on the east bank of the Grand River

near Cambridge that was repeatedly occupied by small groups, perhaps at different times of the year, between circa A.D. 1280 and 1340, 30.5 percent of the 491 features documented were located outside house structures (Ramsden et al. 1994). Eleven extramural activity areas were identified on the basis of feature clusters, and many of these loci were partially enclosed or delimited by fencing. The importance of identifying such areas is indicated by Ramsden and Williamson (1994:110-127), who suggest that "a significant presence of exterior house features, when considered in conjunction with other lines of evidence, can be a useful indicator of warm season occupation. The definition of outside activity areas can also lead to a better understanding of the kinds of outside activities that were undertaken at the site." At the Robin Hood site (AlGt-96), a spring-fall, sixteenth-century, Iroquoian agricultural cabin site located in Pickering Township north-east of Metropolitan Toronto, "outside activity was also prevalent" (Williamson 1983:38). In total, four houses and 143 features were documented at the Robin Hood site. The features fall into two categories: those spatially associated with a house, and those which may have been related to the gathering and processing of wild plants.

Another analytical problem at the Wilcox Lake site is created by a possible overlapping house wall passing through House 3 that cannot be conclusively related to any specific time period or cultural manifestation. While the recovery of certain pre-Iroquoian projectile points from surface contexts, and the overall diversity of raw materials observed, might be explained by the proximity of the Middle Wood-land Lost Brant site (approximately 500 m to the north), or the Paleo-Indian/Middle Wood-land *Esox* site (approximately 500 m to the east), Features 28 and 30 can be confidently assigned to an in situ Middle Woodland component, and Features 33 and 35 can definitely be related to an in situ Late Archaic component. The basal layer of Feature 10, on the other hand, contained both a Lamoka-like projectile point and Iroquoian ceramics, while Feature 66 contained both dentate stamped body sherds and an Iroquois Linear rim. These two features raise the possibility that certain pre-Iroquoian artifacts and features were discovered and reused by the Iroquoian inhabitants of the site. Clearly, further horizontal exposure of the site is required to address this

question properly.

Notwithstanding the complexity outlined above, the Iroquoian component of the Wilcox Lake site has begun to shed further light on a previously unknown regional expression of the Early to Middle Iroquoian transition. The density of interior house features, and the apparent size of the site, suggest a village involving year-round occupation. Relative to the number of ceramic sherds recovered, it is somewhat surprising that only two minute pipe fragments have been encountered to date. Yet, it must be remembered that less than two percent of the total site area has been excavated. On the other hand, the presence of entire families at the site is strongly suggested, given that juvenile ceramics are relatively well represented by fragments from four separate vessels.

With regard to subsistence activities, the close proximity of the lake and the presence of fish bone indicate that fishing constituted an important subsistence activity. Nevertheless, the surrounding soils consist of Brighton sandy loam, which has good horticultural potential, and maize kernels and cupules were recovered from several feature contexts at the site. Wild plants were likely also gathered and processed, as suggested by the remains of five varieties of fleshy fruits, bush honeysuckle, goosefoot, a possible wild rice grain, and two possible legume seeds. Indirect evidence for plant processing is provided by a sedimentary grinding stone fragment. The recovery of white-tailed deer, along with numerous smaller mammals, and the presence of eight end scrapers in the lithic assemblage, all attest to the importance of hunting in the subsistence base. Perhaps, as Warrick (1990:350) has suggested, deer numbers were declining along the north shore of Lake Ontario by the late thirteenth century, creating the need to exploit other environments, such as the Oak Ridges Moraine.

Finally, questions arise about the origins and fate of the Wilcox Lake villagers. Presently, there are no known Early Iroquoian sites in the immediate vicinity of the site. The closest Early Iroquoian sites (AlGs-1, 10, 11, 14, 102, 103, and 104) are clustered in the middle Duffins Creek drainage, 23-28 km to the east-southeast. Five widely recognized sites in this cluster are Boys, Miller, Bolitho, Winnifred, and Ginger. Given our current understanding of village duration and relocation distances, there are clearly important lacunae in the available macro-

settlement pattern data. It seems possible that the Wilcox Lake site represents a very long-distance relocation to the west-northwest, perhaps following West Duffins Creek and various tributaries of the Rouge River. Unfortunately, this issue cannot be resolved until more of the Wilcox Lake site is excavated, and more of the corridor of kettle lakes along the top of the Oak Ridges Moraine has been surveyed. Such surveys would not only help to clarify the Wilcox Lake sequence, but, if focused on some of the north-flowing rivers, might even provide data relevant to the initial Iroquoian colonization of the Barrie area. The earliest confirmed Iroquoian village in Simcoe County is the early Middle Iroquoian Barrie site, on the western side of Lake Simcoe, approximately 55 km northwest of the Wilcox Lake site.

For the time being, the evidence points to a southward movement of the Wilcox Lake villagers upon the abandonment of their site around A.D. 1320. As yet, there have been no Middle Iroquoian settlements discovered immediately to the north of Wilcox Lake. Twenty to twenty-five kilometres to the southeast one finds the early Middle Iroquoian Elliot and Thomson sites, and the supposedly related Tabor Hill Ossuary (AkGt-5). Two other possible early Middle Iroquoian sites in the general vicinity are the Webb I (AlGs-78) and DeLancey (AlGs-101) sites, 25 and 27 km to the east and east-southeast, respectively. The Elliot and Thomson sites, and the Webb I and DeLancey sites, could represent two discrete communities moving through space and time, but the question of whether the Wilcox Lake population was somehow directly linked to either of these regional foci remains uncertain. Although the two nearest large clusters of late Middle Iroquoian sites, including the Milroy, Robb, New, and Reesor sites, among 10 others (AkGt-17, 41, AlGt-1, 4, 8, 12, 18, 36, AlGs-4, 9, 71, 73, 78, and 60), are situated 18-23 km southeast of Wilcox Lake, in the Rouge and Duffins Valleys, there are four other late Middle Iroquoian components, including the Humber River site (AlGv-12), and the Thornhill, Baker and Ream-an sites (AkGu-14, 15, 16), located only 14 km *away* in the Upper Don River drainage. Obviously, there is no clear continuity with the Wilcox Lake site, although an intensive examination of the Upper East Humber River might eventually help to fill in some of this apparent ^{gap}.

A few Late Iroquoian sites have been discov-

ered to the north of Wilcox Lake, but the closest documented Late Iroquoian villages are the Rueben Heise site (AlGu-79), 2.9 km to the southeast, and the Murphy-Goulding (AlGu-3) site, 5.5 km to the southwest, both on tributaries of the Rouge River (Williamson and Cooper 1988).

In conclusion, the Wilcox Lake site has begun to shed light on a previously unknown facet of the Early to Middle Iroquoian transition in south-central Ontario by providing clear evidence of the exploitation of the Oak Ridges Moraine during the early fourteenth century. There is a possibility that other coeval sites may yet be found elsewhere on the moraine, particularly along the shores of the kettle lakes, but perhaps also in areas associated with the various waterways leading northward into Simcoe County.

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