THE WIACEK SITE REVISITED: THE RESULTS OF THE 1990 EXCAVATIONS

David A. Robertson, Stephen G. Monckton, and Ronald F. Williamson

The Wiacek site (BcGw-26), a Middle Iroquoian village located in the southern outskirts of the City of Barrie, was partially excavated by the Ministry of Transportation in 1983. Additional salvage excavations were undertaken at the site in 1990 by Archaeological Services Inc., in advance of the proposed construction of a subdivision. The findings of the 1983 investigations (Lennox et al. 1986) were widely disseminated, since this work represented the most detailed examination undertaken of an Iroquoian site in the region. With a few exceptions, the results of the 1990 excavations are consistent with the earlier findings; however, this study has also raised many new questions. The following article reviews the 1990 excavations, highlights those findings that complement or refine some of the earlier conclusions regarding the site, and outlines several additional issues concerning the Iroquoian settlement of southern Simcoe County that have yet to be resolved.

INTRODUCTION

In the fall of 1989, Archaeological Services Inc. (ASI) was contracted by R.G. Robinson and Associates Ltd. of Barrie to conduct salvage excavations at the Wiacek site (BcGw-26), a plough-disturbed, Middle Iroquoian village situated on a tributary of Lover's Creek in Innisfil Township, Simcoe County (Figures 1 and 2). Following preliminary investigations, these excavations were carried out between May and July of 1990. A final report on the field work and subsequent analysis has recently been completed (Robertson and Williamson 1994).

The Wiacek site was discovered in 1983 by Ontario Ministry of Transportation (MTO) archaeologists, during an archaeological survey in advance of construction of an interchange on Highway 400 (Lennox et al. 1986:1). On the basis of a controlled surface collection, the locations of peripheral middens, and the general topography, it was estimated that the village extended over an area of .74 hectares (Lennox et al. 1986:8), although the northern extreme of the site had been destroyed by previous road construction. Following its initial discovery, salvage excavations were conducted within those areas of the site to be affected by the proposed construction. Several exploratory test trenches were also excavated to the south of the construction impact area.

In light of their analysis of the data recovered during the 1983 excavations, Lennox et al. suggested that the site was occupied between circa A.D. 1350 and A.D. 1450. This temporal placement was based largely on a comparison of the recovered ceramic vessel assemblage with those from sites further to the south (Lennox et al. 1986:62-75). Two radiocarbon dates, obtained from carbonized wood samples from interior house features, produced results of 750±80 B.P. (I-13537) and 730±80 B.P. (I-13538). Calibrated to A.D. 1200±80 and A.D. 1220±80 respectively, these dates were rejected as being too early relative to the ceramic seriation (Lennox et al. 1986:159-160). A re-assay of one of the samples (I-13538c) produced a result of 660±80 B.P./A.D. 1320 ±50 and appears more consistent with the ceramic data (Dodd et al. 1990: Table 10.1).

The MTO excavations at Wiacek provided the first relatively large scale examination of a Middle Iroquoian village in Simcoe County and provided an important foundation for subsequent study of the later prehistory of the region. As research has progressed, however, new questions have arisen, and it has become increasingly evident that some of the older answers deserve reassessment. The 1990 excavations at Wiacek have provided an opportunity to begin this process of reappraisal.

PHYSICAL SETTING

The Wiacek site is situated on the eastern margins of the west lobe of the Innisfil Uplands, at an elevation of 290 m above sea level and on a slight rise of land near the headwaters of a tributary of Lover's Creek, approximately four kilometres south of Kempenfelt Bay (Figure 2). The Innisfil uplands form part of the larger Simcoe Uplands physiographic region, which extends from south of Barrie to the Penetang peninsula (Chapman and Putnam 1984:178, Figure 25). These uplands, the plateaus of which generally lie above the 300 m contour, are formed by a series of broad, rolling till ridges separated by the steep-sided, flat-floored valleys of the Simcoe Lowlands (Chapman and Putnam 1984:182). The poorly drained lowlands, surrounding Lake Simcoe, are joined to the north of the Wiacek site by a narrow valley extending westward from Kempenfelt Bay. These lowlands were flooded by Glacial Lake Algonquin resulting in the formation of numerous shoreline terraces along the sides of the upland ridges (Chapman and Putnam 1984:182).

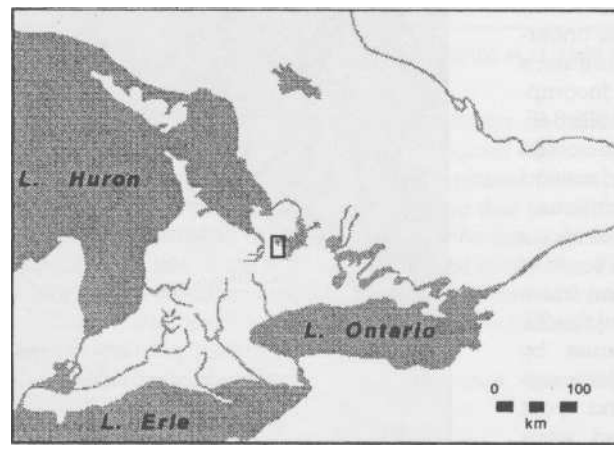


Figure 1. The Location of Lover's Creek and Kempenfelt Bay in Southern Simcoe County, Ontario.

The Simcoe Uplands consist of sands and gravels of such permeability that streams are rare on the upland plateaus, although springs located on the upland slopes feed permanent lowland streams (Chapman and Putnam 1984:183). In the immediate vicinity of the Wiacek site, drainage is directed eastward by several small tributaries of Lover's Creek, which itself flows into Kempenfelt Bay. Al-though prone to drought, limited by relatively low fertility and by moderate to severe slope, the soils of these upland margins would generally have been adequate for Iroquoian maize horticulture (Warrick and Molnar 1986:21-22; Warrick 1988:3).

The topography and soils of the central uplands originally supported a hardwood forest dominated by maple and beech in association with white pine, yellow birch, basswood and hemlock (Chapman and Putnam 1984:183). Whereas these forests may have formed a fairly uniform closed canopy environment, it is also probable that the topographic variability and complex moisture regimes of the upland margins would have resulted in a much more diverse and dynamic forest cover along the upland slopes. These conditions would have encouraged a heterogeneous mix of species, few of which would have thrived or reached optimal stature, and all of which were more likely prone to windfall as a result of the increased exposure of the slopes (MacDonald 1994).

The poor drainage of the surrounding lowlands, on the other hand, favoured species such as elm, cedar, tamarack, black ash and soft maple. Substantial bogs, such as the Minesing Swamp and the Allenby Marsh are also present throughout the lowland areas (Chapman and Putnam 1984:179-180). These areas would have offered a wide variety of resources, including foods such as roots, tubers, greens, and berries, as well as fibres and building materials, such as bark and cedar poles.

The contrasts between the plateau and its marginal slopes appear to have been a major factor influencing Iroquoian settlement patterns in the region, as all of the major sites documented in the Lover's Creek area occur along the upland margins (Figure 2). By placing their major settlements along these upland slopes, these communities could avail themselves not only of well-drained openings in the forest, but more importantly, spring water and the stack of environmental zones that flanked the slopes and valley floor (MacDonald 1994).

SETTLEMENT PATTERNS

As a result of the 1983 MTO excavations (Figure 3), five longhouses and six middens were defined within an estimated occupation area of .74 ha (Lennox et al. 1986:8). There was no indication that the village was enclosed by a palisade. Two of the longhouses (Houses 1 and 2), were completely excavated, while those remaining (Houses 3-5) were identified on the basis of test trenches. In total, an area of approximately 1,200 m^2 was examined in 1983 (Lennox et al. 1986:2). It was recognized that the identifications of House 4, to the west of House 2, and of House 5, to the south-west of House 2, were uncertain, as these structures were "poorly defined and incomplete" (Lennox et al. 1986:8-9). Neither of these houses could be conclusively re-identified during the 1990 excavations.

The 1990 ASI excavations (Figure 4), lying to the south of the original excavation area, entailed the removal of the 30-cm deep plough zone by Gradall. The subsurface settlement features and post moulds thus exposed were delineated more precisely by shovel and by trowel, and were then mapped. Following hand excavation and screening of the feature fills through 6 mm mesh, the feature attributes were recorded on pre-printed forms. An area of approximately 4,500 m^2 was investigated in this manner, resulting in the thorough documentation of House 3 (originally identified by MTO), a pair of fences or windbreaks appended to the south end of MTO's House 1, and two additional small structures (Houses 6 and 7) located in the southeastern portion of the site (Robertson 1994). Table 1 provides selected statistics for all five houses.

One midden (Midden G) was also investigated in 1990. This deposit, lying in a scrubby woodlot to the south of the ploughed field in which the majority of the site was located, does not correspond to any of the peripheral middens defined in 1983. Nineteen external features, forming numerous outdoor activity areas, and three short linear alignments of posts that may have served as fences or windbreaks were also recorded.

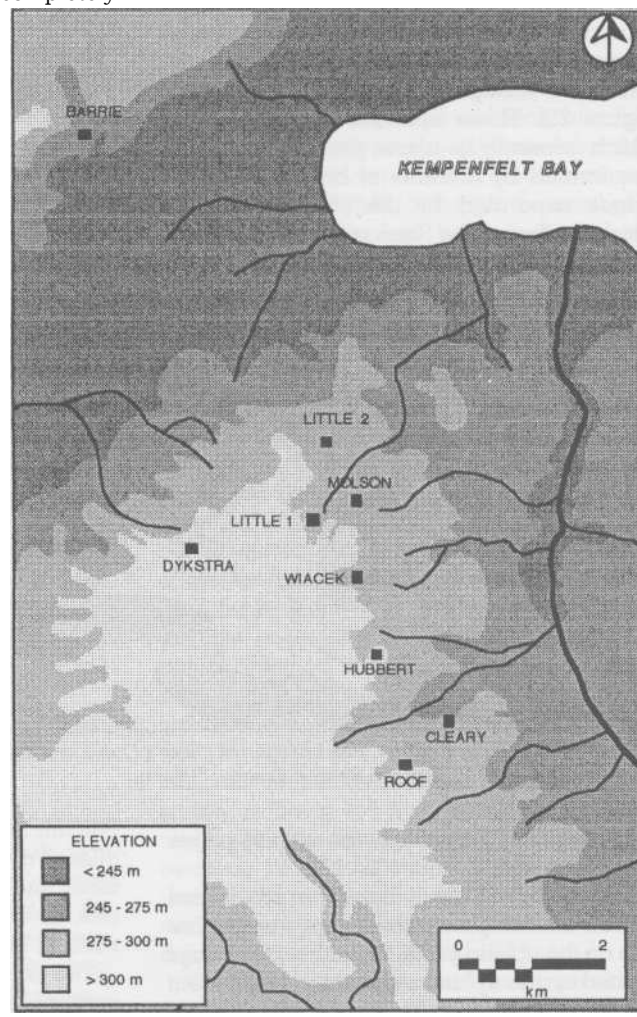


Figure 2. Iroquoian Settlement Distribution along the Margins of the Simcoe Uplands in the Lover's Creek Watershed.

Village Plan

On the basis of their 1983 investigations,

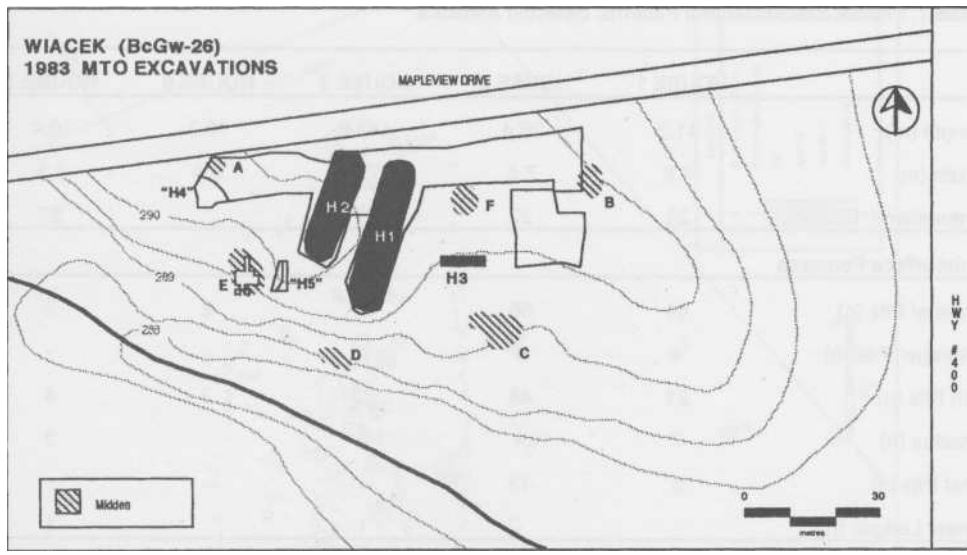


Figure 3. The 1983 MTO Excavations at the Wiacek Site (after Lennox et al. 1986:Figure 2).

Lennox et al. characterized the overall village plan as "disordered" (1986:10), in that the houses did not appear to have been laid out in any formalized manner (Warrick 1984: 45-46). This interpretation was largely a result of the tentative identification of Houses 4 and 5, whose orientations appeared to differ from Houses 1, 2 and 3. With the additional exposure of the settlement area during 1990, however, it now seems more accurate to characterize the village as having been formed by a single aligned cluster (Warrick 1984:45-46). In the first place, there is little new evidence confirming that the settlement features designated as Houses 4 and 5 are representative of residential structures. Furthermore, the newly discovered Houses 6 and 7 have closely comparable orientations to those of Houses 1, 2 and 3.

The houses excavated in 1990, however,

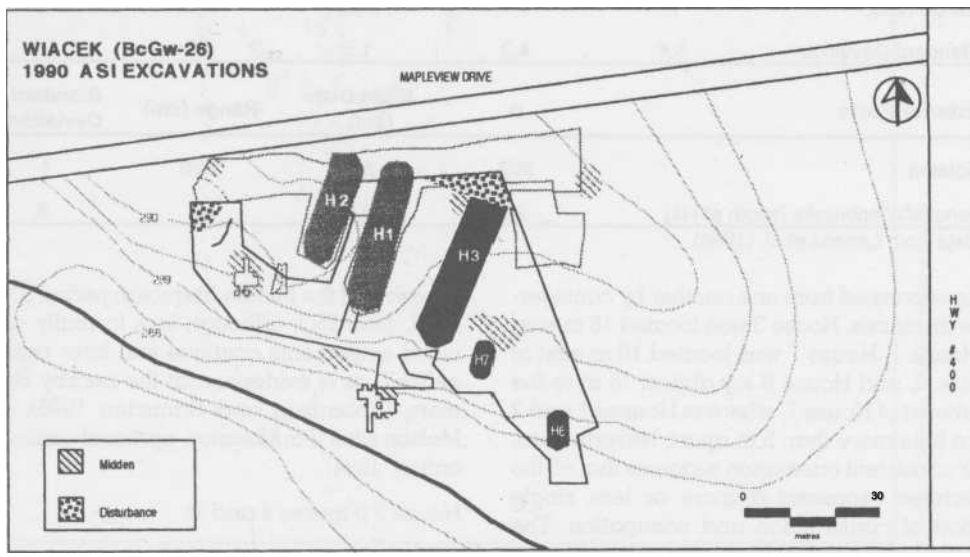


Figure **4.** The 1990 ASI Excavations at the Wiacek Site. It should be noted that Midden C, identified in 1983, proved to be a refuse-filled semi-subterranean sweat lodge (see Figures 7 and 8).

Table 1. Wiacek Site Settlement Patterns: Selected Statistics

	HOUSE 1*	HOUSE 2*	HOUSE 3	HOUSE 6	HOUSE 7
Length (m)	41.3	36.4	+43.6	10.3	10.4
Width (m)	7.5	7.5	7.9	6.6	5.5
Orientation (°EofN)	26	22	27		25
Subsurface Features					
General Pits (n)	44	66	39	2	2
"Storage" Pits (n)	4	9	-	-	-
Ash Pits (n)	21	45	22	3	4
Hearths (n)	7	4	8		3
Post Pits (n)	6	13	-	-	-
Sweat Lodges (n)	-	-	1		1
Wall Posts					
n	459	476	606	137	158
Density (per m^2)	5.5	6.9	5.9	5.1	5.7
Mean Diameter (cm)	7.3	7.1	6.1	5.6	5.6
Range (cm)	3-14	-	3-20	3-10	3-10
Standard Deviation	1.6	1.9	.6	1.2	1.1
Interior Posts					
n	1,116	1,354	1,876	208	810
Mean Diameter (cm)	6.7	6.9	6.2	6.3	5.1
Range (cm)	-	-	3-28	4-20	3-26
Standard Deviation	3.4	4.3	1.5	5.3	1.9

Exterior Posts	n	Mean Diam (cm)	Range (cm)	Standard Deviation
Isolated	962	5.9	3-26	1
Fences/Windbreaks (south of H1)	23	6.5	5-8	.8

*data from Lennox et al. (1986)

were separated from one another by considerable distances. House 3 was located 16 m east of House 1, House 7 was located 18 m east of House 3, and House 6 lay almost 15 m to the southeast of House 7, whereas Houses 1 and 2 were little more than 5 m apart. Nevertheless, their consistent orientation suggests that all the structures represent a more or less single period of construction and occupation. The grouped and parallel alignment of longhouses is typical of the Middle Iroquoian period (Dodd et al. 1990:350), although less formally organized settlements continue into later periods as well, as is evidenced at the nearby Dunsmore (Robertson and Ramsden 1996), and Molson sites (Paul Lennox, personal communication, 1994).

House 3 (Figures 4 *and 5)*

House 3 was the longest house on the site,

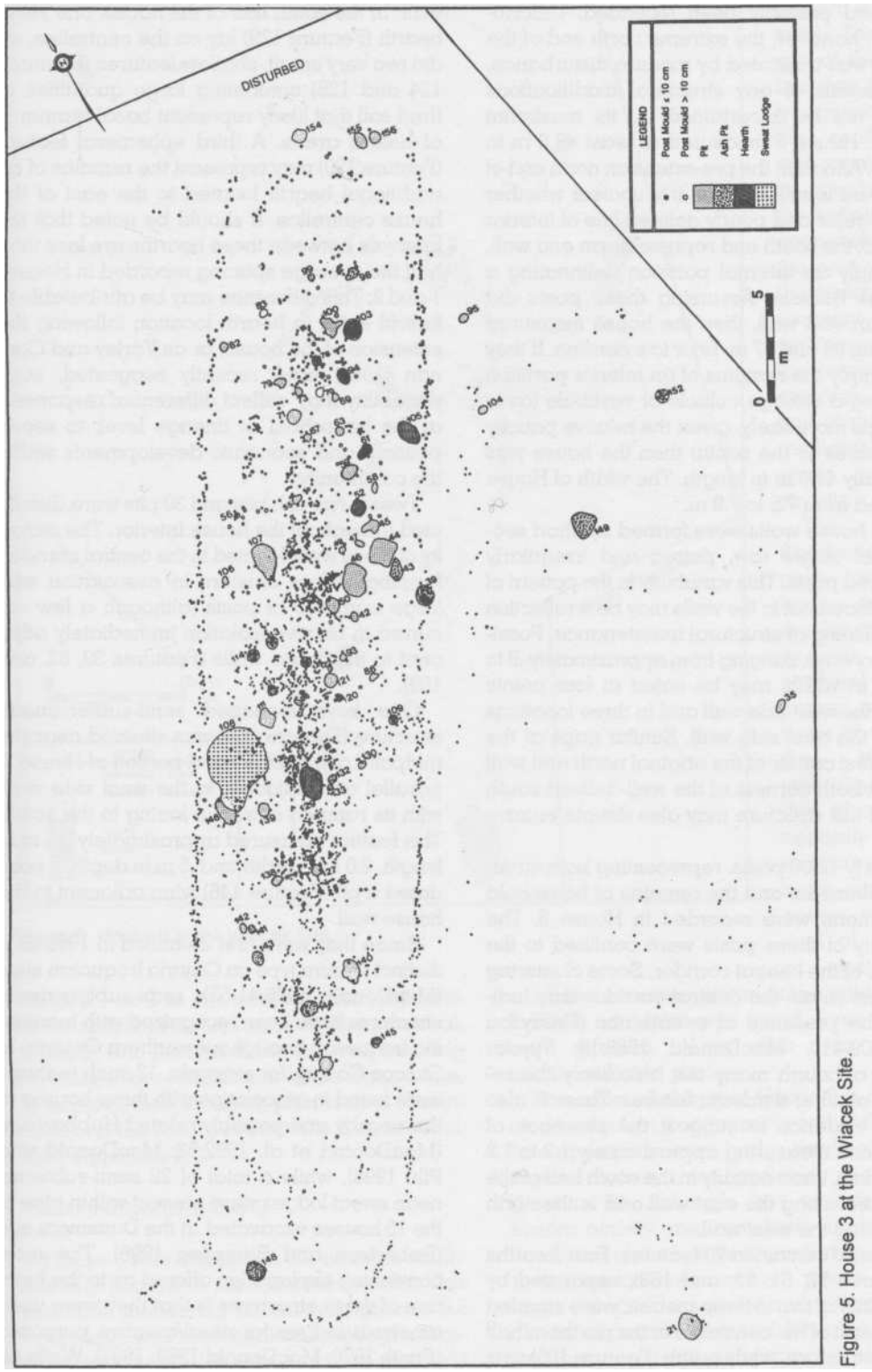


Figure 5. House 3 at the Wiacek Site.

and had possibly been extended. Unfortunately, however, the extreme north end of the house was truncated by modem disturbance, and details of any structural modifications could not be ascertained. At its maximum extent, House 3 measured at least 43.6 m in length. Although the pre-extension north end of the house is well defined, it is unclear whether an irregular and poorly defined line of interior posts at the south end represents an end wall, or simply an internal partition delineating a storage cubicle. Assuming these posts did form an end wall, then the house measured between 36 and 37 m, prior to extension. If they are simply the remains of an interior partition defining a storage cubicle or vestibule (as is perhaps more likely, given the relative paucity of features to the south) then the house was originally 41.9 m in length. The width of House 3 varied from 7.5 to 7.9 m.

The house walls were formed by short sections of single row, paired and irregularly clustered posts. This variability in the pattern of post placement in the walls may be a reflection of rebuilding or structural maintenance. Possible doorways, ranging from approximately .9 to 1.5 m in width, may be noted at four points along the west side wall and in three locations along the east side wall. Similar gaps at the northwest corner of the original north end wall and at both corners of the well-defined south end of the structure may also denote entrances.

Nearly 1,900 posts, representing both structural elements and the remains of household equipment, were recorded in House 3. The majority of these posts were confined to the middle of the central corridor. Some clustering of posts within the central corridor may indicate the presence of sweatbaths (Finlayson 1985:409-410; MacDonald 1988:19; Tyyska 1972), although many are also likely the remains of other domestic fixtures. There is also some evidence to suggest the presence of bunklines measuring approximately 1.2 to 1.8 m in width, most notably in the south half of the structure along the east wall and in the north half along the west wall.

House 3 contained 70 features. Four hearths (Features 52, 61, 94, and 103), separated by distances of two to three metres, were situated to the east of the centreline in the northern half of the structure, while a fifth (Feature 105) was located immediately adjacent to the east side wall. In the south half of the house, one large hearth (Feature 129) lay on the centreline, as did two very small, shallow features (Features 124 and 128) containing large quantities of fired soil that likely represent basal remnants of hearth areas. A third ephemeral feature (Feature 120) may represent the remains of an additional hearth located to the east of the house centreline. It should be noted that the intervals between these hearths are less than half the average spacing recorded in Houses 1 and 2. This difference may be attributable to lateral shifts in hearth location following the extension of the house, or as Varley and Cannon (1994) have recently suggested, such variability may reflect differential responses, at the household or lineage level, to sociopolitical and economic developments within the community.

Twenty-two ash pits and 39 pits were distributed throughout the house interior. The majority of these were located in the central corridor, forming diffuse clusters in association with large numbers of posts, although a few occurred in relative isolation immediately adjacent to the house walls (Features 39, 82, and 109).

One keyhole-shaped semi-subterranean structure (Feature 108) was situated near the midpoint of the excavated portion of House 3, parallel and adjacent to the west side wall, with its ramped entrance facing to the south. This feature measured approximately 3.5 m in length, 2.0 m in width and .5 m in depth. It postdated a pit (Feature 146) lying adjacent to the house wall.

Since they were first identified in 1985 as a distinct feature type on Ontario Iroquoian sites (MacDonald 1986:41-55), semi-subterranean structures have been recognized with increasing frequency throughout southern Ontario. In Simcoe County, for example, 17 such features were found in association with three houses at the nearby and possibly related Hubbert site (MacDonald et al. 1992:53; MacDonald and Pihl 1996), while a total of 22 semi-subterranean sweat lodges were present within nine of the 15 houses excavated at the Dunsmore site (Robertson and Ramsden 1996). The most convincing explanation offered as to the function of these structures is that they were used as sweat lodges for ritual/curative purposes (Smith 1976; MacDonald 1988; 1992). While no similar structures were documented in either

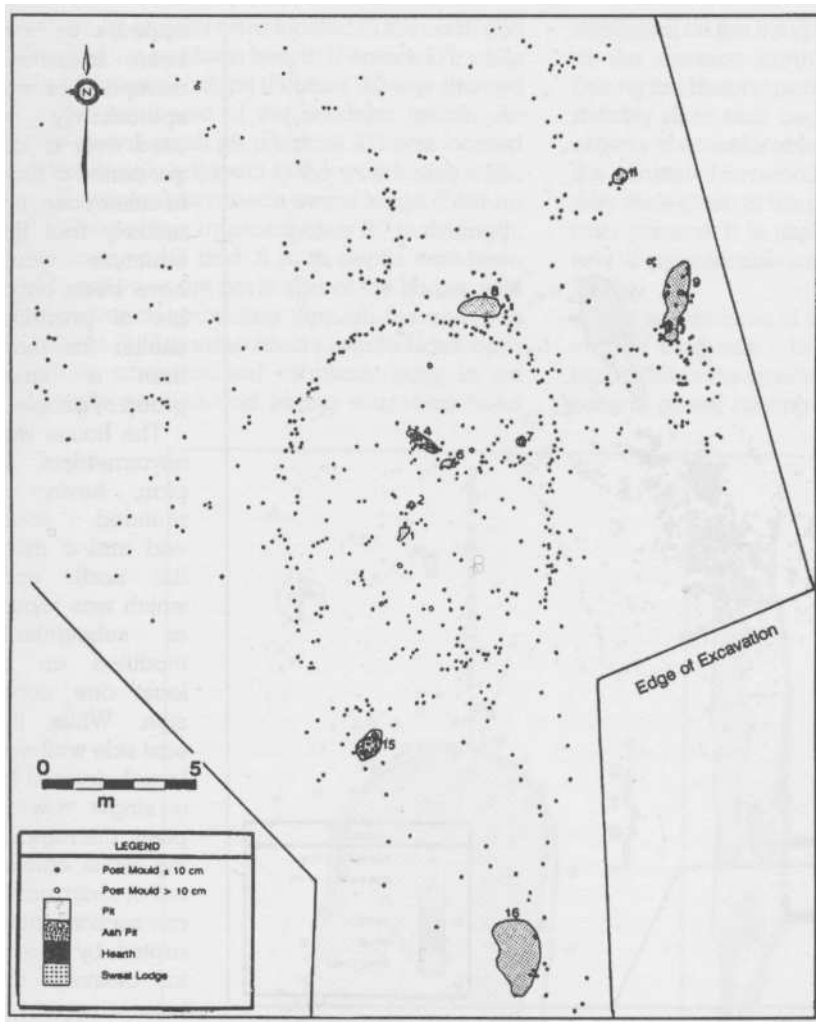


Figure 6. House 6 at the Wiacek Site.

Houses 1 or 2 to the west, several large features classified as "storage pits" (Lennox et al. 1986:30), and located along the west bunkline of House 2, are reminiscent of this feature type, in terms of their location, plan shape, dimensions and the nature of their fills (Lennox et al. 1986: Appendix A).

House 6 (Figures 4 and 6)

House 6 was situated in the extreme southeasterly portion of the excavation area. This structure, measuring 10.3 m in length and 6.6 m in width, was rectanguloid (although somewhat asymmetrical in plan, since the west side wall was approximately 1.5 m longer than its eastern counterpart). The north end of the structure was smoothly rounded, while the south end was more flat. It is possible that the building was open-ended on the south, given the irregular placement of "end wall" posts and the frequency of exterior posts and features immediately to the south of the structure.

The internal distribution of posts and features suggests that interior activity was largely confined to the central and southern portions of the structure; with the exception of a single, centrally located support post, the north end of the house was de-void of features or posts. Five small features were documented within House 6. While no hearth was found, three ash pits were present, along with two general, undifferentiated pits.

The unusual shape of House 6 is accentuated by the fact that the north end of the structure appears to have had a small, sheltered, exterior activity area, enclosing a single pit (Feature 8). Although less well-defined, a similar activity area may have existed at the south end of the house, immediately adjacent to the southwestern corner, where a single large ash pit (Feature 15) and a more diffuse cluster of posts were found. It is also noteworthy that a considerable number of exterior isolated posts and external features surround-

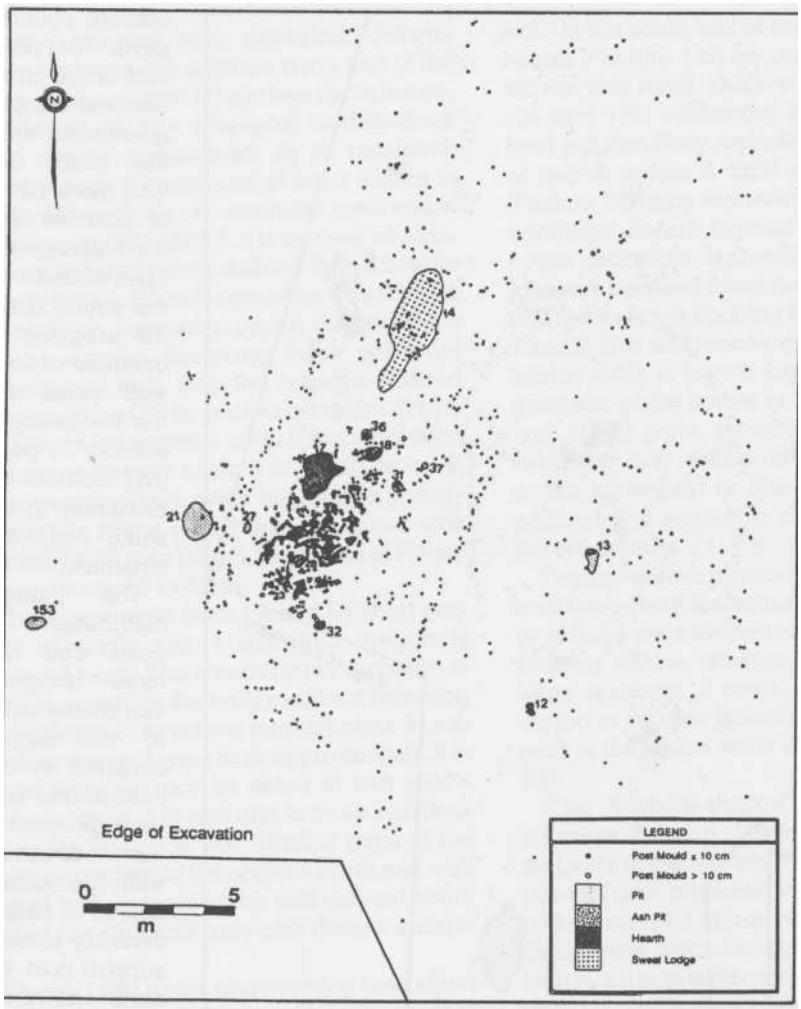


Figure 7. House 7 at the Wiacek Site.

ed both House 6 and House 7. Given the apparent absence of hearths in House 6, its atypical shape, and the apparent intensity of exterior activity in the surrounding area, it is possible that this structure did not function as a permanent residence, but rather as a temporary shelter or warm weather dwelling (cf. Williamson 1983:55).

House 7 (Figures *4 and 7)*

House 7 was located in an intermediate position relative to Houses 3 and 6. Measuring 10.4 m in length and 5.5 m in width, it was the smallest house on the site in terms of internal area. Unlike House 6, however, this structure appears to have been intensively occupied, or was sporadically re-used over a longer period of time. In either case, it is unlikely that this structure would have been capable of providing shelter for more than a small group of people.

The house was asymmetrical in plan, having a rounded south end and a more flat north end, which was rebuilt or substantially modified on at least one occasion. While the east side wall was largely formed by a single row of posts, the remaining walls consisted of short single row sections interrupted by irregular clusters. Entrances appear to have been located at the southeast-ern and south-western corners.

Over 800 posts were distributed throughout the house interior, the majority of which were located in the central corridor, in the vicinity of the hearth areas. The density of the cental post cluster prohibits the identification of any clear patterns, however it is likely that they represent the remains of a variety of domestic fixtures, including sweat baths. Ten features were present in the house interior, eight of which were located within the central corridor. The two hearth areas, the northernmost represented by Feature 17, and the southerly one consisting of Features 23 and 28, were situated approximately one metre to the west of the house centreline. Four small ash pits (Features

18, 31, 36 and 37) were located to the north and west of the northern hearth (Feature 17), while a single small ash pit (Feature 32) was situated to the southeast of the southern hearth. An additional small pit (Feature 27) was located immediately adjacent to the west house wall.

A semi-subterranean sweat lodge (Feature 14), measuring approximately 3.7 m in length, 1.3 m in width and .6 m in depth, had been appended to the north end of the house, with its entrance projecting through the end wall (Figure 8). An unmodified juvenile black bear *(Ursus americanum)* cranium, lying in an upright position and facing east, had been deposited on the living floor of the sweat lodge at the extreme north end of the structure. During the Historic period animal heads - most notably deer and bear - were regarded as objects of considerable spiritual power. Within the context of ceremonial feasts, for example, they were given to the most prestigious individuals present. It is likely that such a practice was of considerable antiquity (Tooker 1991:34, 72-73).

The significance of the bear, particularly its cranial elements - both in terms of hunting ritual and in the quest for medicinal or supernatural power among groups throughout the

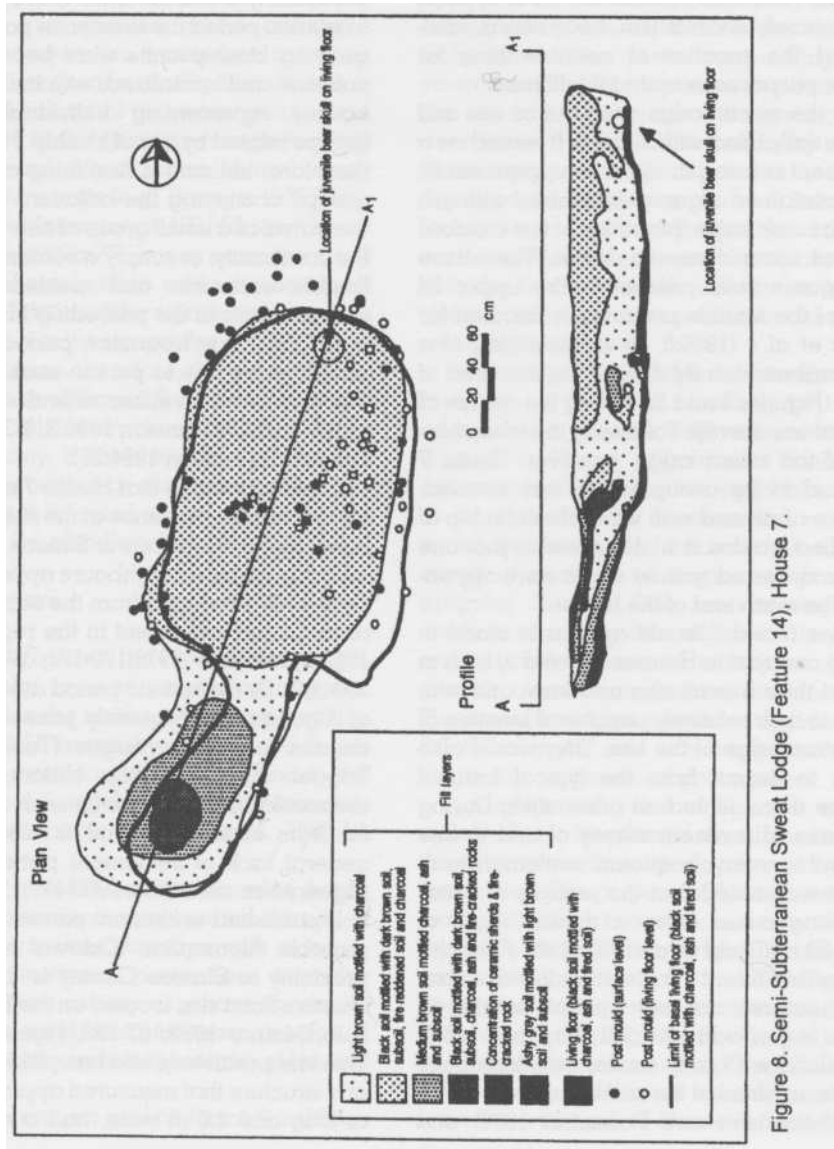


Figure 8. Semi-Subterranean Sweat Lodge (Feature 14), House 7.

Greater Northeast - from at least the Middle Woodland period onward, has recently been reviewed by Fox and Molto (1994:32-36). Shamans or curers frequently appealed to, or acquired, the spirit of a bear in the completion of their rites (Fox and Molto 1994:36; Tooker 1991:78, 107). Furthermore, the Huron occasionally raised bear cubs in captivity to be sacrificed and ceremonially consumed in much the same way as were dogs (Trigger 1976:41). This single archaeological feature may demonstrate the interrelatedness of several of the fundamental attributes of the belief system shared by the majority of the cultures of the Northeast, and indeed the circum-polar world, namely shamanism, bear ceremonial-ism and the practice of sweat-bathing for curative purposes or spiritual fulfilment.

After the sweat lodge went out of use and was partially filled with subsoil, it served as a convenient refuse pit, since its uppermost fill layers contained organic soils mixed with ash and charcoal, large quantities of fire-cracked rock and some domestic debris. The refuse and organic soils present in the upper fill layers of the feature presumably account for Lennox et al.'s (1986:8, 9) identification of a peripheral midden (Midden C) in this area of the site (Figures 2 and 3), during the course of their surface survey. Following the abandonment of the sweat lodge, however, House 7 continued to be occupied, or was re-used, since the north end wall was rebuilt on top of the in-filled feature. It is also possible that one or more sheltered activity areas were appended to the north end of the house.

Houses 6 and 7 would appear to stand in marked contrast to Houses 1, 2 and 3, both in terms of their overall size and form and with respect to their relatively peripheral location at the eastern edge of the site. They would also appear to depart from the typical form of structure documented on other sites. During the course of a recent survey of mid to late fourteenth-century Iroquoian settlement patterns, it was noted that the sample of excavated longhouses have a mean length of almost 28 m (Dodd et al. 1990: 349). Although both Houses 6 and 7 fall well below this size, such structures are not without parallel in Ontario (e.g., Dodd 1984:281; Kapches 1984). Within Simcoe County similar buildings have been documented at the somewhat later Dunsmore (Robertson and Ramsden 1996) and Copeland (Channen and Clarke 1965:7-10) sites, and at the seventeenth century Ball (Dodd 1984: Figure 22) and Molson (Paul Lennox, personal communication, 1994) sites.

Given its relatively open construction, it is most probable that House 6 served as a sheltered activity area, or a temporary warm weather dwelling, and therefore should not be expected to closely conform to the ideal of the Iroquoian longhouse. House 7, on the other hand, was probably capable of accommodating a small group of people during cold weather, or on a year-round basis. The identity of the occupants is an intriguing question, particularly if one assumes that by the Middle Iroquoian period the residence patterns of the growing kinship units were becoming more cohesive and formalized, with individual longhouses representing individual corporate groups related by ties of kinship. House 7 may, therefore, indicate a fissioning of one of the groups occupying the adjacent longhouses, the arrival of a small group of new members to the community, or simply a continuation of the flexible economic and residence patterns characteristic of the preceding Middle Woodland and Early Iroquoian periods, in which people were free to pursue seasonal subsistence activities in either extended or nuclear family units (Williamson 1990:318-319; William-son and Robertson 1994:36).

It is also possible that House 7 may indicate an Algonquian presence at the site. Interaction between the Iroquoians of Simcoe County and their Algonquian neighbours appears to have been well-developed from the earliest phases of Iroquoian settlement in the region (Wright 1966:41; Trigger 1976:170-171; Warrick 1990: 350-352). By the historic period at least, groups of Algonquians frequently passed the winter months in Huron villages (Tooker 1991:25; Trigger 1976: 166-168). Unfortunately, the archaeological evidence for such a practice is far from conclusive, and is hindered by a general lack of settlement pattern data for Algonquian sites (Fox 1990:470). To date, the only published settlement pattern data from a possible Algonquian (Odawa) site in close proximity to Simcoe County is that from the Hunter's Point site, located on the Bruce Peninsula (Molnar 1993:137-138, Figures 2 and 3). This late prehistoric site has yielded evidence of a structure that measured approximately 3.5 m long and 2.0 m wide, had a rectanguloid

form, and was open-ended, suggesting that it served as a temporary shelter for a seasonally utilized hunting and fishing camp.

In a study of a small sample of "cabins" from Ontario Iroquoian sites, Mima Kapches (1984: 64) wisely cautioned against simplistic interpretations of such anomalous structures as indicators of an Algonquian presence, and pointed out that the ethnohistoric records also make reference to the Hurons building temporary shelters in the Algonquian manner. She warned that "diagnostic materials must be found in situ to allow for the assertion that [such structures were used] by Iroquoian peoples or by other non-Iroquoians" (Kapches 1984:64-65). This proviso raises additional problems, however, as it assumes that such ethnic distinctions are readily identifiable in the material culture of these two groups and runs counter to the growing recognition that Iroquoians and Algonquians shared many material culture traits (e.g., Dawson 1979:26-27; Fox 1990:463; Moreau et al. 1991:58; von Gernet 1991:122-123, 1992a:77). In any case, the small quantities of analyzable artifacts recovered from House 7 do not differ significantly from the material found in the remainder of the site. On present evidence, therefore, the suggestion of an Algonquian affiliation for the occupants of House 7 - or similar structures on other sites in Simcoe County, if not elsewhere in southern Ontario - can neither be confirmed nor denied, but should not be ruled out as one of several possibilities *(cf.* also Kapches 1994:264-266).

Exterior Features

During the course of the 1983 MTO investigations, a broad area of exterior activity was documented in the northeastern portion of the site. At least 50 features were located in this area, to the northeast of House 1 and to the north of House 3, together with approximately 500 scattered posts (Lennox et al. 1986:10, Figure 5).

Nineteen of the 104 features recorded during the 1990 excavations were located outside of the house structures, together with approximately 960 scattered posts. Less intensive levels of outdoor activity may have continued further to the south along the eastern edge of the village, particularly in the vicinity of Houses 6 and 7.

Three pits and an ash pit formed a diffuse cluster to the east of House 3 (Figure 5). It is possible that three of these features (104, 149 and 152) were contemporaneous or functionally related, since they appear to have been surrounded by a "halo" of 47 irregularly spaced posts, whereas no posts were present in the central area between the features themselves. An additional small pit (Feature 35), along with 11 scattered posts lay in a relatively isolated position some ten metres to the southeast of this cluster (Figure 5). The external areas to the west of House 3 appear to have been less intensively used.

As discussed earlier, both Houses 6 and 7 appear to have been appended by sheltered activity areas. On the basis of the density of isolated exterior posts surrounding these structures it would also seem that this area of the site saw regular use during various outdoor tasks. It is probable that many of these posts represent temporary features such as drying racks or other structures. Subsurface features were less broadly distributed throughout this area, but were more closely associated with the two houses. None of these features yielded artifactual material that would serve to reveal their functions.

Two straight lines of posts extended south from the south end of House 1, beyond the edge of the original 1983 excavation area (Figure 9). These alignments, flanking an entrance to the house, were probably fences or windbreaks. The westernmost row measured approximately 14 m in length, and consisted of sections of single row posts and irregular clusters. One such cluster at the southern terminus of the alignment may be the result of outdoor domestic activity, as opposed to a structural component of the fence itself. The easternmost line measured approximately 8.5 m in length, and was composed of both single row sections and post clusters.

A single curving line of 23 posts, approximately 10 m in length was also documented in the extreme northwestern portion of the excavation area. The purpose of this isolated linear feature is difficult to assess; however, it may be related to the alignment originally designated as House 4 (Lennox et al. 1986: Figure 4). Regardless of its precise form or purpose, the presence of this alignment, together with the one located to the east of Midden E (Lennox et al.'s House 5) and the one extending northwest from the west wall of House 2 (Lennox et al.

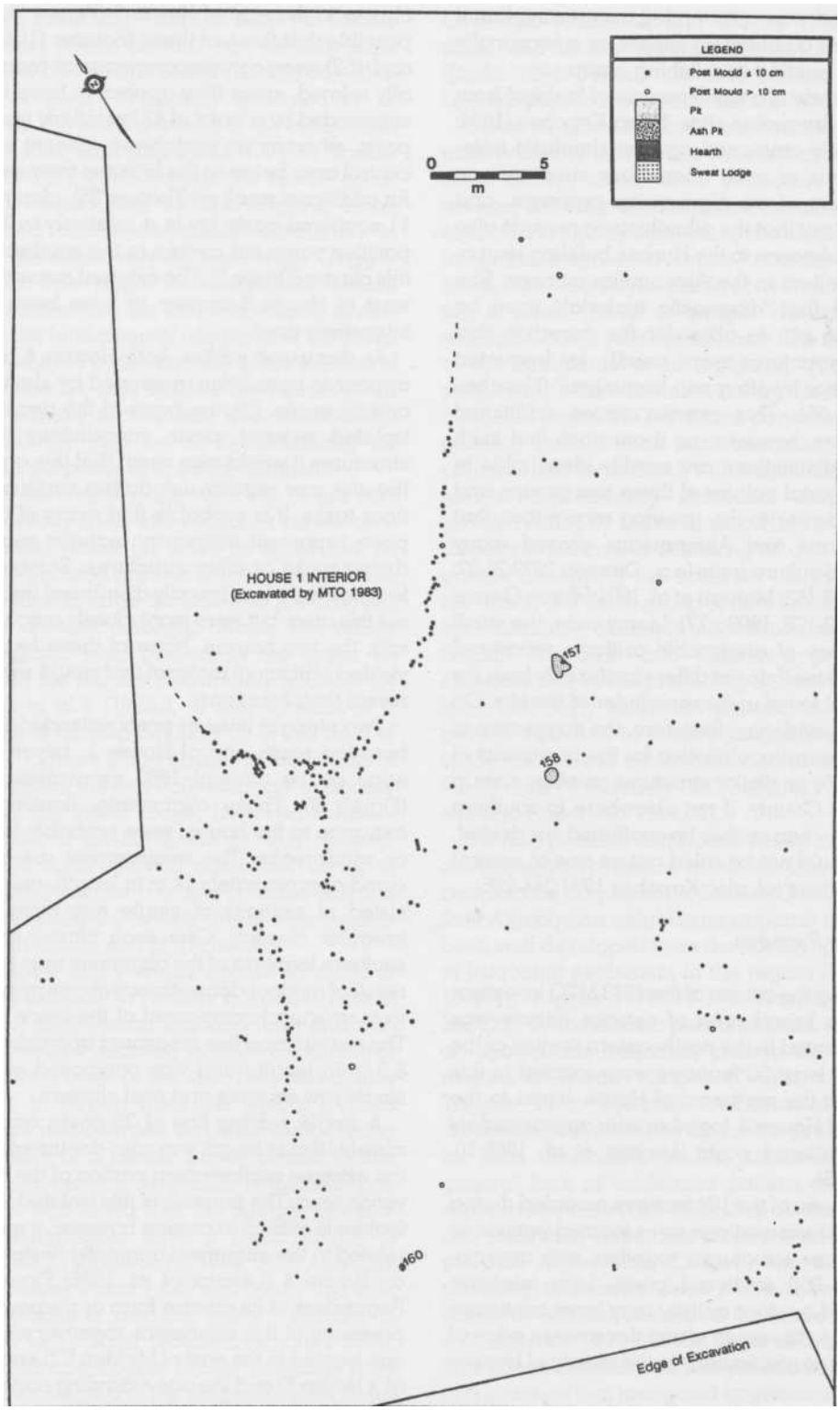


Figure 9. Fences/Windbreaks Extending South from the Southern End of House 1.

1986: Figure 4), suggest that a fairly complex network of linear structures existed in this portion of the site. The alternative possibility, that some of these alignments do represent poorly defined houses comparable to Houses 6 and 7 should not, however, be entirely ruled out.

Midden G

Forty-two one-metre square units were hand-excavated and screened through 6 mm mesh in the area of Midden G, a previously undetected feature lying on the south-facing slope of the ridge, at a distance of approximately 15 m to the southwest of House 3 (the structure with which it is most likely associated). The midden deposits extended over an area measuring approximately eight metres from east to west and seven metres from north to south. Although this feature was situated in a scrubby woodlot at the time of excavation, it had previously been plough-disturbed to a depth of approximately 20 cm. Undisturbed midden soils, however, reached a maximum depth of 24 cm below the plough zone. In several areas, a thin layer of sterile sand separated the plough zone from the undisturbed cultural deposits, which consisted of a relatively uniform dark brown to black organic soil, mottled with ash and charcoal. No subsurface features or posts were found in association with the midden.

THE ARTIFACT ASSEMBLAGE

Approximately 2,150 analyzable artifacts were recovered during the course of the 1990 excavations. Table 2 summarizes this material by artifact class and provides comparative data from the 1983 assemblage. The substantial difference in the size of the two assemblages may be attributed to two major factors. Despite the much larger area uncovered during the 1990 excavations (4,500 m^2 versus 1,200 m^2), only 104 subsurface features were encountered, while the 1983 excavations resulted in the discovery of 285 features, the majority of which were located in the intensively occupied Houses 1 and 2 (Lennox et al. 1986:Tables 1 and 9). Equally importantly, the large-scale soil sampling strategy employed in the 1983 excavations resulted in the collection of significant samples of faunal and plant remains. The former, in fact, constitutes almost 90 percent of the 1983 assemblage. In light of the thoroughness of the 1983 study with respect to soil sampling and flotation, it was decided to employ a less intensive sampling strategy during the 1990 excavations. Direct comparison of the results of the analyses of the two artifact assemblages must take this factor into consideration.

Ceramic Vessels

A total of 1,409 vessel neck, shoulder and body sherds, individually or in various con hinations, constitute the ceramic vessel asse - blage. An additional 94 rim sherds, forming portions of 66 vessels were also recovered. These vessels were analyzed by Terry Powis and Ron Williamson, using attribute (Table 3), linked attribute motif and traditional typological approaches (Powis et al. 1994:24-39), in order to facilitate future inter- and intra-site comparative studies.

Motif Attribute Combinations. General design attribute data were cross tabulated with predominant exterior rim motifs in order to relate the various interior, lip and neck designs with exterior design motifs. Those vessels with only partial neck motifs were not included in the calculation of frequencies. A number of variants, defined on the basis of a particular neck motif, as well as the presence of lip and interior decoration, are provided for each major exterior design sequence (Table 4). This study was undertaken as a preliminary step towards an understanding of the correlation of the various motif attributes in this particular sample, and has no particular bearing on the definition of MacNeish's types (1952). As such, it constitutes a preliminary exploration of common attribute combinations without reference to preconceived types.

The most common exterior design motif in the assemblage consists of obliques over a horizontal line or lines on the collar and a neck design consisting of a horizontal line or lines over obliques (47 percent). The motif seems to relate, however, to the exterior rim as a whole, rather than to distinct collar and neck zones. Indeed, the horizontal element begins on the collar and includes at least one (and usually more) horizontal lines, sometimes continuing on the neck. Others have the design sequence restricted to the collar.

Table 2. Artifact Frequencies by Class for the 1983 MTO and 1990 ASI Excavations

Artifact Class	MTO (1983) n	MTO (1983) %	ASI (1990) n	ASI (1990) %
Ceramics Vessels[1]				
Rim Sherds	167	.9	94	4.4
Neck Sherds	202	1.1	100	4.6
Shoulder Sherds	97	.5	73	3.4
Body Sherds	709	3.9	1,236	57.4
Castellations	-	-	2	<.1
Ceramic Pipes				
Bowls	71	.4	17	.8
Stems	52	.3	13	.6
Juvenile Ceramics				
Vessel Sherds	27	.1	40	1.8
Pipe Sherds	0	0	1	<.1
Miscellaneous Ceramics				
Fired Clay Waste	7	<.1	2	<.1
Lithics				
Points	4	<.1	0	0
Bifaces	1	<.1	1	<.1
Unifaces	-	-	8	.4
Scrapers	4	<.1	4	.2
Retouched & Utilized Flakes	46	.3	26	1.2
Bipolar Cores	92	.5	-	-
Bipolar Nuclei	-	-	64	3
Debitage	616[2]	3.4	204	9.5
Ground Stone Celts	8	<.1	5	0.2
Abraders	2	<.1	1	<.1
Hammer/Anvil Stones	15	<.1	2	<.1
Miscellaneous	3	<.1	0	0
Worked Bone				
	25	.1	8	.4
Faunal Remains				
	15,989[3]	88.2	252	11.7
Total	**18,137**	**99.9**	**2,153**	**99.9**

[1] the 1983 MTO ceramic assemblage count excludes 3,335 unanalyzable sherds and the 1990 ASI assemblages excludes 1,161 unanalyzable sherds
[2] excludes microdebitage (n=638)
[3] identified to class or lower

Table 3. Wiacek Site (1990) Ceramic Vessels: Summary Descriptive Statistics and Metric Attributes

RIM FORM (n=66)	n	%	LIP FORM (n=66)	n	%
Collared	47	71.2	Flat	65	98.5
Incipient Collared	16	24.2	Rounded	1	1.5
Collarless	3	4.5			
ANGLE OF LIP TO INTERIOR	n	%	RIM ORIENTATION (n=66)	n	%
Right	56	85	Outflaring	43	65.1
Obtuse	8	12.1	Vertical	23	34.9
Acute	2	3			
INTERIOR PROFILE (n=66)	n	%	EXTERIOR PROFILE (n=66)	n	%
Concave	32	48.5	Convex	37	56.1
Straight	30	45.4	Straight	26	39.4
Convex	4	6.1	Concave	3	4.5
COLLAR BASE SHAPE (n=61)	n	%	COLLAR HEIGHT (n=66)		
Rounded	39	59.1	Mean	16.1mm	
Angular	22	33.3	Standard Deviation	5.2	
			Coefficient of Variation	32.3	
LIP WIDTH (n=66)			BASAL COLLAR WIDTH (n=66)		
Mean	7mm		Mean	11.2mm	
Standard Deviation	1.7		Standard Deviation	2.2	
Coefficient of Variation	24.3		Coefficient of Variation	19.6	
COLLAR MOTIFS (n=66)	n	%	COLLAR TECHNIQUE (n=66)	n	%
Oblique/Horizontal	28	42.4	Incised	22	33.3
Oblique	21	31.8	Linear Stamped/Incised	16	24.2
Opposed	6	9.1	Incised/Incised	12	18.2
Horizontal	3	4.5	Linear Stamped	8	12.1
Punctate/Horizontal	2	3	Linear Punctates	2	3
Linear Punctate	2	3	Punctate/Incised	2	3
Plain	2	3	Plain	2	3
Oblique + Oblique	1	1.5	Incised/Dentate Stamp	1	1.5
Hatched	1	1.5	Incised/Incised	1	1.5
NECK MOTIF (n=64)	n	%	NECK TECHNIQUE (n=64)	n	%
Horizontal	34	52	Incised	31	47
Plain	9	13.6	Plain	9	13.6
Horizontal/Oblique	6	9.1	Linear Punctate	9	7.6
Horizontal/Punctate	4	6	Incised	5	7.6
Horizontal/Opposed	3	4.5	Incised	4	6
Horizontal/Linear Punctate	2	3	Incised/Punctate	3	4.5
Linear Punctate	2	3	Linear Stamped	2	3
Opposed	1	1.5	Incised/Linear Punctate	2	3
Oblique/Horizontal	1	1.5	Incised/Linear Stamped	1	1.5
Horizontal/Punctate/Horizontal	1	1.5	Punctate	1	1.5
Horizontal// Opposed/Horiz./Opposed	1	1.5	Incised/Punctate/Incised	1	1.5
INTERIOR MOTIF (n=66)	n	%	INTERIOR TECHNIQUE (n=66)	n	%
Plain	61	92.4	Plain	61	92.4
Oblique	3	4.5	Linear Stamped	2	3
Horizontal	1	1.5	Punctate	1	1.5
Linear Punctate	1	1.5	Incised	1	1.5
			Linear Punctate	1	1.5
LIP MOTIF (n=66)	n	%	LIP TECHNIQUE (n=66)	n	%
Plain	53	80.3	Plain	53	80.3
Horizontal	7	10.7	Linear Punctate	5	7.6
Linear Punctate	3	4.5	Punctate	5	7.6
Punctate	2	3	Incised	2	3
Oblique	1	1.5	Linear Stamped	1	1.5

Table **4.** Wiacek Site (1990) Ceramic Vessels: Attribute Combination Frequencies

ATTRIBUTE COMBINATIONS	n	%
Obliques over horizontals on collar; horizontals over obliques on neck	31	47
no lip design; no interior design	8	12.1
lip design; no interior design	1	1.5
interior design; no lip design	1	1.5
neck decoration (horizontal element only); no lip design; no interior design	12	18.2
neck decoration (horizontal over oblique over horizontal); interior design; no lip design	2	3
neck decoration (horizontal over oblique over horizontal); no lip design, no interior design	2	3
neck decoration (horizontals or punctates); lip design; no interior design	3	4.5
horizontal over opposed on neck; no lip design; no interior design	2	3
Simple obliques on collar; various neck motifs	21	31.8
no neck decoration; no interior decoration; no lip decoration	7	10.6
horizontal element over opposed motif on neck; no lip design; no interior design	2	3
horizontal element over obliques on neck; no lip design; no interior design	1	1.5
lip design consisting of horizontal element or punctates	2	3
lip design and interior design	1	1.5
sub-collar punctates or stamps; no neck decoration; no lip design; no interior design	3	4.5
sub-collar punctates; lip design consisting of linear punctates	2	3
plain neck; no lip design; no interior design	3	4.5
Opposed motif on collar; various neck motifs	7	10.6
no lip design; no interior design	3	4.5
neck decoration (double row of horizontal punctates); no lip design; no interior design	1	1.5
no neck decoration; no lip design; no interior design	3	4.5
Horizontal lines on collar; sub-collar or neck punctates	3	4.5
no lip design; no interior design	2	3
no lip design; interior design	1	1.5
Plain collar; horizontals on neck; no lip design; no interior design	2	3
Hatched collar motif; horizontals over obliques on neck; punctates on lip; no interior design	1	1.5
Obliques crossed by obliques on collar; sub-collar punctates; punctates on lip; no interior decoration	1	1.5

The second most common exterior motif in the assemblage includes those vessels with simple obliques on the collar along with various forms of neck decoration (31.8 percent). Most variants have either a plain neck motif or an opposed or simple oblique beneath a horizontal element on the neck. Some rims have the obliques on the collar with sub-collar punctates.

A third common motif consists of opposed obliques on the collar with either plain necks or ones exhibiting some form of horizontal element (10.6 percent).

Less common motifs include those that have horizontal lines on the collar with sub-collar punctates (4.5 percent), those with a plain collar motif with horizontal lines on the neck and no other decorative attributes (3 percent). One vessel exhibits a hatched collar motif with horizontal lines over obliques on the neck and round punctates on the lip (1.5 percent), while one vessel includes obliques crossed by obliques on the collar with sub-collar punctates.

Traditional Typology. The typological approach used in the analysis of the 1990 assemblage follows the classifications defined by MacNeish (1952) and further discussed by Lennox and Kenyon (1984) and Lennox et al. (1986:48-51).

Table 5 summarizes the frequencies of traditional ceramic types by provenience (Figures 10-14). Table 6 provides a comparison of the relative frequencies of traditional types between the 1983 and 1990 assemblages. The differentiation between Middleport Oblique and Pound Necked types in the 1990 assemblage was made on the basis of a strict adherence to the position of the horizontal elements (immediately above or on the collar base for the former and below the collar base for the latter).

The description and identifications of vessels from the two assemblages were made in a similar fashion (Paul Lennox, personal communication 1994). Nevertheless, there are several notable differences between the two samples. The most obvious is the wide range of vessel types present in the 1983 assemblage, compared to that recovered in 1990; this may be attributed to sample size. There are also significant contrasts in the frequencies of Middleport Oblique and Black Necked vessels, although there was a similar occurrence 'of Pound Necked.

The total frequencies, therefore, present a slightly different picture of the assemblage as a whole. In the 1983 sample, Ontario Horizontal, Middleport Oblique and Lawson Incised vessels together accounted for 26.6 percent of the vessels. When the 1990 material is taken into consideration, however, these three types combined account for 39.4 percent of the total assemblage. Moreover, the total frequency of Black Necked, together with Huron Incised, Lawson Incised and Lawson Opposed changes from 30.9 percent in the original assemblage to 24.4 percent in the combined assemblage. Pound Necked, on the other hand, remains virtually unchanged at 22.5 percent.

These data offer a cautionary note for seriation exercises based on an incomplete assemblage from any particular site of this time period and/or region. Perhaps more importantly, they also suggest that the date range for the site may be narrowed to approximately the mid-fourteenth century. While the two initial radiocarbon dates of 750±80 B.P./ cal. A.D. 1200±80 (I-13537) and 730±80 B.P./ cal. A.D. 1220±80 (I-13538) were rejected as too early relative to the 1983 ceramic assemblage, it would seem on the basis of the combined assemblage, that the re-assay of the wood sample from Feature 91 in House 2 (I-1358c), that produced a calibrated date of A.D. 1320 ±50 (Dodd et al. 1990:Table 10.1), is consistent with the combined ceramic vessel assemblage.

Furthermore, given the now clear evidence for regionally-based sequences, the comparison of an individual assemblage with those from other areas of Ontario is unlikely to be useful in the absence of an understanding of the nature of the relationships that existed between these different communities. As Lennox et al. (1986:62) point out, any resolution of the temporal placement of this site, or any other in the region, must await further detailed analyses of additional local assemblages that are as complete as possible. It is anticipated that details of the ceramic vessels from the nearby Dunsmore and Hubbert sites will be published in the near future.

Ceramic Pipes

The sample of ceramic pipes recovered

Table 5. Wiacek Site (1990) Ceramic Vessels: Ceramic Types by Provenience

CERAMIC TYPE	HOUSE 3	HOUSE 6	HOUSE 7	MIDDEN G
Middleport Oblique	8	2	6	10
Pound Necked	1	-	5	9
Ontario Horizontal	2	1	1	3
Lawson Incised	2	-	1	2
Miscellaneous	5	-	-	-
Lawson Opposed	-	-	2	1
Black Necked	-	-	1	1
Copeland Incised	-	-	1	-
Middleport Criss-cross	-	-	-	2
TOTAL	18	3	17	28

Table 6. Wiacek Site Ceramic Vessels: Comparative Type Frequencies (1983 and 1990)

	ASI (1990)		MTO (1983)		TOTAL	
TYPE	f	%	f	%	f	%
Middleport Oblique	26	39.4	12	12.8	38	23.7
Pound Necked	15	22.7	21	22.3	36	22.5
Ontario Horizontal	7	10.6	7	7.4	14	8.8
Lawson Incised	5	7.6	6	6.4	11	6.9
Miscellaneous	5	7.6	3	3.2	8	5
Lawson Opposed	3	4.5	6	6.4	9	5.6
Black Necked	2	3	13	13.8	15	9.4
Middleport Criss-cross	2	3	2	2.1	4	2.5
Copeland Incised	1	1.5	3	3.2	4	2.5
Warminster Crossed	-	-	1	1.1	1	.6
Iroquois Linear	-	-	2	2.1	2	1.3
Huron Incised	-	-	4	4.3	4	2.5
Pound Blank	-	-	5	5.3	5	3.1
High Collared	-	-	4	4.3	4	2.5
Niagara Collared	-	-	2	2.1	2	1.3
Ripley Plain	-	-	1	1.1	1	.6
Ontario Oblique	-	-	1	1.1	1	.6
Sidey Crossed	-	-	1	1.1	1	.6
TOTAL	66	99.9	94	100.1	160	100

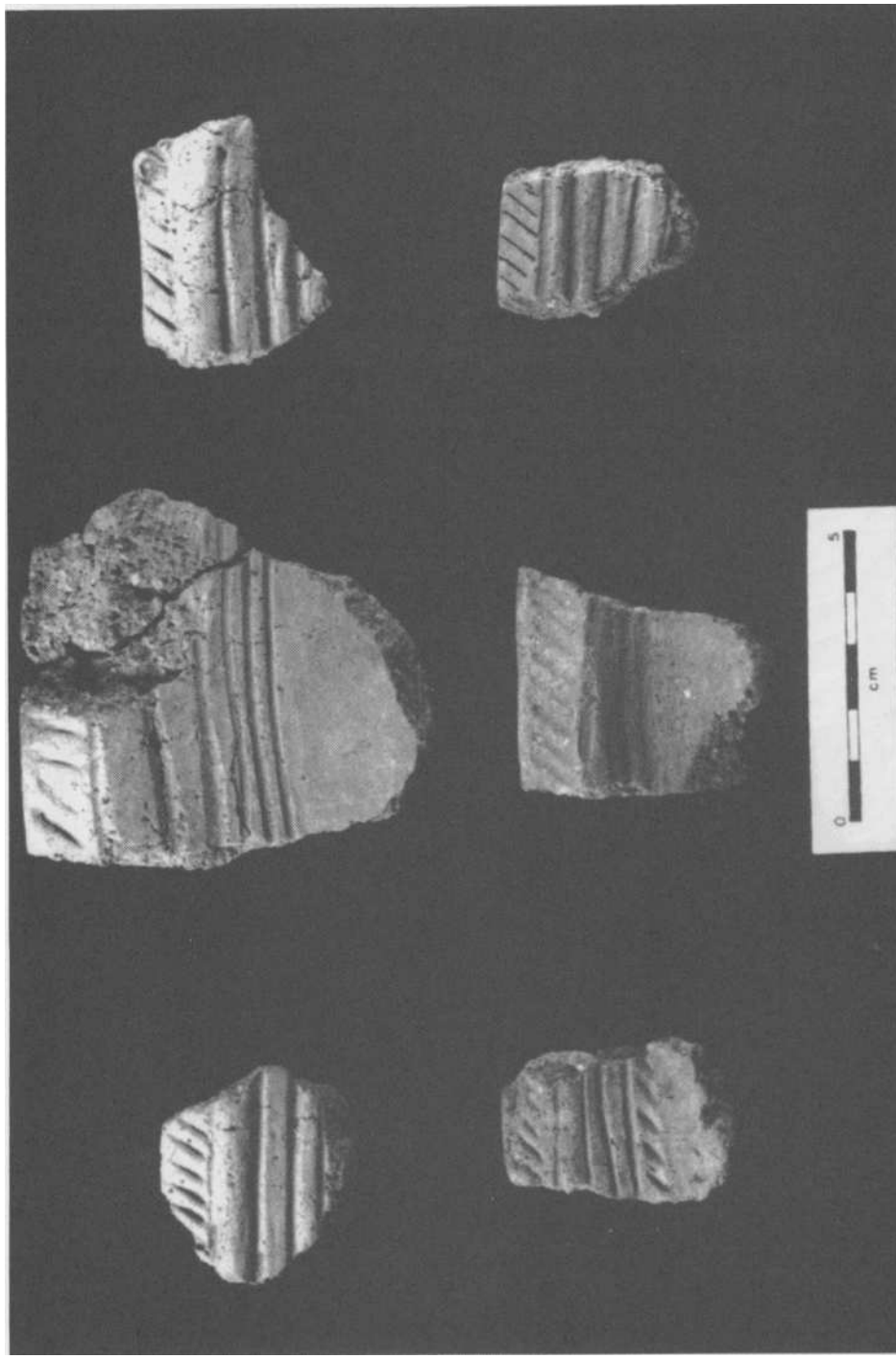


Figure 10. A Selection of Middleport Oblique Vessels from the Wiacek Site. The sherds at top left and top right are possibly from the same vessel.

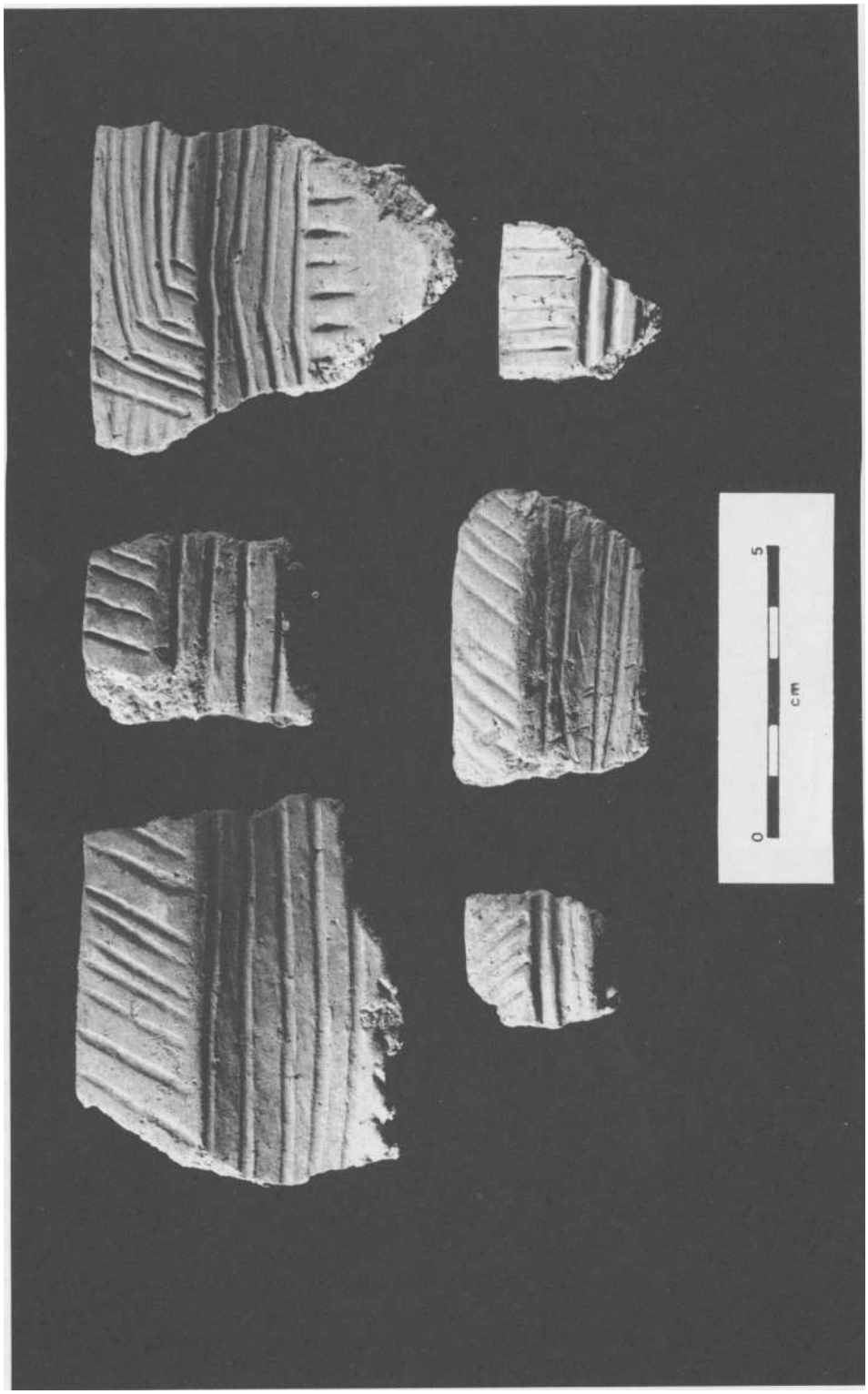


Figure 11. A Selection of Pound Necked Vessels from the Wiacek Site.

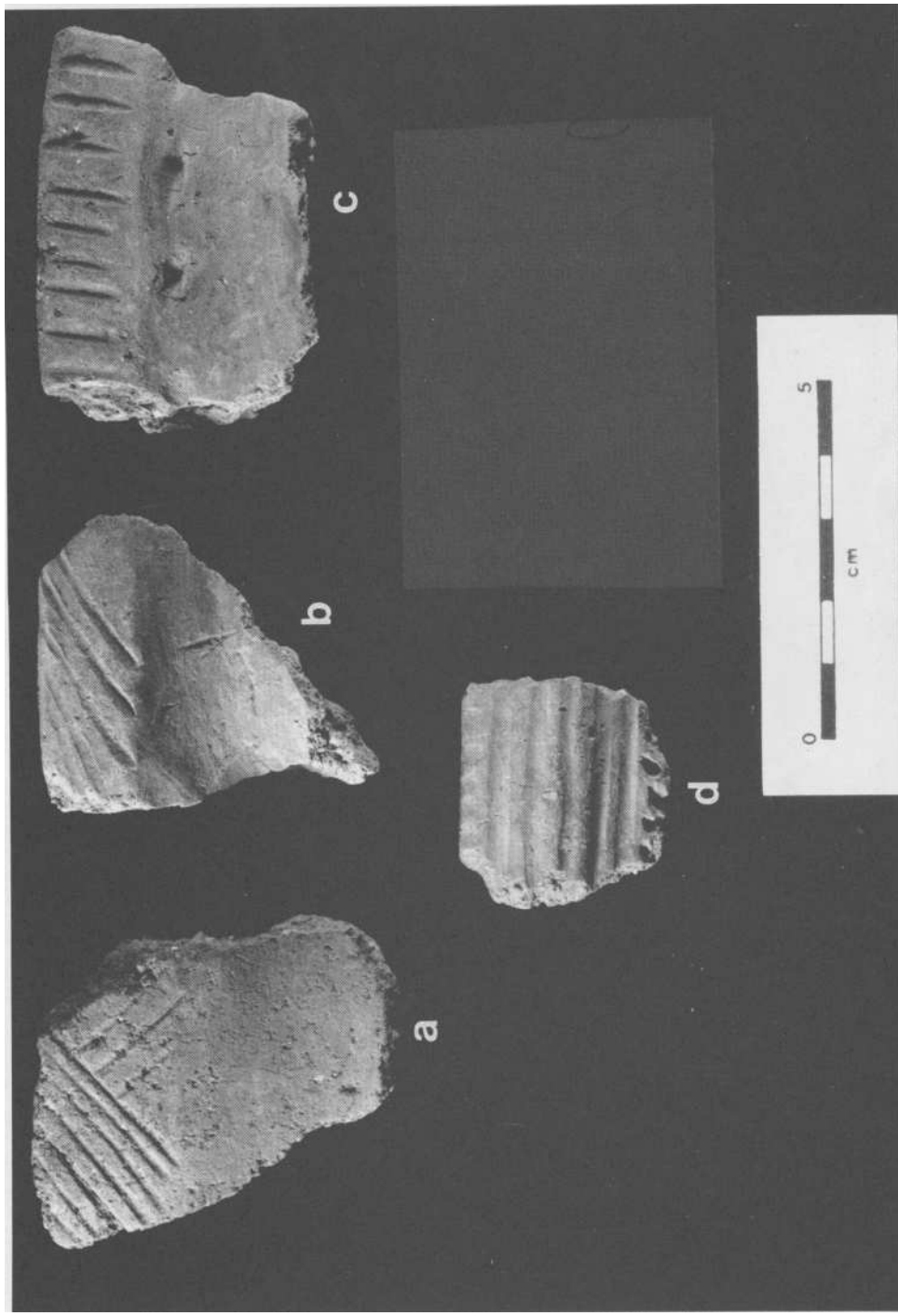


Figure 12. Wiacek Site Ceramic Vessels. Lawson Opposed (a), Lawson Incised (b-c), Ontario Horizontal (d).

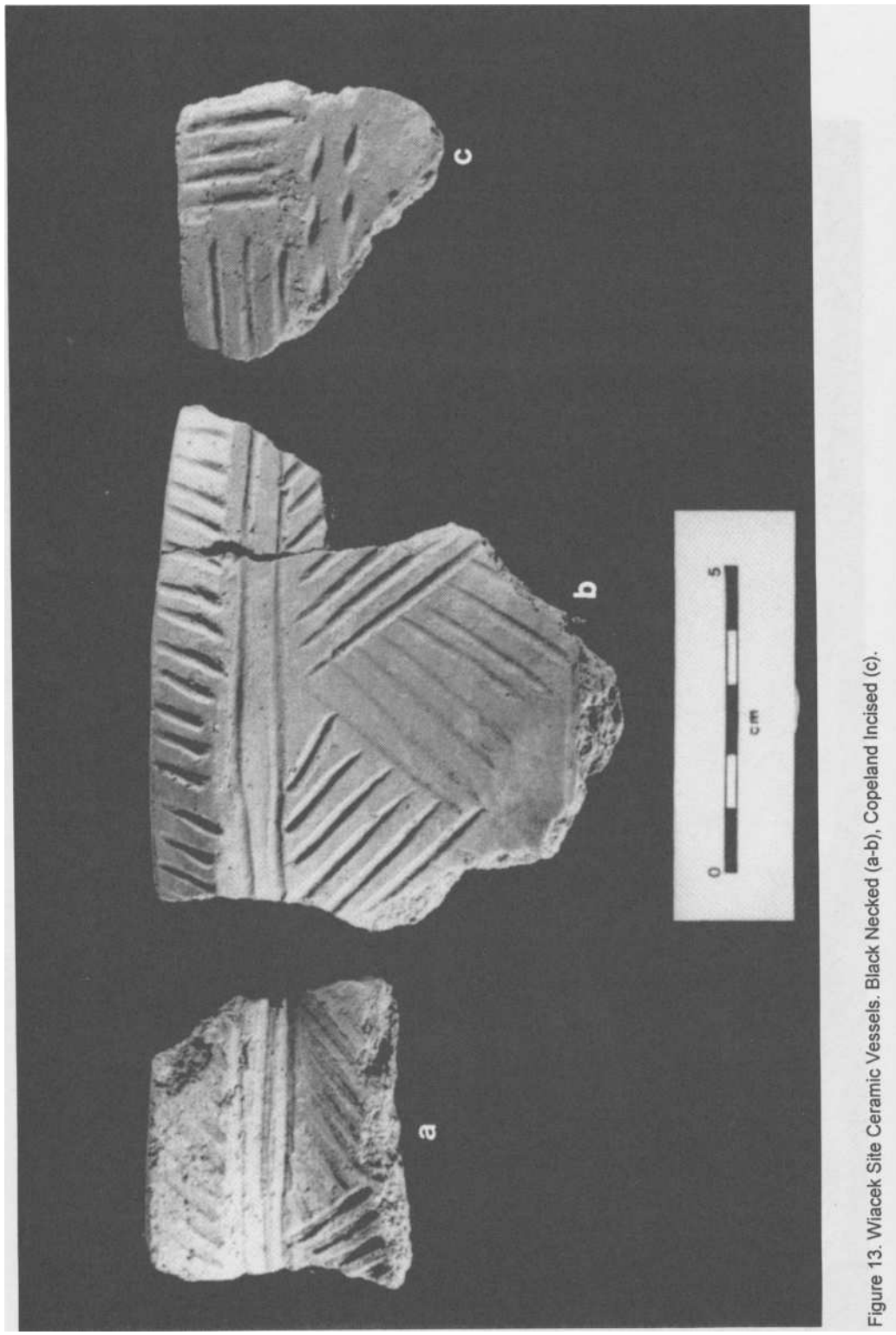


Figure 13. Wiacek Site Ceramic Vessels. Black Necked (a-b), Copeland Incised (c).

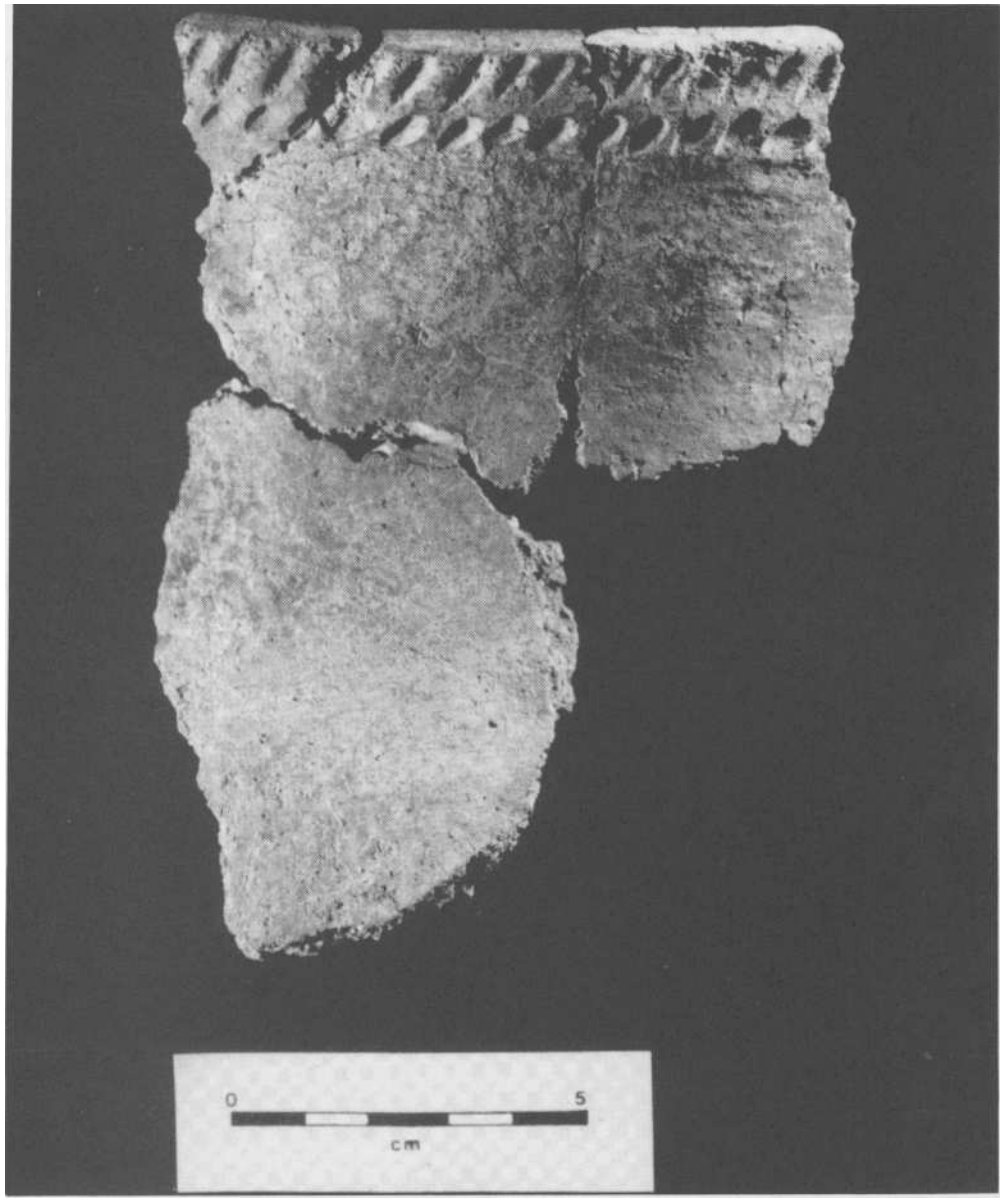


Figure 14. A Miscellaneous Type Vessel from the Wiacek Site. The incipient collar form suggests that it is **a variant of Ontario Oblique.**

during the 1990 excavations, and analyzed by Eva MacDonald, consists of 17 bowl fragments, 12 stem fragments, one elbow section and a juvenile bowl (Powis et al. 1994:39-42). Eleven of the bowls were sufficiently intact to be described in terms of form and decoration.

Two of the pipe bowls are conical (Figure 15:b, c). The first of these is plain, with a flat lip measuring 6.4 mm in width and with a minimum height of 47.5 mm. The second, with an estimated outer rim diameter of 50 mm and a minimum height of 53.3 mm, has a 7.1 mm wide lip that has been ground flat. The bowl exterior was smoothed with a single band of punctates below the lip, and the remnant of an incised horizontal band that has been partially ground

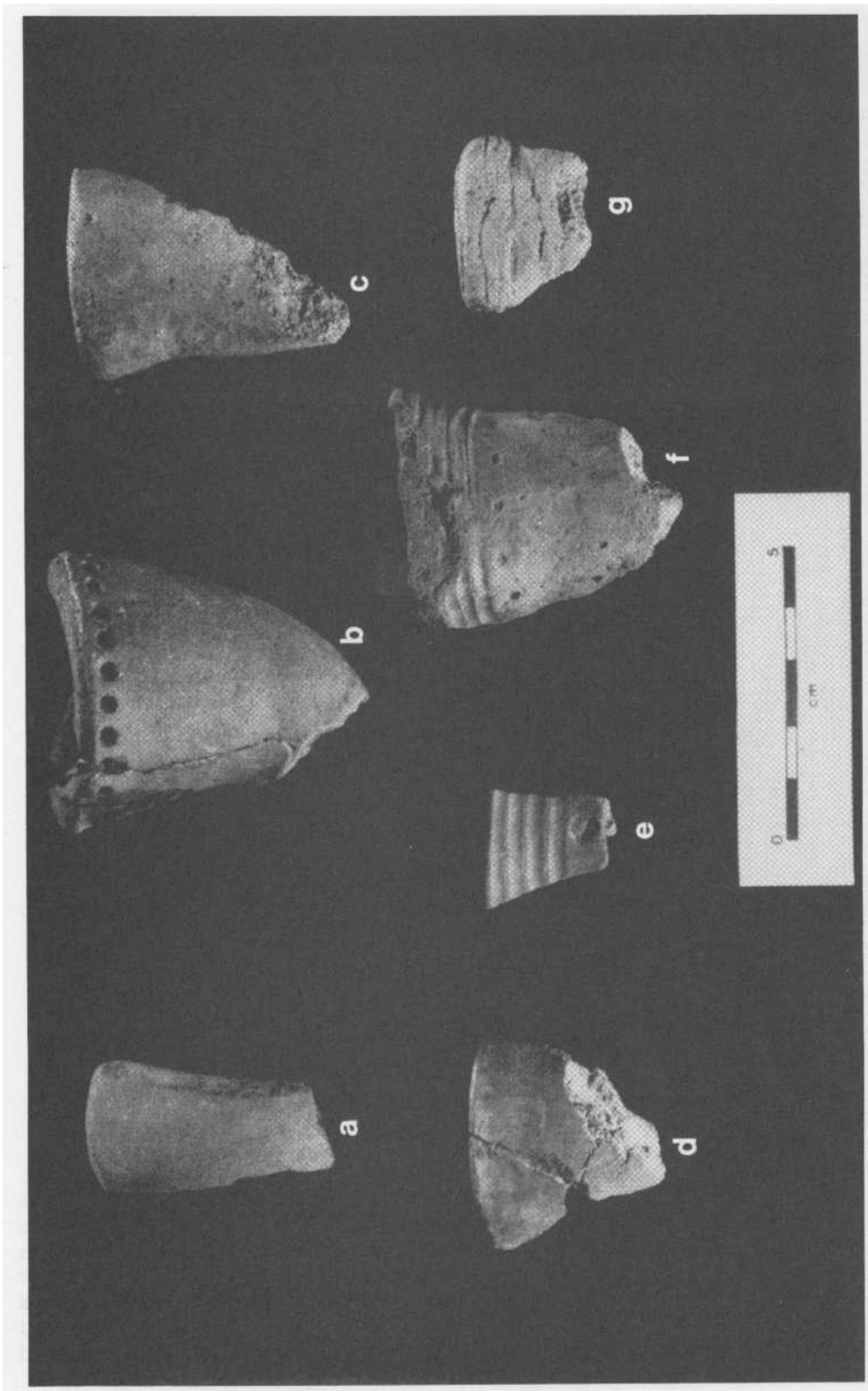


Figure 15. Wiacek Site Ceramic Pipe Bowl Fragments. Barrel (a), Conical (b-c), Trumpet (d-f), Juvenile (g).

away below the rim.

One barrel form (Figure 15:a), with a plain, smoothed exterior, has a minimum bowl height of 40.9 mm, and a 11.3 mm wide lip that has been ground flat.

The remaining eight bowl fragments are trumpet forms (e.g., Figure 15:d-f). All bowl lips are flat, ranging from 4.9 mm to 6.6 mm in width. Minimum bowl heights range from 20.2 mm to 48.9 mm. Six of the eight trumpet pipes (73 percent) have plain exteriors and the majority are lightly burnished. One specimen has been decorated with four incised, horizontal lines directly below the rim of the bowl, while a second exhibits five parallel incised lines situated above a row of punctates. Motifs employed on the remaining unanalyzable bowl fragments include incised horizontals, punctates or incised opposed obliques.

The juvenile pipe bowl (Figure 15:g) is unlike any of the other specimens recovered, in that a collar is present on the rim, and a groove has been inscribed on the lip of the bowl. The bowl is conical in shape with a minimum height of 23.6 mm. The exterior is decorated with three incised horizontal lines that have been partially smoothed over.

Four stems possess intact mouthpieces, all of which have an expanding form and are circular in cross-section with diameters ranging from 9.2 to 10.9 mm. All of the mouthpieces are flat, three having been ground. All of the stem fragments, as well as the one elbow fragment, have plain exteriors, and the majority have been burnished.

The pipe sample obtained during the ASI excavations is considerably smaller than that (n = 123) recovered during the previous excavations (Lennox et al. 1986:58). Nevertheless, several comparative observations can be made. As with the MTO sample, all of the stem fragments and approximately half of the bowl fragments exhibit plain exteriors, and the fragments, in general, come from relatively large pipes. Similarly, the motifs observed on decorated bowls within both collections are generally limited to incised horizontals or rows of punctates encircling the bowl. Opposed linear oblique motifs are rare in both assemblages.

The two samples, however, differ with regard to predominant bowl form. Twenty-two of the 47 bowls (46.8 percent) in the MTO assemblage that were analyzable as to form were described as conical, and an additional 13 (27.6 percent) were classified as "flared conical" or "slight trumpet". Only four (8.5 percent) were described as trumpet pipes (Lennox et al 1986:59, 60). In the ASI assemblage, however, eight of the 11 analyzable bowls (72.7 percent) are classified as trumpet pipes. This discrepancy may be attributed to differences in sample size, or to the fact that the "flared conical" or "slight trumpet" form - described as being intermediate between conical and trumpet (Lennox et al. 1986:60) - was not employed in the present analysis. Even if the "flared conical" and trumpet pipes in the MTO assemblage are combined, however, they only account for 36.1 percent of the 1983 sample in which bowl form could be ascertained.

Lithic *Artifacts*

The lithic assemblage recovered during the 1990 excavations consists of 315 artifacts, including 307 chipped stone items. The remainder are ground stone items, including four celt bit portions, an abrader and two hammer/anvil stones. The analysis of the chipped lithic material was carried out by Robert MacDonald and Deborah Pihl subsequent to the initial analysis provided in the licence report (Pihl and Robertson 1994:48-60). Overall, the assemblage reflects a lithic technology dominated by expedient rather than formal tools; a finding that is in keeping with the analysis of the 1983 assemblage (Lennox et al. 1986:93).

The chipped stone artifacts include: 1 biface, 4 scrapers, 8 unifaces, 26 utilized flakes (8.4 percent), 64 bipolar nuclei (20.8 percent), and 204 pieces of debitage (66.4 percent). The term "bipolar nucleus" has been adopted in place of the more problematic alternatives, "bipolar core", "wedge", and "piece esquillée"

One tip portion of a well-worked biface of Onondaga chert, probably the tip of a projectile point, was recovered. It is relatively broad, with excurvate lateral edges, a biconvex cross section and medial ridges on both faces.

The scrapers were all made from Onondaga chert. One had been re-used as a bipolar nucleus while a second had been fashioned on the lateral edge of a bipolar nucleus. The third was made on a primary flake, and pebble cortex comprises much of the dorsal face of the specimen. In addition to the retouched scraping edge on the distal dorsal edge of the

flake, the proximal portion of the left dorsal edge was finely retouched. The remaining scraper was made on a flake and is more elongate in outline. The thick, central portion of the convex distal edge has been steeply retouched, and continuous edge damage is present on the right portion. The left portion, however, is unused, probably due to the acute edge angle in that area. The distal lateral edges of the tool have been worked on alternate faces, resulting in the blunting and reduction of those edges, possibly for hafting.

The uniface category was used to group items - frequently bipolar nuclei - which exhibited purposeful unifacial retouch for use as expedient scraping tools. Five specimens were of Onondaga chert, two were of Balsam Lake chert, and the eighth specimen was of an unidentified chert.

The utilized flake category was used to group items which exhibited utilization retouch. While Onondaga chert was the preferred material for the utilized flakes (n=16, or 61.5 percent), the majority bore evidence of bipolar reduction. This suggests that considerable effort was made to conserve raw materials. The tools were generally small in size with the largest being only 4.5 mm in length. Despite their small size, however, many of the flake tools were not discarded until after at least one of the working edges had fragmented.

The bipolar nuclei represent a complex class of artifacts, and the functional interpretation cannot rest on artifact morphology alone, but must include use-wear analysis and de-tailed investigation of the bipolar industry practiced on site. In general, however, it is likely that the bipolar nuclei represent both expediently produced cores and wedges.

Analysis of the debitage reveals that tool manufacture also stressed expediency. While roughly one-third of the raw material identified was Onondaga chert, the remaining two-thirds comprised an assortment of regional chert varieties, many of which would be available as pebbles in the local till. Pebble cortex was, in fact, frequently identified. With respect to the reduction technology employed, the majority of the debitage comprised compression flakes (40.2 percent), indicative of the bipolar technique (Cotterell and Kamminga 1987), as well as shatter (49.0 percent). In all likelihood, such a high frequency of shatter can also be attributable to bipolar reduction. Interestingly, the small percentage (9.3) of flakes attributed to bifacial reduction were primarily of Onondaga chert (62.5 percent). While the small numbers tend to skew this statistic, the potential for knapping pebble cherts using bifacial techniques is probably far lower than the potential for bifacially refining imported preforms or reworking imported formal tools of Onondaga chert. Tables 7 and 8 provide cross tabulations for artifact types and flake types against chert type, while Table 9 provides a summary of the distribution of the raw material types by major provenience units.

Analysis of the spatial distribution of the provenienced lithic assemblage revealed that two-thirds (65.7 percent) of the material came from Midden G. Of the remainder, 23.5 percent came from House 3, 5.9 percent from House 7, while the remainder (3.4 percent) was recovered from external features. No lithic material was recovered from House 6. Within Houses 3 and 7, the greatest quantities of material were recovered from the semi-subterranean sweat lodges (Feature 108 in House 3 and Feature 14 in House 7). As with Midden G, this appears to reflect the sheer volume of fill associated with these features, rather than a specific disposal pattern. Overall, Onondaga chert is considerably more common (and Huronian chert is correspondingly less predominant) in the 1990 sample than in that recovered by MTO in 1983. This trend may reflect somewhat better access to higher quality imported cherts on the part of the inhabitants of House 3, as almost 90 percent of the lithic assemblage was derived from this structure and the presumably associated Midden G.

Worked Bone

Excluding two pieces of manufacturing debris, six items of worked bone were recovered (Thomas 1994:77-78). Fragments of three bone beads or tubes were identified, all made from avian long bones, the most noteworthy of which was manufactured from an eagle tibiotarsal bone. A perforated deer phalanx, the tip portion of a robust, dagger-like point and a worked beaver mandibular incisor make up the remainder of the worked bone assemblage.

Bone awls made up approximately one-third of the 1983 MTO worked bone assemblage (Lennox et al. 1986:95), although none are

Table 7. Wiacek Site (1990) Chipped Lithics: Artifact Frequency by Raw Material Type

	Balsam Lake	Gordon Lake	Hudson Bay Low-land	Huronian	Onondaga	Quartz	Trent Valley	Unidenti-fied	Wike	Sub-Total	%
Biface					1					1	.3
Bipolar nuclei	17		1	20	7	12	6	1		64	20.8
Debitage	37	1		57	59	34	7	8	1	204	66.4
Scrapers					4					4	1.3
Utilized flakes	2			2	16	3	2	1		26	8.5
Unifaces	2				5			1		8	2.6
Frequency	58	1	1	79	92	49	15	11	1	307	100
Percent	18.9	.3	.3	25.7	30	16	4.9	3.6	.3	100	

Table 8. Wiacek Site (1990) Chipped Lithics: Debitage Flake Class Frequency by Raw Material Type

	Balsam Lake	Gibson Lake	Huronian	Onon-daga	Quartz	Trent Valley	Unidentified	Wike	Sub-total	%
Compression	19		26	15	14	4	3	1	82	40.2
Primary Reduction				1	1				2	1
Primary Thinning			1						1	.5
Secondary Knapping	1		5	10					16	7.8
Shatter	17	1	25	33	16	3	5		100	49
Unidentified					3				3	1.5
Total	37	1	57	59	34	7	8	1	204	100
Percent	18.1	.5	27.9	28.9	16.7	3.4	3.9	.5	100	

present in the 1990 sample. Given the comparatively small sizes of both samples, however, similar type frequencies should not necessarily be expected.

FLORAL REMAINS

During the course of the 1990 investigations, over 600 litres of soil, recovered from a wide variety of feature types and settlement contexts, were subjected to bucket flotation, and a subsample of the material, derived from 10 proveniences in Midden G, two proveniences in House 3 and one in House 7, was then analyzed (Monckton 1994a:59-70). Particular emphasis was placed upon material from the midden in order to complement Lennox et al.'s study, which focused on interior house and exterior activity area features (1986:132-158).

Unlike the original study (Lennox et al. 1986), the analysis of 1990 Wiacek plant remains produced relatively small quantities of seeds. Seeds of even the most common plant taxa were only sparsely deposited among the large quantities of wood charcoal recovered. Tables 10-13 show the sample contents for the longhouse features and rnidden. Figure 16 illustrates their relative contributions to the sam-

Table 9. Wiacek Site (1990) Chipped Lithics: Raw Material Types by Provenience

RAW MATERIAL TYPE	HOUSE 3	HOUSE 6	HOUSE 7	MIDDEN G	TOTA
Balsam Lake	**8**		**6**	**44**	**58**
Gordon Lake				1	1
Hudson Bay Lowland	1				1
Huronian	**23**		**4**	50	77
Onondaga	**22**		**4**	**56**	**82**
Quartz	13		**3**	**33**	**49**
Trent Valley				**14**	**14**
Unidentified	1			7	**8**
Wike	1				1
TOTAL	**69**	**0**	17	**197**	**283**

pies analyzed from Midden G, House 3 and the semi-subterranean sweat lodge in House 7.

The cultigens recovered (Table 10) include Eastern Complex maize (Zea *mays),* bean (Phaseolus *vulgaris),* cucurbit (Cucurbita pepo), and tobacco *(Nicotiana* rustica). In addition, a variety of collected plants were present in the samples. Fleshy fruits (Table 10) include bramble (Rubus sp.), strawberry *(Fragaria sp.),* elderberry (Sambucus sp.), cherry *(Prunus* sp.) and black nightshade (Solanum *nigrum).* Taxa in the greens/grains category (Table 11) include chenopod (Chenopodium *sp.),* knotweed *(Polygonum sp.),* and spikenard *(Aralia sp.).* Other taxa recovered (Table 12) include sumac *(Rhus typhina)* and bedstraw *(Galium sp.).* Needle fragments of either hemlock (Tsuga canadensis) or yew *(Taxus* canadensis) trees were also present in the sample.

Wood charcoal (Table 13) included maple (Acer sp.), beech *(Fagus grandifolia),* ash *(Fraxinus sp.),* elm (Ulmus *americana),* ironwood *(Ostrya virginiana),* white pine (Pinus strobus), and tamarack *(Larix laricina).*

Direct comparison of the results of the two plant remains studies must be prefaced by a brief discussion of the means used to reconcile several methodological differences between the two analyses. The main distinction between these studies is in the way in which the plant remains were quantified. In the original study (Lennox et al. 1986:Table 59) the enumeration of maize includes both whole kernels (n=336), kernel fragments and other fragmentary portions of the plant (n=5,906). Fragments of maize kernels are potentially valuable for the study of plant remains taphonomy, and it is unfortunate that time was not available to do likewise in this study. Nevertheless the inclusion of these fragments as raw numbers has resulted in an inflated contribution of maize to the cultigens category (94 percent), and to the overall plant remains assemblage (69.9 percent). For the purposes of the present study, therefore, the kernel weights provided by Lennox et al. (1986:Table 60) have been summed and converted to whole kernels, based on the weight of a known number of complete charred kernels (Monckton 1992:30-33). Calculated on the basis of both the 336 whole kernels and 5,570 fragments, these remains may represent a total of 1,216 kernels (77 percent of the cultigens and 29 percent of the total 1983 plant remains assemblage).

Similarly, in the original study, a total of 234 nut shell fragments were recovered from 35 pit features (Lennox et al. 1986: Table 55). In all likelihood, a significant proportion of these fragments belong to the same nuts, thereby reducing their number. It is, therefore, necessary to total the weights of the different nut taxa separately, in order to provide maximum weights that may be converted into whole nut shell weights. However, given that the weights are so small, their conversion to numbers of whole nuts will likely underestimate their numerical contributions. On the other hand, the total number of features found provides a minimum number of 27 butternuts, seven

Table 10. Wiacek Site (1990) Plant Remains: Cultigens and Fleshy Fruits

Prov.	Maize	Bean	Cucurbit	Tobacco	Total Cultigens	Bramble	Straw-berry	Prunus sp.	Plum	Pin-cherry	Elder-berry	Haw-thorn	Black Night-shade	Total Fleshy Fruit
Midden G (no prov.)						5								5
Midden G 192-542	23				23	16	1				1		1	19
Midden G 193-544	15				15	20	5				1		1	27
Midden G 193-546	6				6	10	2	1			1			14
Midden G 194-545	7		1		8	9			1		1			11
Midden G 196-545	16				16	13				1	1	4		19
Midden G 196-599	1				1	3								3
Midden G 197-543	1				1	2								2
Midden G 197-544	1				1	2								2
Midden G 199-549		1			1	3								3
	70	1	1	0	72	83	8	1	1	1	5	4	2	103
%	26.72	.38	.38	0	27.1	31.68	3.05	.38	.38	.38	1.91	1.53	.76	39.31
House 7 F014 (SL)	7			1	7						3			3
%	50	0	0	7.14	50	0	0	0	0	0	21.43	0	0	21.43
House 3 F143 (Ash Pit)	8				8	3					1			4
House 3 F138 (Pit)	8				8							1	4	5
	16	0	0	0	16	3	0	0	0	0	1	1	4	9
%	19.75	0	0	0	19.75	3.7	0	0	0	0	1.23	1.23	4.94	11.11
Total Samples	93	1	1	1	96	86	8	1	1	1	9	5	6	115
%	26.05	.28	.28	.28	26.33	24.09	2.24	.28	.28	.28	2.52	1.4	1.68	32.21
Lennox et al. (1986) Summed Figures														
	1,216	11	3	356	1,586	704	19	3	2	16	457	72	0	1,273
%	29.04	.26	.07	8.5	37.87	16.81	.45	.07	.05	.38	10.91	1.72	0	30.4

acorns, four hickory, and five unidentified nuts, for a total of 43 nuts. The new seed total for the original Wiacek plant remains sample is now 3,769, with an average density of almost 1.9 seeds per litre of floated sample matrix from interior house and exterior activity area features. The overall seed count from the 1986 analysis is still much higher than the results of the 1990 study, although the subsample analyzed in this study shows Midden G to be slightly richer in relative content than the subsurface settlement features, with an estimated seed density of approximately 3.3 seeds per litre.

In order to compare the MTO and ASI assemblages, Lennox et al.'s (1986) data have been restructured into a form that organizes the plant material in terms of the nature of the plant food. Fleshy fruits, for example, are in a separate category because their structure is essentially the same and their preparation requirements are almost identical. Also, the logistics of collecting the various types of fruits are similar. Grasses, on the other hand, are included in the greens and/or grains category, which includes those species whose starchy seeds can be processed in a similar fashion

Table 11. Wiacek Site (1990) Plant Remains: Green/Grains

Prov.	Chenopod	Knotweed	Amaranth	Purslane	Elymus	Small Grass	Total Greens/ Grains
Midden G (no prov.)							0
Midden G 192-542			1	1			2
Midden G 193-544							0
Midden G 193-546		1					1
Midden G 194-545							1
Midden G 196-545					1		0
Midden G 196-599							0
Midden G 197-543							0
Midden G 197-544							0
Midden G 199-549							0
	0	1	1	1	1	0	4
%	0	.38	.38	.38	.38	0	1.53
House 7 F014 (SL)							
%	0	0	0	0	0	0	0
House 3 F143 (Ash Pit)							
House 3 F138 (Pit)	2				1		3
	2	0	0	1	0	0	3
%	2.47	0	0	1.23	0	0	3.7
Total Samples	2	1	1	2	1	0	7
%	.56	.28	.28	.56	.28	0	1.96
Lennox et al. (1986) Summed Figures							
	0	0	0	0	186	28	214
%	0	0	0	0	4.44	.67	5.11

Table 13. Wiacek Site (1990) Plant Remains: Wood Charcoal

Prov.	Maple	Beech	Ash	Elm	Ironwood	Cedar	Birch	Pine	Unknown Conifer	Unknown	Unidenti-fiable	Total
Weight (g)												
Midden G 193-544	1.38	.81			.06	.13			.13	.3	.85	3.66
Midden G 193-546	2.77	.71	.03	.14		.16		.05			.18	4.04
H7 F014	11.34	.57	.12								.45	12.48
H3 F138	3.27	2.68	1.08	.47	.25						1.99	9.74
H3 F143	2.54	1.5			.5			.06			.61	5.21
Percent Weight												
Midden G 193-544	37.7	22.13			1.64	3.55			3.55	8.20	23.22	100
Midden G 193-546	68.5	17.57	.74	3.47		3.96		1.24			4.46	100
H7 F014	90.87	4.57	.96								3.61	100
H3 F138	33.57	27.52	11.09	4.83	2.57						20.43	100
H3 F143	48.75	28.79			9.6			1.15			11.71	100
	21.3	6.27	1.23	.61	.81	.29		.11	.13	.3	4.08	35.13
	60.63	17.85	3.5	1.74	2.31	.83		.31	.37	.85	11.61	100
Lennox et al (1986)												
Weight (g)	98.7	65.32	9.72	12.16	9.08		1.29	50.01	24.71	11.4		282.39
%	34.95	23.13	3.44	4.31	3.22		.46	17.71	8.75	4.04		100

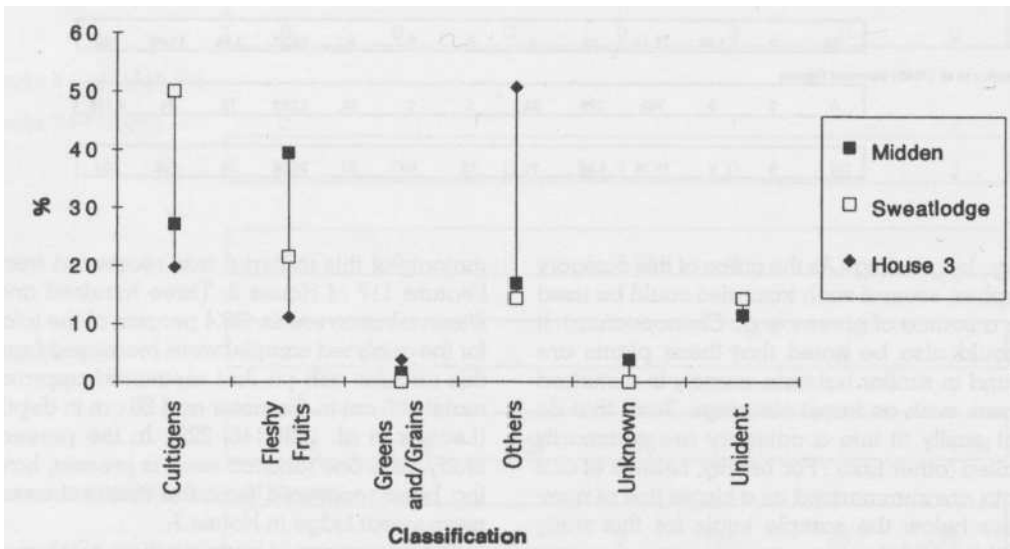


Figure 16. Wiacek **Site** Plant **Remains: Relative** Distribution of **Seed Categories.**

concentrations represent the deliberate burning of tobacco. The Jesuit Relations make frequent reference to people throwing "tobacco cakes" in fires (e.g., Thwaites 1896-1901; 10:159; 13:259; 19:87; 23:55; cf. also von Gernet 1995:70, 83).

While sunflower was not recovered in the 1990 investigations, only nine achenes were recovered from the much larger sample population in the 1986 study. Clearly sunflower was not as important to the diet of the Wiacek site occupants as it appears to have been at

other settlements, such as the protohistoric Seed-Barker site (Crawford 1985) and several historic Huron villages (Monckton 1992:148, 156, 193), where it is second only to maize in frequency.

Fleshy fruits proved to be more abundant in the midden than in the interior longhouse features sampled in both 1983 and 1990. Of these taxa, bramble is the greatest contributor, as it is in most Iroquoian plant remains assemblages. In the 1986 study, fleshy fruits that grow in disturbed habitats made up approximately 14 percent of the total seed assemblage. In this study they account for almost 40 percent of the seeds recovered from the midden. Using the revised seed totals for the MTO assemblage noted above, however, recalculation of the original figures reveals that 33 percent of the seeds recovered belong to the fleshy fruits. This contribution is more consistent with the results of the present study. Nevertheless, a difference between fleshy fruit representation in interior longhouse features and middens has also been noted at the historic period Auger, Ball, and Bidmead sites (Monckton 1992:77-78).

Among the taxa represented in the Midden G and longhouse feature samples examined for this study is black nightshade (Solanum americanum). It is, in fact, more common than several of the other fleshy fruit taxa in this analysis, but was not encountered in the 1986 study. Black nightshade is native to both the Old World (S. nigrum, a hexaploid genotype) and the New World (S. americanum, or S. *nigrum* var. americanum, a diploid genotype) (Gleason and Cronquist 1963:609; Monckton 1992:45). Contrary to popular belief, the toxicity level of black nightshade berries is almost negligible when they are fully ripe (Metsger 1990:12), and boiling the fruit further ensures that they may be safely consumed (Muenscher 1975:208). It is also likely that the plant was utilized for its medicinal and/or hallucinogenic properties (Heiser 1969; Monckton 1992:45), as was the case for other members of the Solanaceae family (von Gernet 1992b:174-175).

Taxa belonging to the greens and/or grains category are quite rare in the present study, suggesting that if refuse areas are representative of subsistence related plants, then these plants were probably of little economic importance. It is interesting to note that wheatgrass/ wild-rye *(Agropyron/Elymus* sp.) is represented by a single specimen in the present analysis (derived from Midden G), whereas in the previous study 152 seeds of this taxon were recovered from Feature 33 of House 2 (Lennox et al. 1986:141). Its absence from the other houses and weak representation in the midden suggests that this grain is unlikely to have contributed significantly to the diet of the inhabitants. It is possible, given the preservation of not only the caryopses but also the grass stalks, that this concentration could be a contemporary accidental intrusion or, as Lennox et al. (1986:41) suggested, a grass lining for the pit.

Similarly, chenopod, knotweed, amaranth, and purslane are thinly distributed over the site. Purslane seeds are frequently found in samples in an uncharred state as modern intrusions, and they should be scratched with a needle or broken in half to ascertain their antiquity. Chenopod, knotweed, and purslane are well represented at other Iroquoian sites such as Crawford Lake (Byrne and McAndrews 1975), Myers Road (Monckton 1995), and Dunsmore (Monckton 1990). To date, the nearby Dunsmore site is the only other Iroquoian settlement in Simcoe County to produce amaranth (Monckton 1990). Overall, the Greens/ Grains category contains species and seed frequencies consistent with that found in other Middle and Late Ontario Iroquoian sites.

Sumac is the most abundant of the other taxa recovered. It is represented in both House 3 and the midden in approximately the same numbers. A single bedstraw seed was identified in this study. This species is rare in most Iroquoian plant remains assemblages. On the other hand, while cat-tail is ubiquitous on many sites, it appears in only small quantities here. In light of its exceptionally small size (<250 pm in width), recovery of this taxon is probably not systematic in most paleoethnobotanical studies.

When combined, the 1986 and 1990 analyses of the Wiacek site plant remains provide a fairly comprehensive picture of the deposition of charred food waste in the settlement. All the cultigens are present, maize being the most strongly represented, although this species no longer appears as dominant in the diet of the site's occupants as was previously inferred (e.g., Warrick and Molnar 1986:28, 30; Warrick 1990:360). Fleshy fruits contribute a substantial amount of the plant food. Greens and/or grains

are minor contributors. Of the other plant taxa, sumac is the most common. While nuts are present, their dietary contributions are difficult to interpret since they are almost completely absent from the midden samples. It is possible that they were used on occasion as a supplementary food. It is noteworthy that these nut remains were probably not introduced with firewood, since no butternut, hickory, or oak wood charcoal was recovered in either study.

Wood Charcoal *and the Paleoenvironment*

The firewood that entered the archaeological record as charcoal was, in all likelihood, gathered as deadwood from the forest floor (Trigger 1967:29-30; Tooker 1991:58; Monckton 1992:87-90; 1994b). Such a practice would have been quicker than tree cutting and would have provided dry fuel. It would also have resulted in a relatively unbiased sampling of species, with the exception of successional birch *(Betula sp.),* which decays rapidly once on the ground, and would be under represented in the wood charcoal assemblage. While this bias against birch may possibly mask the potentially successional character of the assemblage, it seems reasonable to assume that older forest stands would provide more dead wood than younger ones. Such canopied forests - which would also have relatively little ground vegetation obscuring the fallen branches - would be characterized as mature forest stands.

The analysis of the 1990 wood charcoal sample (Table 13) generated results similar to those obtained from the 1986 sample (Lennox et al. 1986:Figure 26, Table 54). Tree species were not distinguished in the present study in order to simplify the comparison of genera. Maple and beech are the dominant tree taxa, but ironwood, pine, tamarack, ash, and elm are also present. The dominance of maple and beech has been interpreted as representing primary forests in which village clearings and agricultural fields were created (Lennox et al. 1986:152, 158, 168; Warrick and Molnar 1986: 28). However, we should be cautious when attempting to reconstruct the environment around a village on the basis of wood charcoal data. While the wood charcoal does show a similar composition to mature maple-beech forests under disequilibrium conditions, this composition also characterizes the relatively young, secondary successional forests in Ontario today (Lambert and Maycock 1968). Again, the potential bias against birch should be taken into account. In short, wood charcoal cannot tell us how old the forest was. Another problem is resource location. Wood charcoal may represent mature forest stands, but may not tell us where within the village catchment these were located, and how extensive they were, nor specifically inform us about the immediate surroundings of the village.

In spite of these difficulties, data from the Wiacek studies and other sites in the area do provide evidence that supports the suggestion that primary forests were present within the vicinity of the village, although the presence of forest edge species in the assemblages also demonstrates the overall patchiness of the forest cover.

If people traditionally collected firewood from relatively undisturbed mature forests, we would expect that wood charcoal from Wiacek and other settlements would broadly reflect regional forest composition and that wood charcoal weight proportions would exhibit close similarities to forest biomass, calculated on the basis of regional pollen data. Comparisons of the wood charcoal assemblages from Wiacek with several other village sites in the area show that they exhibit remarkable similarity, not only to each other (although the high percentage of successional ash [Fraxinus sp.] in the Hubbert sample is a notable exception), but also to pollen data from Crawford Lake at circa A.D. 1300 (McAndrews 1994:Figure 10.9) converted to biomass. Figure 17 shows wood charcoal from the Wiacek, Barrie, Dunsmore, and Hubbert sites in southern Simcoe County, together with the Myers Road site in Cambridge, Ontario. Figure 18 shows average figures for these sites and compares them to recent estimates for the same taxa in pollen-biomass conversions (McAndrews 1994: 186-187). Absolute figures are less important in this comparison than the simple order of tree dominance. Much later wood charcoal assemblages recovered from historic Huron village middens also show an identical ordering of wood taxa (Monckton 1992:Figures 3.7 and 3.8; 1994b:Figure 12.3), even though the disturbance of local vegetation - and consequent patchiness of forest cover - must have been greater due to larger and more concentrated populations there (Monckton 1992:7-8). It seems probable then, that the wood charcoal

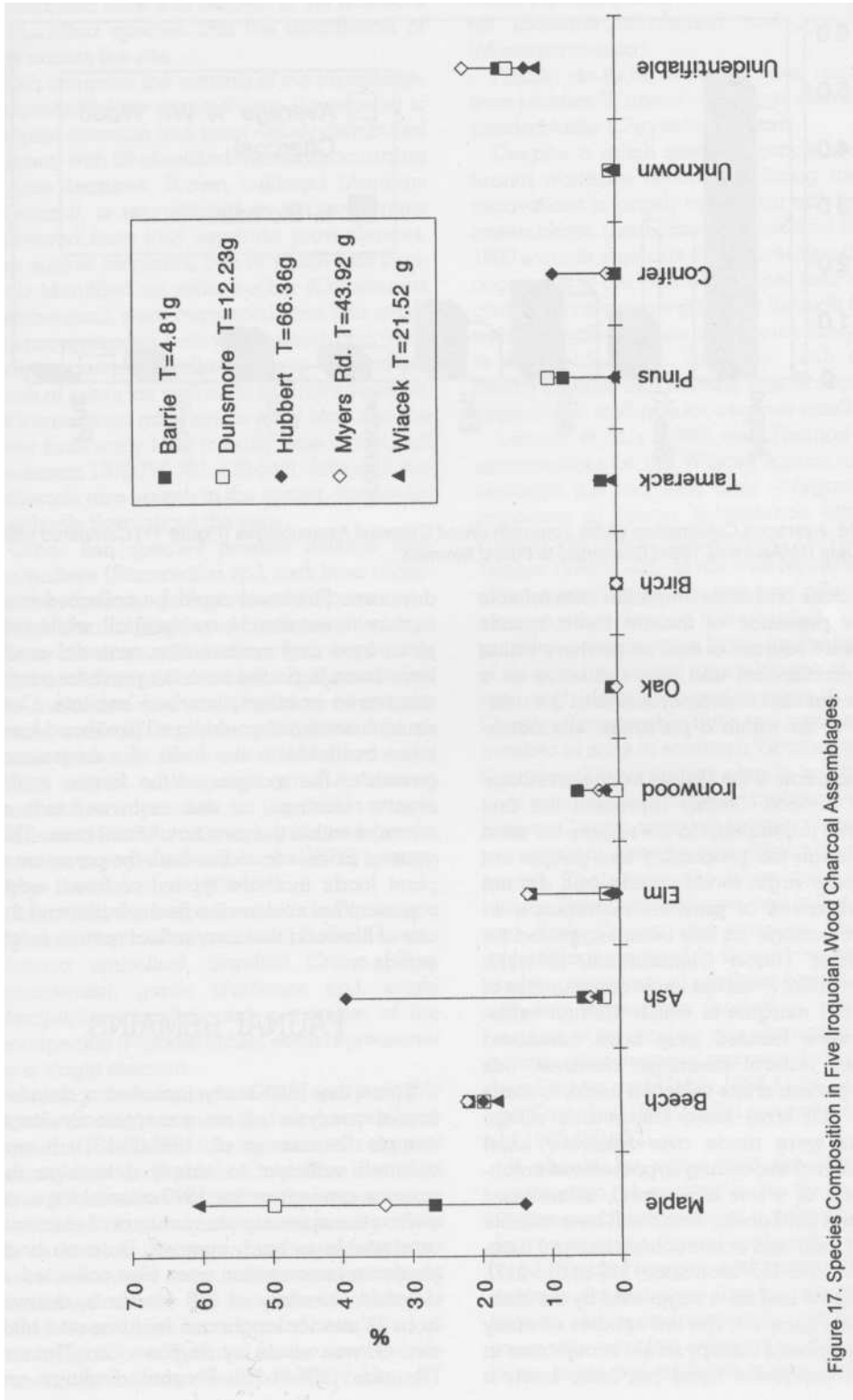


Figure 17. Species Composition in Five Iroquoian Wood Charcoal Assemblages.

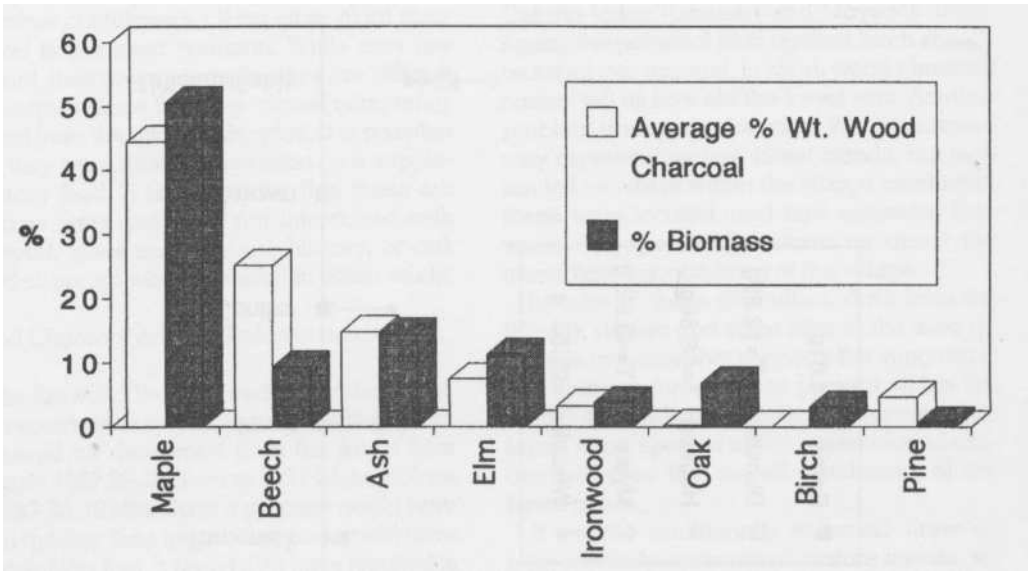


Figure 18. Averaged Composition of the Iroquoian Wood Charcoal Assemblages (Figure 17) Compared with Pollen Data (McAndrews 1994) Converted to Forest Biomass.

from Wiacek and other Iroquoian sites reflects only the presence of mature forest stands (which were sources of fuel) somewhere within village catchments and may not serve as a basis for detailed characterization of the overall tree cover within a particular site catchment.

In conclusion, if the Middle Iroquoian village sites of Simcoe County represent the first substantial populations in the region, we must acknowledge the probability that people cut down some virgin forest stands, and did not just seek areas of previous disturbance or natural clearings, as has been suggested for the historic Huron (Heidenreich 1971:112; Monckton 1992:7). As the forest communities of the upland margins in which the first settlements were located may have contained numerous natural clearings, however, this general pattern of site selection could, to some degree, still have been followed. If village removals were made over relatively short distances (not exceeding hypothesized catchment radii of a few kilometres), abandoned village and field areas would still be available for plant food and construction material (Lennox et al., 1986:157; Monckton, 1994b:213-217), as well as for fuel as is suggested by the Hubbert data (Figure 17). The low species diversity of mature closed canopy forest ecosystems in the new residence need not have been a deterrent. Firewood could be collected from mature forest stands, as deadfall, while wild plant food and construction material could have been imported from the previous catchment area or other disturbed habitats. Construction material would, in all likelihood have been available in the form of successional growth at the margins of the former settlement's clearings, as well as in wetlands or swamps within the new catchment area. This general model reconciles both the presence of plant foods that are typical of forest edge communities, such as the fleshy fruits, and the use of firewood that may reflect mature forest stands.

FAUNAL REMAINS

Since the 1986 study included a detailed faunal analysis of an exceptionally large sample (Lennox et al. 1986:98-131), it was deemed sufficient to simply determine the species present in the 1990 assemblage, as well as the approximate numbers of elements attributable to each species. Data on body portion representation were also collected. A detailed inventory of 246 elements, derived from 22 interior longhouse features and Midden G, was made by Stephen Cox Thomas (Thomas 1994:71-79). Thomas' findings are

summarized here with respect to the numbers of identified species and the distribution of taxa across the site.

Fish comprise the majority of the identifiable elements. Yellow perch *(Perca* flavescens) is the most common and most widely distributed species, with 28 identified elements occurring in nine features. Brown bullhead (Ameirus nebulosis), is represented by six specimens recovered from four separate proveniences. Five sucker elements, one of which was positively identified as white sucker (Catostomus commersoni), were recovered from four separate proveniences. Both yellow perch and white sucker spawn in shallow bays or the inshore areas of lakes, as well as in tributary streams, the former from mid-April to early May and the latter from early May to early June (Scott and Crossman 1979:755-761, 538-543). Although the bullheads also spawn in the spring, they swim in schools throughout the year.

Other fish species present include sauger/walleye (Stizostedion sp.), rock bass (Amploplites rupestris), pumpkinseed (Lepomis sp.), catfish *(Ictalurus* sp.) and a salmonid (a large lake or brook trout [Salvelinus sp.], or possibly Atlantic Salmon [Salmo *salar]).* No taxa that are indicative of the exploitation of marshy areas, such as northern pike (Esox lucius), grass pickerel *(Esox* americanus), bowfin (Amia *calva),* or longnose gar (Lepisosteus osseus) were present in the 1990 sample (Thomas 1994:73), although pike and bowfin were both encountered in the MTO assemblage (Lennox et al. 1986:104).

Identified avian species include Passenger Pigeon (Ectopistus migratorius), Ruffed Grouse *(Bonasa* umbellus), Sandhill Crane (Grus canadensis), grebe (Podiceps sp.), eagle (Accipitridae family), and a member of the woodpecker (Picidae) family, each represented by a single element.

Among the mammals, Canis sp. (probably domestic dog), occurs in four provenience contexts. A considerable age range is present among these individuals. Only three identified deer (Odocoileus virginianus) elements were recovered from as many proveniences, while three beaver (Castor canadensis) elements were recovered from two proveniences. As discussed above, the cranium of a juvenile black bear *(Ursus* americanus) was found on the living floor of Feature 14, the semi-subterranean sweat lodge associated with House 7.

Other identified mammals include grey squirrel (Sciurius *carolensis)* and woodchuck *(Marmota* monax).

Finally, six turtle elements were recovered from Midden G, one of which was identified as painted turtle *(Chrysemys picta).*

Despite a much smaller sample size, the faunal evidence recovered during the 1990 excavations is largely consistent with the 1983 assemblage (Lennox et al. 1986:98-150). The 1990 sample supports the impression that the occupants of the Wiacek site met their dietary protein requirements primarily through fishing, with a notable reliance on species likely found in Kempenfelt Bay. Similarly, both studies clearly suggest that hunting was of secondary importance, and was focused on small game.

Lennox et al.'s (1986) and Thomas' (1994) examinations of the Wiacek faunal material highlight the fact that deer - regarded as important in Huron subsistence strategies (Tooker 1991:64-65; Heidenreich 1971:204-205; Trigger 1976:41-43) - is not well-represented in either assemblage, nor is it particularly common on other Simcoe County sites. Table 14 provides a comparative listing for the presence of deer in the faunal assemblages of prehistoric and historic Iroquoian sites in Simcoe County. Comparable data are provided for a number of sites in southern Victoria and York Counties. These figures clearly indicate that deer remains are sparse on prehistoric sites in Simcoe County, although marginally more are recovered in some locales during the Historic period. There are also more deer in some historic Petun assemblages and in the Victoria and York County site samples. The latter assemblages resemble those from sites situated in other parts of southern Ontario, which with few exceptions (probably due to site function or incomplete site excavations), consistently yield mammal remains dominated by deer (Prevec and Noble 1983:41-56; Campbell and Campbell 1989:21-28; Lennox and Fitzgerald 1990:450-452).

It should be noted that the percentage contribution of mammals in these assemblages is not necessarily a reflection of the degree to which floated materials were analyzed. Needs-Howarth and Sutton (1993), for example, have argued that the relative contributions of fish and mammals are similar for some site samples, whether or not they had been subjected to flotation processing, pro-

Table 14. Comparative Listing of the Presence of Deer in the Faunal Assemblages of Select Prehistoric Iroquoian Communities in Southcentral Ontario

SITE	# EXAMINED SPECIMENS (*Includes floated material)	% MAMMAL (of those identified to class)	% DEER (of those mammals identified to species)	UNGULATE CAPABILITY RATING (5km catchment)
Simcoe County - Middle Iroquoian (c. A.D. 1280 - A.D. 1400)				
Barrie (BcGw-18)	686*	41	8	5
Wiacek (BcGw-26)	16,235*	13	4	3
Simcoe County - Late Iroquoian (c. A.D. 1400 - A.D. 1600)				
Carson (BcGw-9)	4,608	25	<1	4
Baumann (BdGv-14)	9,479	9	5	3
Hubbert (BbGw-9)	650*	40	<1	3
Dunsmore (BcGw-10)	1,128*	18	3	3;4
Fournier (BeGx-2)	2,957	32	4	4
Second Lake II (BfGx-3)	240	31	0	4
Copeland (BdGw-30)	712	77	9	4
Pinery (BeGx-12)	697	19	<1	4;2
White (BcHa-1)	259	60	14	4;3
Second Lake I (BfGx-1)	456	44	7	4
Simcoe County - Huron (Post c. A.D. 1600)				
Maurice (BeHa-2)	1,504	29	9	3;4;5
Beeton (BaGw-1)	2,783	25	12	3;1
Ball (BdGv-3)	21,767	38	10	3;1
Warminster (BdGv-1)	1,186	84	16	4;3
Alonso (BcGw-15)	124	67	3	3
Auger (BdGw-3)	1,636	31	1	3
Bidmead (BeGv-4)	2,412	51	22	3
Gignac Lake (BfGx-2)	1,536	24	5	4
Robitaille (BeHa-3)	3,386	16	5	3;4;5
Peden (BeGw-1)	2,818*	22	15	3;4
Thomas-Walker (BeGv-3)	3,906	35	19	3
Sainte Marie I (BeGx-1)	8,436	27	39	3;4
Simcoe County - Petun (Post c. A.D. 1600)				
Sidey-Mackay (BbHa-6)	3,433	30	8	2;4
McEwen (BcHb-17)	471	80	<1	2;4
McQueen-McConnell (BcHb-31)	1,252	66	9	2;3;4
Young-McQueen (BcHb-19)	883	69	8	2;3;4
Melville (BbHa-7)	3,449	12	4	2;3;4
Rock Bottom (BcHb-20)	202	78	4	3;4
Glebe (BcHb-1)	1,185	67	6	2
Graham-Ferguson (BcHb-7)	2,667	56	1	2;4
Kelly-Campbell (BcHb-10)	2,705	56	12	2;4
Pretty River (BcHb-22)	493	77	5	2;4
Hamilton-Lougheed (BbHa-10)	1,390	88	15	4
Victoria County - Late Iroquoian (c. A.D. 1400 - A.D. 1600)				
Washburn Island (Unregistered)	1,478	69	57	3
Hardrock (BdGr-2)	1,008	37	19	4
Coulter (BdGr-6)	5,545	11	27	2
Kirche (BcGr-1)	8,264	59	14	2;3;4
Benson (BdGr-1)	2,293	72	28	4;5
York County - Middle Iroquoian (c. A.D. 1280 - A.D. 1400)				
Robb (AlGt-4)	1,192	46	39	2
New (AlGt-36)	3,258	37	33	2
Milroy (AlGt-1)	1,517	91	75	2
York County - Late Iroquoian (c. A.D. 1400 - A.D. 1600)				
Black Creek (AkGv-11)	305	56	15	1;2
Over (AlGu-11)	287	30	10	2
Boyd (AkGv-3)	1,798	67	77	1;2
Parsons (AkGv-8)	1,586*	60	25	2
Keffer (AkGv-14)	11,846*	29	31	1;2;3
Mckenzie (AkGv-2)	5,106*	84	81	1;2
Seed Barker (AkGv-1)	18,195*	83	57	1;2

Note: Analysts for each site are provided in Cooper and Savage (1994). Wherever possible, all or most of the analyzed data for each site have been employed. In certain cases, however, the data were taken from Hamalainen (1981) or were provided by the site archaeologist

All ungulate capability limitations relate to both lack of nutrients in the soil tar opt amen plant growth or excessive or deficient soil moisture. Some Petun area and Victoria County limitations are due to poor soil depth or adverse topography, while Volk County limitations are due to deficiencies in soil fertility.

vided that the feature fills had been screened through 3 mm mesh (cf. Hamalainen 1983). It may nevertheless be assumed that mammal is over represented in those site samples for which floated material was not analyzed (e.g., Clason and Prummel 1977:173; Lennox et al. 1986:121-129; Payne 1972; Stewart 1991; Struever 1968:361; Waselkov 1984:137, 157).

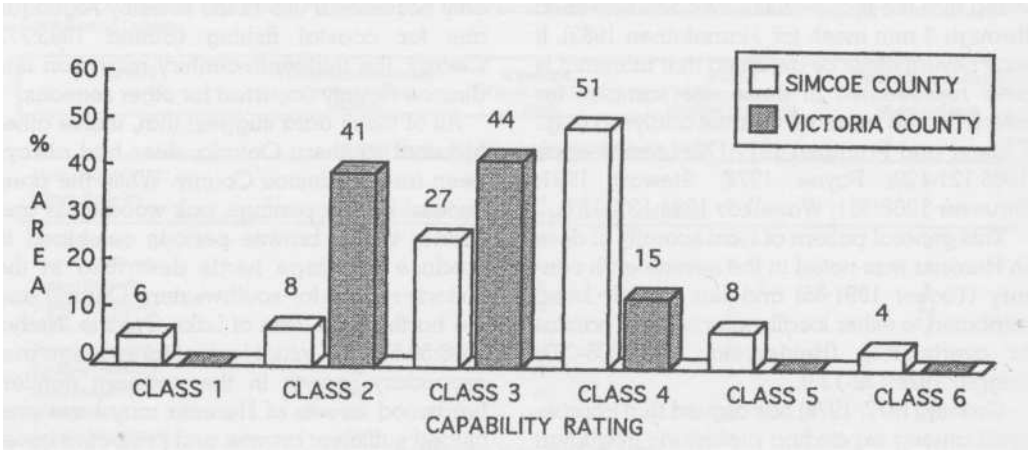
This general pattern of local scarcity of deer in Huronia was noted in the seventeenth century (Tooker 1991:65) and has usually been attributed to either locally-inferior deer habitat or overhunting (Heidenreich 1971:206-207; Trigger 1976:132-133).

Gramly (1977, 1979) has argued that competition among expanding prehistoric Iroquoian groups, over dwindling supplies of deer skins required for the manufacture of clothing, was a prime motivational factor leading to the Iroquoian migration to Huronia. This would have facilitated exchange with Algonquian trading partners, who could supply them with sufficient skins to meet a growing annual deficit (Gramly 1979:821). Trigger (1985:98) has noted, however, that competition for skins is unlikely to have caused intertribal warfare, since there is no record of such conflicts in historic times. He also observes that the Huron do not appear to have been short of animal hides (Trigger 1976:133), although this may only have been because the skins of moose and beaver which are also known to have been used for clothing (Tooker 1991:59). Moose were likely not present in significant numbers in Huronia, and beavers appear to have been overhunted, becoming rare by Historic times (Heidenreich 1971:207-208). On the other hand, significant numbers of beaver bones have been found on Historic Petun sites (Prevec and Noble 1983: 50-52).

It is also unlikely that Iroquoians would have migrated into Simcoe County as a result of increasing competition over deer hunting territories. Indeed, the late thirteenth or early fourteenth-century Barrie site has yielded the lowest percentage of deer remains of all contemporary sites examined from across southern Ontario (Needs-Howarth and Sutton 1993). This implies that deer were already rare by the late thirteenth century, the time of the hypothesised migration into the area by southern Iroquoians (Sutton 1995). There is also little evidence that this situation resulted from overhunting since there appears to have been only occasional use of the area by Algonquians for coastal fishing (Sutton 1995:77). Clearly, the thirteenth-century migration into Simcoe County occurred for other reasons.

All of these data suggest that, unlike other areas of southern Ontario, deer had always been rare in Simcoe County. While the presence of forest openings, oak woodlands and shorter winter browse periods combined to produce the large herds described in the historic record for southwestern Ontario and the north shore area of Lake Ontario (Nichol 1980:50-52), the initial lack of forest edge and secondary growth in the northern conifer-hardwood forests of Huronia may have precluded sufficient browse and protective cover for a large, evenly distributed population of deer. Smaller populations may, however, have lived in pockets of superior habitat, as the faunal data from Sainte Marie I and a number of Historic Petun sites suggest (cf. Nichol 1980: 53). While it may also be true that, as fields were cleared, better deer habitats were created (Nichol 1980:79-83; Trigger 1985:98), there does not appear to have been any appreciable improvement in the availability of deer through time. Indeed, Needs-Howarth and Thomas (1994) have suggested that, by the time of the occupation of the Wiacek site, there may have been an abundance of secondary growth habitat for deer. Their absence from such sites, however, has led them to suggest that a deliberate choice was made to avoid the exploitation of deer (Needs-Howarth and Thomas 1994).

While the Iroquoian settlers of southern Simcoe County, and their descendants, clearly focused their subsistence efforts on fishing and the exploitation of small mammals, there remained a substantial need for hides and meat as well as antler and bone for tools. It is more likely, therefore, that deer were simply unavailable locally. While suitable habitats for deer were probably present in the vicinity of the Wiacek site, and were likely expanding as a result of human activities, it appears that, at the time of the site's occupation, such niches were still relatively circumscribed and could only support a limited population. There is also no doubt that winter conditions, in particular snowfall, were severe in this area, which would have had serious consequences for winter browse conditions (Starna and Relethford 1985:327).



CLASS 1: no significant limitations
CLASS 2: very slight limitations
CLASS 3: slight limitations
CLASS 4: moderate limitations
CLASS 5: moderately severe limitations
CLASS 6: severe limitations

Figure 19. Comparative Composition of Ungulate Rating Classifications for Simcoe and Victoria Counties.

These observations are also reflected in the Canada Land Inventory ungulate capability ratings for Simcoe County (CLI 1971:Sheet 31/D), which indicate the capability of land to provide cover and food for ungulates. The classification system is based on the requirements of particular species and the limitations imposed by the physical characteristics of the land (e.g., land form distribution, topography, and soil characteristics) and climate (e.g., aridity, snow depth, and exposure). Ratings for each of the sites in Table 14 are provided in the last column, based on a five kilometre catchment. The ratings point to deficiencies in soil moisture and fertility, which result in slight to moderate limitations for deer populations for many of the sites situated in Simcoe County, compared with very slight limitations for sites in Victoria and York Counties. To provide a context in which to evaluate these ratings, given that deer ranges may at times have exceeded two to three kilometres at a distance of at least one kilometre from major settlements (Williamson 1985:128-134), Figure 19 provides comparative ratings for all of Simcoe County as well as southern Victoria County (south of Balsam Lake), where it is thought that the Historic Huron conducted deer drives (Heidenreich 1971:207). Clearly, southern Victoria County is characterized by superior deer habitat and represents an easily accessible destination for Huron hunters.

While all of these data suggest that it is unlikely that there was ever a substantial Prehistoric or early Historic period deer population in Simcoe County, careful paleoecological analysis of the local environment is necessary to determine the nature and extent of their pre-thirteenth century presence. Such an examination might also address the question of the potential for an expansion of deer into the area as a by-product of Iroquoian colonization and continued landscape alteration.

THE LOCAL AND REGIONAL CONTEXT OF THE WIACEK SITE A.D. 1300-1500

Although there is evidence for scattered Archaic and Early-Middle Woodland occupations throughout much of southern Simcoe County (e.g., O'Brien 1975; Warrick 1988), there is currently no indication that the region was permanently settled by Iroquoian groups prior to the beginning of the Middle Iroquoian period, in the late thirteenth to early fourteenth

centuries (Warrick and Molnar 1986; Warrick 1988; Sutton 1995). The Middle Iroquoian period was one of rapid, even revolutionary, change in terms of population growth, the emergence of new settlement-subsistence systems, increasingly formalized socio-political organization, and an increased homogenization of certain aspects of material culture throughout southern Ontario (Dodd et al. 1990).

Several broad historical outlines of the Iroquoian settlement of Simcoe County (Figure 20) have recently been set forth, based on both regional studies (e.g., Warrick 1990; Bursey 1993) and on a more detailed examination of the settlement history of North Innisfil Township (Warrick and Molnar 1986; Warrick 1988). The majority of sites incorporated within the resulting village sequences are known only on the basis of surface survey or small-scale test excavations. The reliability of their identifications as "villages" and of their chronological ordering, therefore, must not be over-estimated.

The earliest major Iroquoian occupation known in Simcoe County is the Barrie site (BcGw-18), dating to the late thirteenth or early fourteenth centuries and located a short distance west of Kempenfelt Bay (Sutton 1995, 1996). With the possible exception of the recently discovered Holly site (BcGw-58) (Sutton 1996:58), Barrie represents the only large site of this period to be found north of the Oak Ridges Moraine (Austin 1994), although several small components, such as at Methodist Point (BfHa-2) and the Mystery site (BcGw-32) are indicative of a transitional Early-Middle Iroquoian presence in Simcoe County (Smith 1979; Warrick 1988).

By the mid-fourteenth century, population levels appear to have risen rapidly, resulting in an expansion of settlement into virtually every area of southern Ontario that provided an adequate resource base (Kapches 1981:308-311; Warrick 1990:353-362). This expansion included the "colonization" of southern Simcoe County (Warrick 1990:360; Sutton 1995), as agricultural communities migrated into the region (Lennox et al. 1986:158; Warrick and Molnar 1986:32). In all likelihood, the homelands of these communities lay along the watersheds draining into Lake Ontario.

The mid-fourteenth century Iroquoian occupations remained largely concentrated in the vicinity of modern Barrie, particularly within the Lover's Creek watershed. In their construction of a site sequence for this area, Warrick and Molnar identified the Little II site (BcGw-28) as the earliest village in this drainage, and suggested that its occupants subsequently relocated to the Dykstra site (BbGw-5) (1986:25). As noted earlier, the recently discovered Holly site may represent the establishment of a village in the Lover's Creek area prior to the occupation of Little II.

Additional mid-fourteenth century Iroquoian sites described as villages in the general Barrie area include: Cundles-Brown (BcGw-11), Gervais (BdGw-5), Sparrow Farm (BcGw-8) and Beswetherick (BcGw-1), located further to the northwest of Lover's Creek; as well as Cowan (BcGw-13) and Partridge (BcGw-12), situated to the north of Little Lake (Hunter 1976, 1978; Warrick 1988). Excavations at the Beswetherick site yielded a wood sample producing a radiocarbon date of A.D. 1360± 100 (M1526), which when calibrated indicated occupation between A.D. 1295 and 1375 (Dodd et al. 1990:Table 10.1).

Towards the latter part of the fourteenth century, the Barrie region remained the primary area of Iroquoian settlement in Simcoe County. Warrick and Molnar (1986:25) suggested that the occupants of the Dykstra site amalgamated with a neighbouring community and relocated to the Little site (BcGw-15), which in turn subsequently fissioned in the early fifteenth century, with some occupants moving west to the Lougheed site (BbGw-13) and others relocating eastward to the Wiacek site (BcGw-26) site. The suggested chronology of this postulated series of relocations is difficult to reconcile with the approximately mid-fourteenth-century occupation of Wiacek suggested on the basis of the combined 1983 and 1990 vessel assemblages.

Warrick and Molnar (1986:25) further proposed that the Wiacek community may have then relocated to the Hubbert site (BbGw-9). Approximately one third of the Hubbert site was excavated by ASI in 1990 (MacDonald et al. 1992:52-53). One partial and two complete, but small, houses were documented, together with a very rich midden. In general, the ceramic assemblage recovered from Hubbert suggests that the site was occupied in circa A.D. 1450 (Williamson and Powis 1996). The results of the Hubbert excavations (MacDonald and Williamson 1996) will be the subject of a

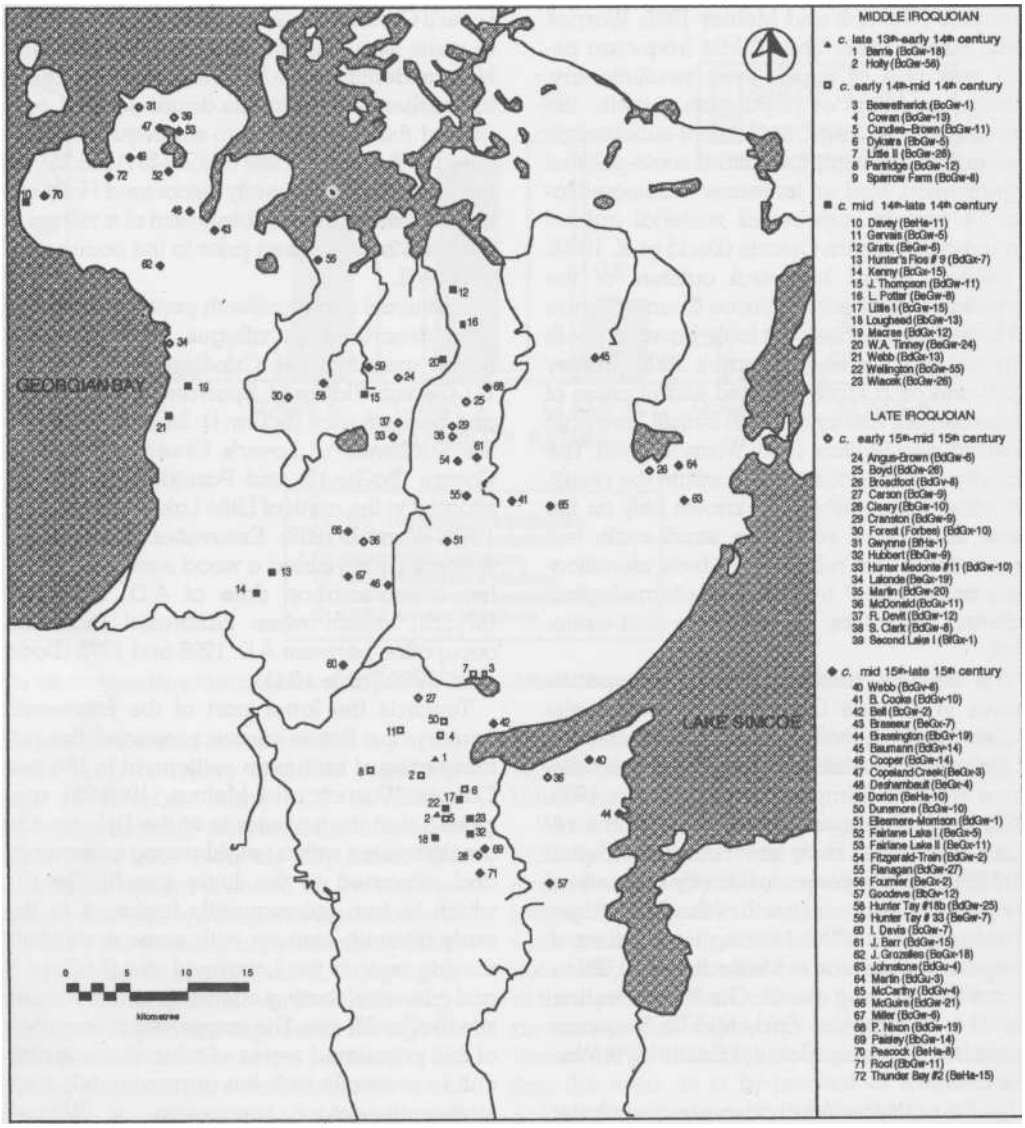


Figure 20. The Iroquoian Occupation of Simcoe County. The distribution of villages or large settlements, circa A.D. 1300-1500. Adapted from Bursey (1993) and Warrick (1990).

future article.

The more diffuse distribution of numerous other apparently late fourteenth-century sites throughout southern Simcoe County also attests to an expansion of Middle Iroquoian settlement. The Kenny (BcGx-15) and Hunter's Flos #9 (BdGx-7) sites in the Flos Lowlands, together with the Webb (BdGx-13), Macrae (BdGx-12) and Davey (BeHa-11) sites on the Penetang Peninsula, suggests a western movement into this portion of Simcoe County (Warrick 1990:360-361). Similarly, expansion northwards from the Barrie core area is suggested by relatively isolated middle to late fourteenth-century villages located along the rivers flowing north into Severn Sound, such as the J. Thompson site (BdGw- 11) at the headwaters of Hog Creek, and the W.A. Tinney (BeGw-24), L. Potter (BeGw-8) and Gratix (BeGw-6) sites along the Sturgeon River watershed.

Warrick (1990:360) has suggested that these movements to the north and west represent an

expansion of populations in the original core area of settlement in the Barrie region, much like the pattern postulated by the "Wave of Advance" model (e.g., Ammerman and Cavalli-Sforza 1973) for the spread of Neolithic swidden agriculturalists through the temperate forests of western Europe. Sutton (1995), on the other hand, has pointed out the deficiencies of this model, which relies upon overly inflated estimates of population growth through reproduction alone. He suggests that the spread of villages further northward must, in large part, be attributed to the continued migration of new communities into the area, creating a "leap-frog" pattern of village distribution in which less favourable areas were avoided (Sutton 1995: 74).

During the course of the fifteenth century, Iroquoian settlement coalesced into a number of regional groupings, primarily located in the northern portion of the county. It has been posited that this northward shift was a result of increased trade (particularly after circa A.D. 1450) between Iroquoians and the Algonquian groups of the Canadian Shield (Trigger 1976:166-174; 1985:160).

Nevertheless, occupation continued in the Barrie area, as is suggested by the presence of the late fifteenth century Roof site (BbGw-11) (Warrick and Molnar 1986:26). Warrick and Molnar (1986:26) further suggested that Roof was succeeded by the Cleary site (BbGw-10), which formed through the amalgamation of the Roof community and several groups who were relatively recent arrivals from the north shore of Lake Ontario. Other major fifteenth-century settlements known in the general Barrie area include the early to middle fifteenth-century Cranston (BdGw-9) and Carson (BcGw-9) sites and the mid- to late fifteenth-century Paisley (BbGw-14) and Dunsmore (BcGw-10) sites. Limited test excavations were carried out at the Dunsmore site by James Hunter in the 1970s (Hunter 1978). A radiocarbon date of 590±50 B.P. (GSC-2663), calibrated to A.D. 1350±35 was obtained from a wood charcoal sample (Dodd et al. 1990:Table 10.1). ASI's excavation of part of the site, in 1989, resulted in the documentation of six longhouses and eight small cabins, some of which appear to have been only seasonally occupied while others may have served as year-round or cold-weather dwellings. While final analysis of the site is pending, one gains an overall impression that the settlement had a complex history - one which involved both seasonal occupations and year-round habitation. On the basis of the ceramic assemblage recovered from the site, the mid-fourteenth-century radiocarbon date appears to be at least a century too early, although Hunter's excavations were located some distance from the area investigated in 1989 and could conceivably relate to a somewhat earlier component.

Throughout southern Ontario, individual house size and village size increased dramatically during the fifteenth century. These trends are also apparent in the Barrie area. The Cleary site, for instance, is believed to extend over an area of 4.6 ha (Warrick 1988:49), while the largest house at the Carson site, for example, measures over 70 min length (Varley 1993: Figure 3). These developments may be a product of demographic trends, resulting from the population "explosion" of the Middle Iroquoian period (Warrick 1990:363-364), and a consequence of the amalgamation of smaller communities. If these amalgamations also involved the absorption of new immigrants from the north shore of Lake Ontario to southern Simcoe County, as Warrick and Molnar (1986:26) have surmised for Cleary (1986:26), it remains to be seen how this process of population movement and consolidation is related to the contemporaneous developments in the Lake Ontario area which gave rise to such large sites as Draper (Finlayson 1985) and Parsons (Williamson et al. 1996).

At present, mid-sixteenth-century sites are known in the Barrie area. The later sixteenth to early-seventeenth century Molson site (BcGw-27) is currently the only documented Later Prehistoric to Protohistoric village site in the Barrie area core of Middle Iroquoian occupation, thus demonstrating the continued northward shift in settlement. It may, therefore, represent one of the final occupations of this area by the descendants of Middle Iroquoian colonists prior to their movement north, into the area known historically as Huronia, where they merged with the developing polities that subsequently encountered the French explorers and missionaries arriving to the region.

SUMMARY AND CONCLUSIONS

The 1990 ASI excavations at the Wiacek site resulted in the documentation of three longhouses and 104 interior and exterior features. Approximately 2,200 artifacts were recovered during the course of this work. When combined, the results of the 1983 MTO and 1990 ASI excavations at the Wiacek site provide one of the most complete records currently available for an Iroquoian village site in Simcoe County. For the most part, the results of the 1990 excavations have been consistent with the earlier findings. The compilation of a large body of additional data during the seven years separating the two excavations, however, has provided an opportunity to re-examine certain interpretations or general assumptions concerning the archaeological record of the Iroquoian occupation of Simcoe County.

In terms of village settlement patterns, the ASI excavations led to the complete documentation of three additional structures (Houses 3, 6, and 7) located to the southeast of those longhouses completely excavated in 1983 (Houses 1 and 2). The consistent orientation of these structures with that of Houses 1 and 2, combined with the fact that no further conclusive evidence for the existence of either of the poorly defined Houses 4 or 5 was recovered, suggests that the overall village plan is more accurately described as a cluster of aligned houses, rather than as disordered (Lennox et al. 1986:10). The village was not enclosed by a palisade.

House 3 is generally comparable in size, form and in the distribution and density of interior features to Houses 1 and 2. Unlike either of these latter structures, however, House 3 appears to have been extended on at least one occasion. Measuring at least 43.5 m at its maximum length, it would have been the longest house on the site.

Houses 6 and 7 stand in marked contrast to the other three structures. Neither house exceeded 10.5 m in length, and both were somewhat irregular in overall shape. House 7 appears to have been relatively intensively occupied, although it is unlikely that it could have provided long term shelter for more than a small number of people. It is possible that the occupants of this structure were not related by kinship to the occupants of the more typical longhouses. Given the known frequency with which small groups of Algonquians wintered in Huron villages during the Historic period, it remains open to question whether the inhabitants of House 7 were even Iroquoians. Regardless of ethnic or linguistic affiliations, the deliberate deposition of the bear skull within the sweat lodge appended to the house is demonstrative of the ideological and symbolic importance of this type of structure and the activities that were carried out within them.

House 6, on the other hand, appears never to have served as a permanent residence. The house also appears to have been appended by two sheltered exterior activity areas, and was immediately surrounded by a large number of additional isolated exterior posts and features. It is most likely, therefore, that House 6 was a temporary shelter or warm weather dwelling.

The samples of the most analytically useful material remains in every artifact class recovered during the 1990 excavations are considerably smaller than those obtained in 1983. This has made direct comparison of the two assemblages difficult, although certain trends have become apparent.

With respect to the ceramic vessels recovered, the 1990 assemblage differs significantly from that recovered in 1983. In the 1983 assemblage, Ontario Horizontal, Middleport Oblique and Lawson Incised vessels together accounted for 26.6 percent of the vessels recovered. When the 1990 material is taken into consideration, however, these three types combined account for 39.4 percent of the total assemblage. Moreover, the total frequency of Black Necked, together with Huron Incised, Lawson Incised and Lawson Opposed changes from 30.9 percent in the original assemblage to 24.4 percent in the combined assemblage. Pound Necked, on the other hand, remains virtually unchanged at 22.5 percent. In view of these results, the overall composition of the ceramic vessel assemblage is suggestive of an occupation early in the second half of the fourteenth century, a date that is more consistent with the radiocarbon determination of A.D. 1320± 50.

As was the case with the 1983 sample, the 1990 chipped lithic assemblage reflects a need to conserve a limited quantity of imported, finished tools or preforms made from high quality cherts, and the use of bipolar reduction

techniques on the more abundant, but poor quality, local chert pebbles and cobbles. Use of these materials appears to have been largely expedient. Pieces from various stages of the lithic reduction sequence were selected as potential tools and were generally used until exhausted, testifying to the need for economy.

Despite much smaller sample sizes, the subsistence evidence recovered during the 1990 excavations is largely consistent with that produced in 1983. In terms of faunal remains, the much smaller ASI assemblage supports the view that the occupants of the Wiacek site met their dietary protein requirements primarily through fishing, with a notable reliance on species most likely found in Kempenfelt Bay. Both faunal studies clearly found that hunting, which was largely focused on smaller species, was only of secondary importance. Similarly, the results of both floral studies provide evidence for the husbandry of the full complement of Iroquoian cultigens (although the reliance on maize is unlikely to have been as extensive as the 1986 statistics suggested), together with the collection of a wide range of wild taxa, particularly forest-edge community fleshy fruits.

Numerous questions have arisen concerning the environment in which the occupants of the Wiacek site, and indeed the other Middle Iroquoian populations of southern Simcoe County, lived. The clear preference for settlement along the diverse and varied ecological zones of the upland margins, together with the wood charcoal evidence, raises questions about the image of these communities as colonists who were forced to carve up the closed canopy maple-beech forests of limited biodiversity, while relying heavily on their ability to meet their subsistence needs through agriculture (e.g., Warrick and Molnar 1986:28, 30; Warrick 1990:360).

By the same token, however, it is clear from the consideration of the very low numbers of deer remains from Wiacek and the majority of other Iroquoian sites in Simcoe County, that at least this traditional subsistence resource was relatively scarce. Clearly, this fact must be accounted for in our attempt to understand the driving forces behind the Iroquoian settlement of Huronia and the mechanisms by which this was accomplished.

In summary, the 1983 and 1990 excavations of the Wiacek site have together provided a relatively complete record of one of the earlier Iroquoian villages established in Simcoe County. The most obvious outcome of this research, however, has been to demonstrate how many questions remain to be answered.

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David A. Robertson, Stephen G. Monckton, and Ronald F. Williamson
Archaeological Services Inc., 528 Bathurst Street, Toronto, Ontario M5S 2P9