

The regional drainage system is largely shaped by these general physiographic zones. A series of rivers and creeks flows from their headwaters in the Oak Ridges Moraine into Lake Ontario. The major watersheds within the City of Vaughan south of the moraine include (from west to east) the Humber River, the East Humber River, the West Don River, and the East Don River/German Mills, as well as the northern reaches of Black Creek, Highland Creek.

The upper gradients of these systems originating in the moraine can be quite steep, and significant dissection of the moraine apron has occurred. On reaching the gently sloping till plain the flow is somewhat reduced, although it remains swift enough to produce entrenchment in deep V-shaped valleys and extensive alluvial deposits. Gentle fluting of the till plain, possibly related to bedrock topography to the south, has produced a pattern of generally parallel drainage.

The linear fabric of watercourses would have provided a permanent system of landmarks to orient travelers. As canoe travel would have been limited to the lower portions of the waterways, these watercourses would also have tended to orient foot travel to a parallel path, as trails would have been directed parallel to the watercourse orientation by virtue of the difficulty of negotiating steep ravines, swampy lowlands, and troublesome water crossings. These systems linked Lake Ontario to the upper Great Lakes through Lake Simcoe. Perhaps the busiest and best documented of these routes was the followed the Humber River valley northward over the drainage divide to the East Branch of the Holland River (Austin 1995; Robinson 1965:viii-ix). Another trail ran from the mouth of the Rouge River northward to the headwaters of the Little Rouge and over the drainage divide to the East Branch of the Holland River at Holland Landing (Robinson 1965:53). Still another followed the Don River. Each of these trails led to Lake Simcoe, which was once known as Lake Toronto, and was part of the Toronto Carrying Place trail system. Each of these trails leading inland was advantageously routed. The west branch of the Toronto Carrying Place followed the Humber River and skirted the west end of the Oak Ridges Moraine, while the Rouge trail and the Don trail both take advantage of the only stretches where the moraine narrows to only one or two kilometres. Given the physiographic, hydrographic, and ecological foundations on which these major north-south trails were established, they are likely of great antiquity. While there is certainly a correspondence between each of these travel routes and local Late Woodland settlement distribution (Teiaiagon is located at the southern terminus of the Humber trail in Toronto), it is reasonable to presume that the residents of these communities simply availed themselves of the same access routes and resources that were of importance to their ancestors. It is also likely that they served, in part, to define the precontact territories of communities at the microband, macroband, and even tribal levels.

3.0 THE PRE-A.D. 1690 CULTURE HISTORY OF THE STUDY AREA

3.1 Introduction

The discipline of archaeology has long been concerned with the classification and description of material culture and other forms of data collected from archaeological sites. Often, material culture forms the basis from which meaningful descriptions and interpretations regarding past lifeways are constructed. For those archaeologists concerned with ethnicity in the past, differences in artifact morphologies and decorative attributes are believed to distinguish archaeological groups from one another. Put simply, differences in artifact (particularly ceramic) styles, both in time and space, are thought to reflect differences in pre-contact ethnic affiliation. Artifacts are seen to serve as “ethnic boundary markers” that can be used to make these determinations. During the latter half of the twentieth century, these differences in material culture were used to construct temporal frameworks for the purposes of examining the development of regional archaeological cultures (Rouse 1957; Willey and Phillips 1958). Archaeological cultures,



however, should not be confused with real human cultures or ethnic groups that were recognized as distinct entities either by their members or by outsiders. The development of ethnicity is a complex and highly variable process, one which is dependent upon overlapping and mutually interacting factors of biology, language, history, tradition, spatial distribution, political circumstances, material culture practice and use, and one's concept of self and others (for anthropological summaries of the problems inherent in identifying ethnicity in the archaeological record see, for example, Shennan [1989]; Jones [1997]). No one criterion determines the ethnic identity of an individual or group; to assume that there is a one-to-one correlation between language, or ceramic style, and ethnic affiliation is to simply perpetuate monolithic and crude assumptions about culture and identity that have arisen due to the incomplete character of the evidence at the archaeologist's disposal. This is an axiom in anthropology, but often tends to be ignored among archaeologists working in the lower Great Lakes region. In light of the foregoing, this study, will attempt to avoid the use of overly-complicated taxa in favour of basic chronological referents (e.g., Late Archaic, Early Iroquoian, etc.).

Appendix B contains a listing of all of the pre-contact or early contact Aboriginal sites in the City. Sites of all of the following periods have been documented in the City of Vaughan. Since 1974 all archaeological sites for the Province of Ontario have been registered with the Ontario Archaeological Sites Database (OASD) maintained by the Heritage Branch and Libraries Branch of the Ontario Ministry of Tourism and Culture, Toronto. This database is the official, central repository of all site information for the province collected under the *Ontario Heritage Act* (1974, 1980). An associated Geographic Information System has been developed by the Ministry of Tourism and Culture. Within the OASD registered archaeological sites are organized within the "Borden" system, which is based on blocks of latitude and longitude, each measuring approximately 13 kilometres east-west by 18.5 kilometres north-south. Each block is assigned a unique four letter designator and sites within each block are numbered sequentially as they are found. The inventory of registered archaeological sites that formed the basis for the present study was compiled by the Data Co-ordinator of the Archaeology Unit, Heritage Branch and Libraries Branch, Ministry of Tourism and Culture, and by the staff of Archaeological Services Inc.

The land now encompassed by the City has a cultural history that begins approximately 11,000 years ago and continues to the present. The chronological ordering of this review of the study area's pre-contact history is made with respect to three temporal referents: B.C. - before Christ; A.D. - Anno Domini (in the year of our Lord); and B.P. - before present (1950).

3.2 Paleo-Indian Period (9,000 B.C.-7,000 B.C.)

While the arrival of Paleo-Indian hunting bands in southern Ontario has not been accurately dated, it is thought that they arrived sometime between approximately 11,000 and 10,800 years ago, soon after the area became habitable. During the previous millennia, southern Ontario was covered the glaciers that stretched across most of North America. As these glaciers began to retreat approximately 12,500 years ago, large meltwater lakes formed in their wake and continued to cover much of southern Ontario.

The landscape that subsequently emerged was one of relatively barren tundra interspersed with areas of open boreal forest. This environment supported herds of large Pleistocene mammals such as mastodon, moose, elk, and caribou.

Evidence concerning the Paleo-Indian people is very limited since populations were not large and since little of the sparse material culture of these nomadic hunters has survived the millennia. Virtually all that remains are the tools and by-products of their flaked stone industry. Radiocarbon dates from other North American Paleo-Indian sites suggest that the earliest sites found in Ontario date between approximately



11,000 and 10,800 years B.P. Characteristic Paleo-Indian tool types include fluted points, large lanceolate projectile points, bifacial leaf-shaped and semi-lunate knives, and a variety of unifacial scrapers, and graters (Ellis and Deller 1990).

During this period, there was a marked preference for lithic raw materials derived directly from bedrock outcrops, over secondary sources such as glacial till. Paleo-Indian populations throughout much of south-western and south-central Ontario obtained toolstone from the Collingwood and Beaver Valley areas, where Fossil Hill Formation cherts were quarried extensively.

Given the tundra- or taiga-like environment that prevailed during this period, it has long been postulated that their economy focused on the hunting of large Pleistocene mammals such as mastodon, moose, elk, and especially caribou. Of particular interest in this regard is the frequent location of Paleo-Indian sites adjacent to the strandlines of large post-glacial lakes. This settlement pattern has been attributed to the strategic placement of camps in order to intercept migrating caribou herds.

The traditional view of Paleo-Indians' reliance almost exclusively on large game has been modified somewhat, as it is becoming more apparent that smaller game and fish were also important dietary contributors (Storck 1988). It may be that their subsistence practices were more flexible and broadly based than previously assumed. Site locations at topographic breaks along the Iroquois strand may also indicate equal interest in the natural resources available in both the upland and lowland zones. Whether the Paleo-Indians were dependent on the constantly moving herds or on less communal species, these subsistence strategies would have necessitated that social groups remain relatively small and egalitarian. These highly mobile bands probably moved in seasonal patterns throughout very large territories, establishing small camps for only brief periods of time, although they may have been re-occupied on a seasonal basis.

Two Paleo-Indian campsites (Rainbow Creek – AkGv-48 and Ageing Maple – AkGv-91) and one find spot (AkGv-145) have been registered within the City of Vaughan.

3.3 Archaic Period (7,000 B.C.-1,000 B.C.)

The Archaic period is commonly divided into three sub-periods: Early Archaic (7,000-6,000 B.C.), Middle Archaic (6,000-2,500 B.C.), and Late Archaic (2,500-1,000 B.C.). Few Early or Middle Archaic period sites have been investigated and they, like Paleo-Indian sites, are often identified on the basis of the recovery of isolated projectile points. Paleo-environmental data suggest that a mixed forest cover had been established in Ontario by circa 7,000 B.C. and that the nomadic hunter-gatherers of this period exploited deer, moose and other animals, as well as fish and some plant resources, still moving relatively large distances over the landscape during the course of the year. The landscape continued to change with much lower water levels in the Great Lakes and the expansion of more temperate forests. Over the following millennia, technological and cultural change is evident in the wide variety of tools produced, which in turn are reflections of the shifts in hunting strategies necessitated by a constantly evolving environment. The Early Archaic witnessed a change in lithic procurement practices, as a wider range of chert sources was exploited, with an emphasis on secondary sources rather than a few distant primary deposits. The lithic tool kit became increasingly dominated by small “disposable” tools and for the first time, heavy wood working tools manufactured from ground stone are evident (Ellis et al. 1990:79).

During the Middle Archaic, many of the artifact types considered characteristic of the Archaic period as a whole, first appear in quantity. These include netsinkers and ornate ground stone items such as bannerstones. Raw materials used in the production of flaked and ground stone tools were increasingly



limited to locally available material. In south-eastern Ontario, a number of sites dating to the Middle Archaic period have yielded evidence of use of copper to produce a range of decorative and prosaic items. This eastern expression is frequently referred to as the “Laurentian Archaic” (Ellis et al. 1990:85-89), and also boasted a wide array of ground stone tool forms.

By about 3,000 B.C., there is evidence for increased population levels, within smaller areas exploited during the course of the annual round. Sites were larger and occupied for longer periods of time, at least in areas characterized by more stable and productive natural environments. Despite a reduction in territory size on the part of individual hunter-gatherer groups, long-range exchange remained important to at least those groups in eastern Ontario that produced items of copper (Ellis et al. 1990:93).

By the Late Archaic period, hunter-gatherer bands had likely settled into familiar hunting territories. Their annual round of travel likely involved occupation of two major types of sites. Small inland camps, occupied by small groups of related families during the fall and winter, were situated to harvest nuts and to hunt the deer that also browsed in the forests, and which congregated in cedar swamps during the winter. Larger spring and summer settlements located near river mouths were places where many groups of families came together to exploit rich aquatic resources such as spawning fish, to trade, and to bury their dead, sometimes with elaborate mortuary ceremonies and offerings (Ellis et al. 1990:121).

A number of Archaic sites have been registered within the City of Vaughan. Of note includes the Andridge site (AlGu-327) and the Edgar site (AlGu-199). Andridge is thought to date to the Early Archaic period due to the presence of spurred end scrapers and moderate to full dorsal flaking on two specimens as well as the site’s proximity to the Edgar site. The presence of secondary knapping and retouch flakes at Andridge suggests that at least some semi-refined or refined biface reduction and/or formal tool re-sharpening was carried out at the site. The site appears to be a short-term seasonally occupied camp site (ASI 2008). The Edgar site, an Early Archaic lithic scatter, is located immediately northeast of Andridge. The stone tools at Edgar were Nettling (serrated, corner-notched) projectile points, thinned biface base fragments and “drills” – all consistent with Corner-Notched horizon sites that are radiocarbon dated in stratified contexts to the period 9700-8900 B.P. (approximately 11,000-10,000 CAL years B.P.) in Tennessee (Ellis et al. 1990). The assemblage also included three graveurs, which suggests an affinity with earlier Palaeo-Indian technology. The site also appears to be a short-term seasonally occupied camp site (ASI 2007).

3.4 The Woodland Period

3.4.1 Introduction

The Woodland period is divided into four sub-periods: Early (1,000 B.C.-400 B.C.), Middle (400 B.C.-A.D. 500), the Middle to Late Woodland Transition (A.D. 500-A.D. 900), and Late Woodland (A.D. 900-A.D. 1650). In the opinion of some researchers, the transition from the Middle to Late Woodland periods represents a major disjuncture in the population history of the southern Ontario, with the arrival of Iroquoian-speaking migrants to the region. The succeeding Late Woodland period witnessed the florescence of Iroquoian societies in the Great Lakes region. The Late Woodland period is further divided into the Early, Middle and Late Iroquoian stages. The use of the term “Iroquoian” to describe these communities is based on the fact that the peoples encountered by the French in southern Ontario circa A.D. 1600 (as well the Iroquois of western New York) spoke languages related to Cherokee and Tuscarora, the homelands of which lay in the southern Appalachians, North Carolina and Virginia, rather than forms of the Algonquian language which dominated much of the remainder of eastern North America (Trigger 1969:6).



The existence of this enclave of Iroquoian-speakers within the eastern Great Lakes basin has led to two major schools of thought regarding their origins. Arguably, the most accepted theory, known as the *in situ* model, is that these Iroquoian-speakers are simply the descendants of the Middle Woodland bands that were already established in the region, who gradually adopted a semi-sedentary agricultural way of life. The alternative theory—which is largely contradicted by the evidence of continuities in many aspects of material culture between the Middle and Late Woodland periods and by current understandings of the chronology of the adoption of agriculture in the region—is that they represent a migration of people into the area from southern Pennsylvania, who brought with them their distinctive lifeways, and who succeeded in displacing or absorbing the resident Algonquian-speaking populations. These competing schools of thought will be further discussed in Section 3.4.3, however, it is probable that the reality lies somewhere in between these opposing views.

3.4.2 The Early Woodland (1,000 B.C.-400 B.C.)

The Early Woodland period differed little from the previous Late Archaic period with respect to trends in settlement-subsistence pursuits. This period is, however, marked by the introduction of ceramics into Ontario. Although a useful temporal marker for archaeologists, the appearance of these ceramics does not seem to have profoundly changed the hunter-gatherer way of life. As was likely the case from the Late Archaic period onward, the settlement-subsistence system likely involved congregations at lake or river shore sites, from spring until fall, relying primarily on fish, shellfish and wild plant foods for their subsistence needs. In late fall, wild rice, deer and nuts would have contributed to their diet. These large bands would probably then have dispersed into smaller groups for the winter, depending upon preserved foodstuffs augmented by any available game. Such seasonal movements probably took place within well-defined territories, with individual bands repeatedly returning to certain preferred sites.

There is compelling evidence in the Early Woodland period, however, for an expanding network of societies across northeastern North America that shared burial rituals, although this phenomenon first appears during the previous millennium. A common practice, for example, was the application of large quantities of symbolically important red ochre (ground iron hematite) to human remains and the inclusion in graves of offerings of objects that represented a considerable investment of time and artistic skill. Moreover, the nature and variety of these exotic grave goods suggest that members of the community outside of the immediate family of the deceased were contributing mortuary offerings.

The most significant change during the Early and Middle Woodland periods was the increase in trade of exotic items, no doubt stimulated by contact with more complex, mound-building cultures in the Ohio and Mississippi valleys. These items were included in the increasingly sophisticated burial ceremonies of the period. These developments may have emanated from the need for greater social solidarity among growing Aboriginal populations that were competing for resources.

A small number of sites assigned to the Early Woodland period, most of which consist of isolated finds, have been registered within the City of Vaughan. These include: Maplewood Ravines (AlGu-175), Highway 407 Operations Centre 1 (AkGv-134), Sweet VI (AkGv-85), Burnside Findspot (AkGv-142), Spike (AlGv-78), and sites AkGv-266, AkGv-185, AlGu-307, AkGv-267, and AlGv-182.



3.4.3 The Middle Woodland (400 B.C.-A.D. 500)

Information regarding the Middle Woodland period occupation of the Region is limited. While fairly detailed information exists for the Rice Lake area to the east, it is recognized that certain cultural developments there—including low-level social ranking as suggested by elaborate burial ceremonialism—were unusual. Generally throughout southern Ontario and environs, the Middle Woodland settlement-subsistence pattern seems to have involved bands of around 35 to 50 people following a seasonal round of resource procurement. Evidence also indicates a continuation of the long term trend toward the intensification of either seasonal macroband settlements or long-term base camps wherever harvests of key resources, such as spawning fish, shellfish, and wild rice, would support such congregations. These localities tended to be adjacent to major lakes and rivers (Ferris and Spence 1995: 97-102; Finlayson 1977; Johnston 1968; Spence et al. 1990; Warrick 1990:323; Wilson 1990; 1991).

With its origins lying in the Late Archaic and Early Woodland periods, the elaborate mortuary ceremonialism of the Middle Woodland—which included the development of large cemeteries and the use of prominent natural features and artificial mounds—is generally seen as a reflection of the emergence of an increasingly strong sense of social or community identity. The long-term use of formalized cemeteries, in some instances including monumental construction, along with a general increase in sedentism during the Middle Woodland likely point to some important changes in land use and control, brought about by increasingly sedentary subsistence-settlement patterns, within smaller, more well-defined band territories (Ferris and Spence 1995:98; Spence et al. 1984; Spence et al. 1990:165-168). Where documented, burial mounds are prominently situated along the shores of major lakes and rivers; they are located on high points of land or raised shoreline terraces that command extensive views of the surrounding landscape and waters. The degree to which these mounds may have been visible from afar is more difficult to ascertain, given that they were seldom very large features, and that sight-lines towards them often would have been limited by dense forest cover during all but the winter months. It is likely, however, that they were established in clearings, either natural or man-made, as all are associated with very large, warm-weather camp sites established in locales that were particularly rich in seasonal resources, where many people could come together to hunt, fish, collect plant foods, establish or reaffirm social ties between families, and bury the dead. Therefore, together with their contemporary domestic sites, they may have served as conspicuous landmarks.

Three broad archaeological complexes, largely defined on the basis of regional differences in ceramic vessel manufacture and decoration have been identified for the Middle Woodland period: the Couture complex in extreme south-western Ontario; the Saugeen complex from the southeast shore of Lake Huron easterly to the Niagara River and Escarpment; and the Point Peninsula complex in south-central and eastern Ontario (Spence et al. 1990:143). These regional groupings are probably only poor reflections of the socio-political realities of the Middle Woodland period. In his consideration of the baseline population for Middle Woodland in south-central Ontario, Gary Warrick (1990:322-332) examined information concerning over seventy sites, based in large part on the territories of a number of interacting groups of hunter-gatherers in the Rice Lake region, and suggested that there were at least five or six regional bands in south-central Ontario contributing to a total population of two to three thousand people. A review of sites documented in the rest of southern Ontario suggests that there were as many as 25 to 30 regional bands, each occupying a significant portion of a major drainage system (Spence et al. 1990).

Exchange and communication patterns among neighbouring and distant local bands were likely primary factors influencing material culture production. It has been argued, for example, that the stylistic standardization within Middle Woodland ceramic vessel traditions resulted from the development of symbolic redundancy in exchange activity among both neighbouring and geographically separated communities (Braun 1986:123). Such uniformity was perhaps deliberately sought in an effort to reinforce

membership in an expanding network of social relations. In this way, the most frequently expressed cultural markers may have symbolized the “salient affiliations” of a group, making it easier to identify membership since these cues were highly visible and redundant (Schortman 1989). They should, therefore, find lasting expression in the archaeological record. In this way, what we have traditionally recognized as Saugeen and Point Peninsula cultural complexes might actually have represented broad social networks to which local bands belonged.

One Middle Woodland lithic scatter (Earl site – AIGv-75) and two isolated finds (AIGu-311 and AIGu-319) have been registered within the City of Vaughan.

3.4.4 The Middle to Late Woodland Transition (A.D. 500-A.D. 900)

Beginning around A.D. 500, the appearance of maize (a domesticated crop of tropical origin) and cord-wrapped-stick decorated pottery, together with developments in the settlement-subsistence system involving the use of both year-round base camps and short-term special purpose sites oriented to lacustrine, riverine, and wetland locations, marks the beginning of a cultural complex that exhibits continuity with the subsequent Early Iroquoian (Late Woodland) period. The most well understood series of sites occur in south-western Ontario in an area roughly bounded by Long Point, the western end of Lake Ontario, and the Niagara River (Crawford and Smith 1996; Fox 1990; Smith and Crawford 1995; 1997; Smith 1997; Stothers 1977). These sites, which have been collectively defined as comprising the Princess Point complex, are currently restricted to the period A.D. 500 to A.D. 1,000.

It has proven difficult to incorporate the Princess Point complex within the existing culture history taxonomy, since Princess Point—which exhibits Late Woodland cultural patterns—co-exists for several centuries with Middle Woodland cultural expressions to the west and east. It also may co-exist with later Early Iroquoian manifestations from around A.D. 900 to A.D. 1,000 (Smith 1997; Smith and Crawford 1997). While some authors (e.g., Spence and Pihl 1984; Ferris and Spence 1995; Smith 1997; Williamson and Robertson 1994) have assigned Princess Point to a new category termed “Transitional Woodland” in an attempt to overcome the constraints of the existing taxonomy, this assignment is thought by others to be taxonomically problematic (Smith 1997; Smith and Crawford 1997).

In eastern Ontario, a similar, but far less well-documented, archaeological construct for this period is the Sandbanks Tradition. Several sites at the eastern end of Lake Ontario and the north shore of the St. Lawrence River, which apparently date to the A.D. 800-1,000 period, have produced “Princess Point-like” ceramics (Daechsel and Wright 1988).

Princess Point sites provide the earliest evidence for the presence of maize in southern Ontario. On the basis of AMS radiocarbon dates on charred maize remains, Crawford and Smith have established that maize was present on several sites within the Grand River valley by the sixth century A.D. (Crawford et al. 1997). Similar sixth-century results from macrofossil samples have been found near Rice Lake (Jackson 1983). In New York State, a series of sites have yielded evidence for the presence of maize in the early seventh century (Hart et al. 2003). These latter findings are the result of an innovative study combining AMS dating of carbonized food remains on ceramic vessel sherds and microscopic phytolith analysis of those food remains. Further research using these techniques has demonstrated that maize was being cooked in central New York by around 2000 years ago, a full millennium before the earliest published direct date on macrobotanical remains in the state (Hart and Williamson 2004). Phytolith analysis has not been undertaken in Ontario in any great frequency. In one instance, however, it has resulted in the identification of another cultigen, in this case squash (*Curcubit pepo*), in two features radiocarbon dated to the Middle Woodland period at the HH site near the mouth of the Red Hill Creek at

the western end of Lake Ontario (Buerhle cited in Woodley 1996:124). On the basis of macrofossil evidence alone, squash has generally been assumed to be a relatively late arrival to Ontario and comparatively unimportant prior to the thirteenth century (e.g., Chapdelaine 1993:194; Smith and Crawford 1997:26).

In spite of deficiencies in both the current taxonomy and the supporting archaeological data, it is the prevailing supposition that cultural continuity and a genetic relationship, exists between local Middle Woodland and Late Woodland (Early Iroquoian) populations in south-central Ontario, based on osteological (e.g., Molto 1983), demographic (e.g., Warrick 1990, 2008), and archaeological evidence (Crawford and Smith 1996; Smith and Crawford 1995, 1997; Engelbrecht 1999; Ferris and Spence 1995; Fox 1990; 1995; Spence et al. 1990).

Of course continuity in some areas and discontinuity in others is a possibility, and it may be too early to rule out migration as *one* of the processes involved in the Middle to Late Woodland transition (Smith and Crawford 1997: 28). Nevertheless, there is not yet a coherent argument outlining how a small intrusive population managed to displace or absorb the thousands of—presumably Algonquian-speaking people—distributed in geographically disparate regional groupings across southern Ontario and western and central New York, creating, in the process, an “island” of Iroquoian speakers in the middle of a “sea” of Algonquian speakers. It is far more likely that a small number of Iroquoian-speakers introduced both maize and the language to resident Algonquian-speaking Great Lakes populations after which both the language and the subsistence technology gained wide-spread acceptance.

It should be noted, however, that there is likely to be little material culture evidence of this transition in that in the Great Lakes region in particular, it has become increasingly clear that Iroquoians and Algonquians alike participated in a tradition of ceramic vessel manufacture that enjoyed comparatively widespread currency throughout much of the Northeast (e.g., Brumbach 1975, 1995; Moreau et al. 1991:58; von Gernet 1992:122-123, 1993:77). Determining the relationships between artifacts and ethnic groups is further complicated by the overlapping territories and high degree of social mobility often ascribed to the various groups in this region, the apparent openness of social groups to new members through adoption, and the drastic population movements and realignments which appear in European accounts of seventeenth and eighteenth century life in throughout the Great Lakes region (cf. Engelbrecht 1999).

Despite our limited knowledge of the period, the events of the Middle to Late Woodland transition are of great significance to the subsequent culture history of the region. The adoption of maize must ultimately have had an important role in initiating the transition to food production and reducing the traditional reliance on naturally occurring resources, however, it would seem that this process was much more gradual than previously thought. Likewise, it is probable that it was highly variable from one area to the next. In some areas this shift may have been accomplished simply through local populations adopting agricultural practices and associated customs or ritual. In other areas, it is equally possible that the arrival of new peoples were initially responsible for the changes apparent in the archaeological record. The Iroquoian language(s) may have spread into the lower Great Lakes area through either means—the process being facilitated by the fact that social and ethnic boundaries were flexible and permeable to the individuals and groups who were active agents in their creation in the first place.

In any case, the incipient agriculture of these communities likely led to decreased mobility as at least some members of the community likely remained near their garden plots for longer periods of time to tend their crops. It may be easy to over-estimate the role of maize in this process, however, as it would also seem that increased sedentism necessitated by population concentration into regional site clusters was already occurring in many areas of the Northeast prior to the widespread adoption of maize (cf.



Brashler et al. 2000; Ceci 1990; Ferris 1999; Hart 2001; Hart et al. 2003; Wymer 1993). Either way, sites were more intensively occupied and subject to a greater degree of internal spatial organization and, increasingly, were located on terraces overlooking the floodplains of large rivers. In southern Ontario this pattern is most clearly seen in the Grand River valley at later Princess Point sites such as Porteus (Noble and Kenyon 1972; Stothers 1977) and Holmedale (Pihl et al. 2008).

While only one campsite (Thornbush site – AkGv-90) dating to the Middle to Late Woodland transition period has been documented within the study area, the events of the period are potentially significant to the settlement history of the area given the large number of Early Iroquoian sites recorded within the City, the Region of York or directly south in the City of Toronto.

3.4.5 The Late Woodland (A.D. 900-A.D. 1650)

Changes in the settlement-subsistence regime of southern Ontario's Aboriginal peoples continued throughout the balance of the Late Woodland period. The Late Woodland is subdivided into the Early (A.D. 900-A.D. 1300), Middle (A.D. 1300-A.D. 1400), and Late Iroquoian (A.D. 1400-A.D. 1650) periods.¹

Most previous research into the Late Woodland in southern Ontario has been framed in a model of Iroquoian cultural development whose origins lie with the in situ model first advanced by Richard MacNeish (1952), but which has been challenged by the revived migrationist school of thought, as discussed in Section 3.4.4. In 1952, MacNeish published a study of ceramics that demonstrated continuity between known seventeenth century Iroquoian groups and more remote pre-contact cultures, thereby establishing an in situ developmental sequence. The proposed length of this largely unbroken cultural sequence was the subject of some debate with researchers proposing variously that the Iroquoian-speakers of the contact period were the descendents of the Early- to Middle Woodland groups, if not their Late Archaic or even Middle Archaic forebears.

The basic tenets of the in situ theory became truly formalized when J.V. Wright (1966) established a generalized framework of pre-contact Iroquoian history that remains in use, at least as a taxonomic tool, to the present day (Smith 1990:284-285). In his outline of the "Ontario Iroquois Tradition," Wright proposed three stages of development, the first of which, the "Early Ontario Iroquois" stage, consisted of a western branch (Glen Meyer) and an eastern branch (Pickering), both thought to be evolving in relative isolation from one another. The Niagara Escarpment was seen to represent the "frontier" between these two branches.

The second of Wright's stages, the "Middle Ontario Iroquois," was thought to represent the fusion of these two branches, and the subsequent appearance of a uniform Iroquoian cultural pattern throughout southern Ontario. This fusion of Pickering and Glen Meyer was thought to be the result of a military conquest of the Glen Meyer on the part of the Pickering. Wright defined two substages within the Middle Ontario Iroquois stage: the Uren substage of the early fourteenth century, which was portrayed as the onset of a rapid and widespread process of homogenization in settlement patterns, subsistence, and

¹ The basic chronology for the Late Woodland presented herein is largely consistent with that utilized by most researchers (cf. Ellis and Ferris [ed.s] 1990), even if they utilize different names for specific sub-periods (e.g., Ferris 1999). Smith (1997), however, would place the beginning of the Early Iroquoian period circa A.D. 1000, but given the gradual nature of the transitions occurring at that time, this is not a serious discrepancy. Finlayson (1998:Volume 1:371-375) has recently proposed substantial revisions to the chronology of the Middle and Late Iroquoian periods, however, his suggestions are based only on site sequences in the Crawford Lake region and run counter to that established for all other areas of the province and are unlikely to be accepted (e.g., Warrick 2000:421).



material culture (by and large a Pickering ascendancy) and the Middleport substage of the second half of the century, which was said to represent the culmination and consolidation of these sudden changes.

Wright's final stage, the "Late Ontario Iroquois," was thought to be a divergence from the middle stage culminating in the historical tribal groupings of the Huron, Petun, Neutral, and Erie. The Huron-Petun branch was further subdivided into Southern and Northern divisions. Both divisions were conceived as having evolved along basically parallel trajectories, a result of their having emerged from a common Middle Iroquoian base and having maintained some degree of continued contact. Beginning in the mid-sixteenth century, the gradual movement of the Southern division groups away from the shore of Lake Ontario resulted in the "fusion" of the two divisions in Simcoe County between Barrie and Midland shortly before European contact (Wright 1966:68-83; cf. Popham and Emerson 1952; Emerson 1959, 1961).

Two other Iroquoian co-traditions were similarly defined: the Mohawk-Onondaga-Oneida Tradition and the Seneca-Cayuga-Susquehannock Tradition. Wright acknowledged that the three postulated traditions were, in effect, rather simplistic taxonomic tools, but he argued that simplicity was necessary to understand the archaeological record (Wright 1966:3). Archaeologists now recognize, however, that complex cultural developments cannot adequately be investigated using superficial models. Indeed, the imposition of one-dimensional taxonomic divisions such as "branches" on pre-contact societies masks regional variation and discourages the investigation of dynamic, multi-dimensional lines of socio-political integration (MacDonald 2002).

Wright's Early Iroquoian conquest hypothesis was only cautiously received, or rejected outright, by many archaeologists in the years following its proposal (e.g., White 1971; Noble 1969, 1975; Trigger 1976, 1985; Fox 1976; M. Wright 1986; Cooper 1983; Pearce 1984; Warrick 1984; Williamson 1985, 1986). More recently, the conquest hypothesis has been largely abandoned by researchers in light of the vastly extensive data that have come to light for the Early and Middle Iroquoian periods (e.g., Williamson 1990:311-312; Williamson and Robertson 1994; Spence 1994; Ferris and Spence 1995:110; Timmins 1997; Ferris 1999; Warrick 2000).

Likewise, Wright's characterization of a Middle Iroquoian cultural pattern being homogeneous from one region to the next is coming under question as well. The Middle Iroquoian period was originally developed on the basis of a sudden and widespread homogenization of Iroquoian material culture and subsistence-settlement patterns. Within Wright's scheme, the Uren substage of the early fourteenth century was portrayed as the beginning of a widespread process of homogenization in settlement patterns, subsistence, and material culture, by and large, a "Pickering ascendancy". The Middleport substage of the second half of the century was, said to represent the culmination and consolidation of these sudden changes and the onset of a rapid expansion of Iroquoians communities across many previously unsettled parts of southern Ontario. Additional research has shown, however, that the fourteenth century was a period of considerable cultural diversity. It has become evident, that individual communities underwent a series of transitions in different ways and at different times, depending on where they lived and on the structure of the social and economic networks in which they were involved (Robertson and Williamson 2002).

Finally, Wright's treatment of Late Iroquoian development, with its identification of "Northern and Southern Division Hurons", was based on a very small quantity of, often conflicting, data and represents an unwarranted projection of documented seventeenth century tribal identities back almost two centuries (Trigger 1970:39-42; Ramsden 1977:22-27). Given the complex and long-term historical processes that led to the formation of the Huron Confederacy, and the emerging understanding that these processes were in operation over extensive geographical areas and periods of time, the fifteenth and sixteenth century



communities south of the Oak Ridges Moraine likely recognized various degrees of kinship with the descendents of the first Iroquoian settlers of Simcoe County, however, they were not yet of one nation. In the fifteenth century, for example, there are numerous indications that Simcoe County groups had minimal or constrained access to the resources of the more southerly regions of York and Durham counties, and that such restrictions were socio-political in origin rather than simply a factor of distance (Robertson and Williamson 2002).

The limitations of Wright's original constructs are clearly reflected in the increasing difficulty with which archaeological data are accommodated by his paradigm. Middle and Late Woodland sites in south-central Ontario have cultural assemblages that share attributes with complexes in south-western and south-eastern Ontario and the classification of certain Early Iroquoian communities as either Pickering or Glen Meyer is proving as difficult as classifying some Late Iroquoian sites as either pre-contact Huron or pre-contact Neutral (Williamson and Robertson 1994; Ferris and Spence 1995; Ferris 1999:12-14; Warrick 2000). Similarly, the precise degree of Middle Iroquoian homogeneity remains to be defined. Moreover, the appearance of larger and more numerous Middle Iroquoian sites in many areas were merely the precursors of the population amalgamations that resulted in the emergence of much larger tribal systems during the mid-fifteenth century. This is not to say that the consolidation of autonomous Early Iroquoian communities during the thirteenth and fourteenth centuries did not represent significant socio-political events, perhaps even the development of incipient tribal systems, but this was but one step in an 800-year-long transition to agricultural village life. The continued use of the Uren and Middleport substages as taxonomic referents, and even of the more general concept of a Middle Iroquoian period, tends to obscure the long-term continuity of this process, and to hinder examination of the complexity and variability seen across southern Ontario.

A break from Wright's paradigm of Iroquoian pre-contact history is slowly being made. In most cases now, the continued use of his taxonomy serves as a convenient tool to simplify communication rather than as a paradigm to guide research (Smith 1990:287-288). If no rigid taxonomy is imposed *a priori*, many of the problems discussed above, which are inherent in the model, disappear. Equally vexing for all periods, however, is the problem of archaeologically differentiating between Iroquoian and certain Algonquian groups who shared a similar lifestyle and material culture.

Early Iroquoian (A.D. 900-1300)

Within south-central Ontario, virtually all the documented Early Iroquoian sites are distributed along the north shore of Lake Ontario on the glacial Lake Iroquois Plain or around Rice Lake (Williamson 1990). These sites occur as geographically discrete, regional clusters of larger settlements and smaller camps and special purpose sites. Given this distribution pattern, some groups may have associated with their neighbours more frequently than did others and each was adapting to a slightly different environment. The level of interaction between communities would have been primarily a function of distance mediated by accessibility and economics. Inter-group communication was likely greatest among neighbouring groups, particularly among those that shared major navigable waterways. Indeed, Timmins (1997:228) has noted that some regional clusters of Early Iroquoian sites may have involved not a single site sequence, but two or more contemporary communities that may have shared a hunting territory or some other common resource base. In this way, a number of self-governing, autonomous polities may have participated in a large social network with more meaningful social links established between neighbouring communities than with distant groups. Such networks may have involved spousal exchanges, war alliances, and trading relationships, and may even have served to "predispose people for the eventual decision to amalgamate into larger villages", once the region-wide intensification of food production had occurred (Timmins 1997:228). Sequences of ceramic development are consistent with this



pattern in that they were quite variable from one region to another, as was the use of specific decorative motifs or techniques (Williamson 1985:289-290). This may be attributable to the fact that spouses were obtained from other communities within a regional cluster (Timmins 1997:228).

The evolution of this period should clearly nevertheless be viewed as multi-linear, with each region experiencing unique cultural adaptations and arriving at different stages of economic, social, and political development at slightly different times (Williamson 1990). Yet, while there apparently were a large number of regional ceramic micro-traditions, there was also considerable developmental uniformity in material culture and settlement-subsistence patterns at the macro-regional level. It is at the level of interaction between these regional clusters of villages that the processes which ultimately led to the emergence of larger tribal groupings in later times operated, and it is there that the most informative investigations will occur (Renfrew 1986:7; Williamson and Robertson 1994).

Beyond certain core areas of early agriculture, such as the Grand River valley, serious reliance on corn horticulture seems to have begun during the Early Iroquoian period. As Trigger (1985:77) has argued, the introduction of corn as early as the sixth century (Crawford and Smith 1996; Smith and Crawford 1997) offered yet another, relatively reliable, resource to the late Middle Woodland repertoire. Such a resource would have been particularly favoured given the apparent trend towards increased macrobanding and the concomitant quest for ways to prolong the much-valued sociocultural interaction that occurred during these seasonal congregations. During the Early Iroquoian period, increasing reliance on corn eliminated the need for seasonal macroband dispersal, thereby initiating the development of semi-sedentary settlement (Trigger 1978:59-61; 1985:87; Warrick 2000:432-433; Williamson 1990).

The traditional hunter-gatherer ethos nevertheless prevailed during the Early Iroquoian period and the settlement-subsistence patterns suggest no fundamental change from earlier times. Economic security was sought through a diverse natural resource base now supplemented by corn horticulture (Williamson 1990:312-313). In south-western Ontario, investigation of one regional population's settlement-subsistence practices through time has demonstrated the importance of special-purpose resource extraction camps to the support of a central village. This work has also demonstrated that central villages were initially not occupied by the entire population year round, thereby highlighting how Early Iroquoian settlement was transitional between Middle Woodland and Middle Iroquoian modes. Peter Timmins (1997) has documented how one such village, the Calvert site, developed from seasonal hunting camp into a village between circa A.D. 1150 and A.D. 1250. While no detailed studies such as these have been undertaken in south-central Ontario, similar trends can be expected in this region (e.g., Kapches 1987). As supported by Mima Kapches' (1981b, 1987) work at the Auda site (AlGo-29) in the Port Hope area, for example, these settlements were likely occupied by the descendants of various indigenous Middle Woodland populations (Trigger 1985:86). Some sites in this area, however, may have been occupied by the descendants of immigrants from the Grand River valley (Warrick 2000:438) or perhaps from New York State (MacDonald and Williamson 1995).

Bruce Trigger (1976:134) has suggested that the estimated population of most of the early sedentary villages (200 to 400) falls comfortably within the size range of Middle Woodland spring and summer fishing groups, and that the small villages of the Early Iroquoian period may have been continuations of these early macrobands. Their small size also suggests that separate bands had not yet begun to join together to form larger communities and that leadership would have remained informal, perhaps being limited to an individual who also acted as a spokesperson in dealings with neighbouring groups (Trigger 1981:24). Early sedentary villages, therefore, may have been characterized by a flexible and evolving socio-political structure, whereby people were free to pursue seasonal subsistence activities in either extended or nuclear family units. Some members of these groups may have elected to remain at fall hunting sites into the winter, depending on the severity of the weather and the availability of resources.



While there is only one Early Iroquoian findspot (Weatherspoon 4 – AkGv-55) registered within the City of Vaughan, the sandy soils of the Iroquois Plain in the undeveloped lands in the Pickering area in Durham Region can stand as a proxy to what would have been present within the City of Toronto and southern York Region. The Plain extends a considerable distance inland from the shore of Lake Ontario in Durham and contains a significant cluster of Early Iroquoian settlements, which have survived by virtue of the fact that the Iroquois Plain stretches so far north of the previously urbanized lands along the lake front. Of these, the Delancey (AIGs-101), Bolitho (AIGs-102) and Ginger (AIGs-104) sites were subject to limited test excavations in the late 1970s and early 1980s (Spittal 1978; Ambrose 1981). An exposed, disturbed burial at Ginger was subsequently excavated in the late 1990s and reinterred at the site (DRPA 1998). The McLachlin site (AIGs-199) was documented as a diffuse surface scatter of material distributed over an area of approximately 0.5 hectare tableland. It has been interpreted as a short-term village or seasonally occupied hamlet (DRPA 1998:35). It is located approximately 150 metres to the southwest of the Miller site (AIGs-1), which is the only Early Iroquoian component that has been investigated on a large scale. Miller is located in an area of level terrain on the west side of a deep, steep-sided ravine cut by Ganatsekaigon Creek. The site was investigated extensively under the direction of Dr. Walter Kenyon of the Royal Ontario Museum, from 1958 to 1961 after it had been discovered while the Miller Paving Company was exploring the area for sand and gravel concentrations (Kenyon 1968).

Kenyon's excavations at the site resulted in the documentation of a settlement consisting of at least six small longhouses set within a palisaded compound of approximately 0.5 hectare. The Miller site excavations also resulted in the discovery of seven graves, containing a total of 32 individuals. The ceramics recovered from the site date the occupation to between A.D. 1100 and A.D. 1215. An exterior activity area apparently located beyond the west limits of primary settlement compound was recently subject to salvage excavation (ASI 2004a).

As is typical of many long-term Early Iroquoian settlements, there is considerable evidence at Miller for house rebuilding and extensive traces of exterior activity entailing the construction of slight shelters, windbreaks, or simply poorly defined houses. Until recently, the vast number of posts forming overlapping lines, amorphous clusters, or simply broad areas of isolated posts that exhibit little patterning of any sort, found at Miller and other Early Iroquoian settlements have been interpreted as reflecting an absence of community planning and concomitant lack of formal village government, and low population densities and short-term but frequently repeated occupations during the cold-weather months (e.g., Noble 1968; Trigger 1981; Williamson 1990). More recently, however, highly detailed analysis of the Early Iroquoian Calvert site (Timmins 1997) has clearly demonstrated that the apparent randomness and lack of order on such sites is largely a consequence of the use of these sites over the course of many years, during which period each occupation was much more orderly than previously assumed.

One additional large and partially investigated Early Iroquoian village has been documented within Durham Region. The eleventh century A.D. Boys site (AIGs-10) is located on Duffins Creek in the Greenwood Conservation Area and was initially investigated by Frank Ridley and members of the Ontario Archaeological Society (Ridley 1958). This work involved excavation of a trench through a midden. The OAS carried out further investigations at the site in the early 1970s. Additional work was carried out at the same time by Paddy Reid. Cumulatively, the excavations documented portions of two longhouses, a single row palisade on the north side of the site and several middens along the steep ravine slopes that defined the south and east limits of the settlement area (Reid 1975). It is likely that other houses are present within those portions of the compound that were not investigated.



Middle Iroquoian (A.D. 1300-1400)

Toward the end of the thirteenth century, significant changes had begun to take place in Late Woodland culture. While there is no evidence to suggest discontinuities among regional populations from Early to Middle Iroquoian times, there are notable changes in both community and regional settlement patterns (Dodd et al 1990; Kapches 1981a). In most cases, it appears that individual Early Iroquoian communities may have amalgamated during the early fourteenth century, precipitating changes in the economic, social and political spheres.

Community patterns are characterized by groupings of aligned longhouses and less evidence of house rebuilding as indicated by overlapping structures. There is also a nearly two-fold increase in mean village size and longhouse length. Both overall population increases and community fusion have been suggested to explain these trends (Dodd et al. 1990; Pearce 1984:379-384). Indeed, it has been argued that Middle Iroquoian population growth occurred at rates that have rarely been equalled among early agricultural societies (Warrick 1990:353, 2000:444). Whatever the case, these changes in the community pattern infrastructure imply a more elaborate socio-political organization in order to cope with the logistics of managing a resident population—logistics that increasingly exceeded the capabilities of band-level social institutions (Trigger 1985:93; Warrick 1990:348; 2000:439-441; Williamson and Robertson 1994). Complex political means of regulating village affairs and for linking separate villages developed, as exemplified by the appearance on sites (in variable frequencies within and between regional settlement clusters) of palisades around settlements, ossuary burial features², semi-subterranean sweat lodges³, and, as noted above, increasingly orderly settlement layouts. Widespread similarities in pottery and smoking pipe styles also point to increasing levels of intercommunity communication and integration. Substantial variability in longhouse and settlement size, on the other hand, involving both expansion and contraction, as well as overall settlement configuration, suggests significant movements of people, as groups struggled to adapt to the evolving ecological and social milieux (MacDonald 2002:348). As is the case for earlier (and later) periods, the evolution of Middle Iroquoian period must be understood to have been as multilinear, with each region experiencing unique cultural adaptations and arriving at different stages of economic, social, and political development at slightly different times (Robertson and Williamson 2002).

The Middle Iroquoian period also marks the point in Iroquoian cultural evolution at which a fully developed agricultural system, based on corn, bean and squash husbandry, crystallized. Maize was the preeminent dietary staple, although hunting, fishing and the collection of wild plant foods remained important tasks at particular times of the year, requiring the establishment of a variety of special purpose sites at varying distances from the main settlements. In fact, it may have been during the late thirteenth century, at least in some localities that maize consumption peaked. Detailed isotope analysis of human remains from the circa A.D. 1300 Moatfield ossuary, located on a tributary of the Don River approximately five kilometers north of Lake Ontario in the City of Toronto, indicates that for a brief

² Ossuary burial is a mode of corporate burial in which the remains of numerous individuals, who were formerly interred within a village were disinterred and re-deposited into one or two mass graves. Presumably, this act took place upon abandonment of the village in favour of a new site. Ossuaries range in size from those that contain the disarticulated and/or bundled remains of approximately ten individuals, to those that contain the remains of 500 people or more. The tradition of ossuary burial began in the Early Iroquoian period as a family-oriented rite. By early Middle Iroquoian times, ossuaries had become larger community-wide features, and by the end of the Middle Iroquoian period their creation likely involved the participation of members of different allied villages in a joint burial ceremony.

³ Communal sweat lodges likely used for ritual, curative, or socio-political purposes (Smith 1976; MacDonald 1988; 1992), although uses for other purposes requiring solitude or segregation cannot be ruled out. Semi-subterranean sweat lodges are apparently a thirteenth to mid-fifteenth century A.D. phenomenon in Ontario. The frequency with which these structures occur within longhouses on Ontario Iroquoian settlements after circa A.D. 1200 suggests that their role may have been a fundamental aspect of daily life in an Iroquoian household, especially if their use related to a curing society that functioned as a socially unifying institution within the emergent tribal systems of the Middle and early Late Iroquoian periods (MacDonald and Williamson 2001; Robertson and Williamson 1998:147).



period, maize comprised 70% of the diet. Such a reliance on a single foodstuff was likely neither sustainable in terms of production effort or desirable in terms of health or risk buffering, but intensified cultivation may have been a necessary, temporary, response to increased population concentration within a newly amalgamated settlement (van der Merwe et al. 2003; Pfeiffer and Williamson 2003). Such levels of maize consumption represent the highest levels recorded for Ontario populations, although it appears to have been related to a single generation of individuals at Moatfield. Analysis of remains from later fourteenth and fifteenth century sites suggest that at its peak, maize typically comprised approximately half of the diet of Iroquoians (Schwarcz et al. 1985; Katzenberg et al. 1995).

A notable change in regional settlement patterns is a later thirteenth-early fourteenth century northward or upstream expansion onto the South Slopes Till Plain from the glacial Lake Iroquois Plain. This period was also marked by the first expansion of Iroquoian settlements into the uplands to the west of Lake Simcoe (Sutton 1996, 1999). By the end of the fourteenth century there is evidence to suggest that a virtual population explosion may have taken place (Warrick 1990:353). Regional populations continued to occupy the South Slopes Till Plain, however, the “colonization” of southern Simcoe County was intensified, as agricultural communities continued to migrate into the region (Warrick 1990:360; Sutton 1996, 1999). In all likelihood, the homelands of these communities lay along the watersheds draining into Lake Ontario. A similar expansion into the Trent Valley (Warrick 1990; Sutton 1990, 1996) also began at this time. The establishment of villages in these areas likely entailed a lengthy period of negotiation and interaction between the Iroquoians of the South Slope and the Algonquian-speaking groups that utilized the Georgian Bay littoral and the Trent valley. It is possible that such interaction involved protracted visits of Algonquian parties to the villages south of the Oak Ridges Moraine.

Interaction between these groups likely had begun at least by the Early Iroquoian period, based on the presence of a few sites within the shield region that have yielded Early Iroquoian-like ceramics (Trigger 1976:170-171; Warrick 1990:350-352; Sutton 1996, 1999). Some of these sites may represent actual forays into the area and the establishment of temporary fishing camps along the coast of Georgian Bay, such as at Methodist Point (Smith 1979). Given that similar ceramics are found as far north as Lake Noising (Ridley 1954; Wright 1966:41), and the questionable ability of such far-flung sites to make a meaningful contribution to the subsistence needs of the Lake Ontario north shore communities (given the richness of the Lake Ontario coastal fisheries), however, it seems more likely that their presence was the result of more intricate socio-political relations between the groups, interaction that also facilitated or was expressed through a sharing of ceramic traditions. Undoubtedly exchange was part of this process, as indicated by the presence of a small quantity of Fossil Hill Formation chert (the sources of which lie in the Collingwood and Beaver Valley areas) and other exotic lithic types, in the debitage recovered from the Early Iroquoian Bolitho site (Ambrose 1981:59; Fox and Garrad 2004) in the Region of Durham

Again many archaeological sites of this period were destroyed by nineteenth- and twentieth-century urban development. Still, the richness of the archaeological record of this period far surpasses that of previous times, with more surviving sites allowing for a better understanding of agricultural village lifeways. Moreover, new villages are discovered and excavated regularly. The Alexandra site, to take just one case in point, is a fourteenth-century ancestral Huron village discovered in the summer of 2000, during a routine pre development archaeological assessment along Highland Creek in northeastern Toronto. The site was over two hectares in size and was completely excavated in 2000 and 2001, yielding evidence of 17 longhouse structures, more than 600 subsurface cultural features and approximately 19,000 artifacts.



Late Iroquoian (A.D. 1440-1600)

Peter Ramsden was one of the first researchers to attempt to comprehensively redress the short-comings of Wright's overly generalized model for the Late Iroquoian period (Ramsden 1977; 1990a). His was an effort to identify the complex and dynamic interplay of socio-political interaction (e.g., alliance, conflict, population movement, etc.), primarily occurring at the local level, which led to the formation of the large polities concentrated in Huronia during the seventeenth century. Ramsden (1990a) has defined three major chronological periods within the overall development of the Huron, distinguished on the basis of changes in material culture and socio-political structure. The first of these periods, the "Black Creek-Lalonde period" (circa 1400-1500) is one of marked regional differences between groups, reflecting the existence of distinct "local or 'tribal' groups" in the Toronto, Kawartha Lakes, Kingston, and Simcoe regions (Ramsden 1990a:381). Ramsden described the following "Realignment period" (circa 1500-1600) as a time of considerable change brought about by the "re-structuring of traditional tribal groupings, population migrations, and the coalescence of small villages into large cosmopolitan ones" (1990a:382). Much of this upheaval was originally attributed to competition, between the populations of central and eastern Ontario, for access to exchange networks through which European trade goods were beginning to flow (Ramsden 1977:291-293; 1978). More recently, however, Ramsden has become less inclined to believe that competition for European material could have been the only, or indeed, even the primary cause for these developments (Ramsden 1990a:382; 1990b:91-92), based on the re-identification of "trade" metal from many sixteenth century sites as being of native rather than European origin, and on the recognition that European items do not appear on sites in southern Ontario prior to the 1580s (e.g., (Finlayson 1985:437; Fitzgerald 1990:103-107; Fox et al. 1995:282; Hancock et al. 1991). The end of the Realignment period, and the succeeding "French period" (circa 1600-1650), witnessed the final shift of populations into Huronia, as well as stabilization and consolidation of communities into the socio-political groups subsequently encountered by the European explorers and missionaries (Ramsden 1990a:282-283).

It is not clear, however, that the marked regional differences between groups apparent in the archaeological record of the fourteenth or early fifteenth century can be explained in the context of "tribal" groups or "nations", as they are understood from the historic record. Nor is it clear that realignments of pre-contact period communities occurred only in the sixteenth century. Prior to the mid-fifteenth century, the autonomous, multi-lineage village likely represented the maximal political unit, although many neighbouring villages may have participated in loosely-formed social and political networks. It is at the level of such networks, between regional clusters of villages, that the processes which ultimately led to the emergence of larger tribal or national groupings probably operated (Renfrew 1986:7). Thus, it would appear that the consolidation of many smaller, autonomous multi-lineage communities in the early to mid-fifteenth century does mark the initial stages in the emergence of fully formed tribal social systems (cf. Service 1971). These were among the first systems to be integrated by cross-cutting pan-residential institutions and to be involved in long distance, large scale politics, warfare and exchange (Niemczycki 1984:80-84; Timmins 1997:227-229; Williamson and Robertson 1994:34). Since clan membership cut across related communities, this aspect of kinship was an important source of tribal integration (Ramsden 1990a; Jamieson 1990; Lennox and Fitzgerald 1990).

This consolidation of larger tribal or national groupings is most evident in the archaeological record of south-central Ontario beginning in the mid-fifteenth century with the appearance of very large, well-planned and heavily fortified villages (in excess of three hectares in size) that represent not only population growth, but the amalgamation of two or more neighbouring villages that may have previously participated in a more loosely-formed trade or military alliance. To a certain degree, the consolidation of military alliances at this time may be both a cause and a consequence of an overall increase in hostilities that appear to have arisen between different communities. While it has traditionally been assumed that the



endemic conflict that characterized Late Iroquoian society was played out over long distances, such as between the geographically disparate Huron and St. Lawrence Iroquoians, or the Neutral and the Algonquian-speaking Fire Nation (e.g., Warrick 1984:63; Pendergast 1993:25-26), in some regions, feuding was taking place between neighbouring communities or tribal systems (Dupras and Pratte 1998; Robertson and Williamson 1998). However, given the likelihood that both alliance formation and conflict between individual communities was highly dynamic, it may be expected that both occurred at a broad range of scales.

It appears that by the middle of the fifteenth century the Iroquoian population expansion in south-central Ontario was waning and had stabilized by the third quarter of the century (Warrick 1990:362; 2000:446). Significant expansion continued into the uplands west of Lake Simcoe and to a lesser extent into the Trent Valley. Not surprisingly, there is evidence of increasing trade with northern Algonquians at this time. Substantial variability in community and longhouse size, including evidence that both houses and settlements were being expanded and contracted to accommodate significant movements of people (e.g., Finlayson 1985), suggest that a considerable amount of “settling in” was underway as groups continued to adapt to changing ecological and social circumstances. As community territories became more densely packed, one might expect that competition for certain resources would become increasingly confrontational. Yet Trigger (1985:98) has pointed out that documented site densities do not appear to be such that competition over arable land would have been a likely source of contention. Moreover, continued clearance and regeneration of lands through swidden agriculture would have increased habitat for deer and other game species, thereby likely offsetting the effects of increased predation by Iroquoian hunters (but see Gramly 1977). Moreover, it is likely that settlement redistributions were designed to maintain local population densities at supportable levels (MacDonald 2002:21). Continued migration north and north-eastwards throughout the fifteenth century likely played an important role in maintaining the viability of those communities that remained on the South Slope.

Around the beginning of the sixteenth century, expansion into the uplands of Simcoe County and the Trent Valley levelled off, settlement on the South Slopes Till Plain was reduced, and colonization of the Nottawasaga Highlands began. There is evidence to suggest that the colonists of the Trent Valley were interacting with and eventually assimilated groups of St. Lawrence Iroquoians (Jamieson 1990:403; Nasmith Ramsden 1989:64; P. Ramsden 1990a:383; Warrick 1990:376-378; 2000: 454-457). Evidence of settlement fission and fusion continued (e.g. Damkjar 1990; Finlayson 1985; Nasmith Ramsden 1989). By the end of the sixteenth century, the northward migration that had begun in the thirteenth century approached its final stage, as groups coalesced to form the Huron tribal confederacy in the northern uplands of Simcoe County and the Tionnontaté or Petun nation in the Nottawasaga Highlands. The South Slopes Till Plain and Trent Valley were virtually abandoned at this time.

A number of Late Iroquoian period sites have been documented within the City and surrounding area. Archaeologists have been able to reconstruct century long settlement sequences for one or perhaps two ancestral Huron communities in the Humber valley between A.D. 1400 and 1600: one in the middle Humber–Black Creek drainage area and the other at the headwaters of the Humber.

The best-known site of the middle Humber sequence is the Parsons site, a large, late-fifteenth-century ancestral Huron village near the campus of York University in the City of Toronto, and a subject of both avocational and professional investigations. In the late 1980s, archaeologists carrying out pre-development excavations at the site found parts of ten house structures, several large refuse heaps known as middens and an extensive palisade. Since Parsons is almost twice the size of earlier villages, there may have been two or more earlier sites that amalgamated to form this larger settlement, perhaps in response to growing conflict. We know there was conflict of some form because of the elaborate defensive systems and scattered human bone on Parsons and on a number of other nearby sites. The early-fifteenth-century



Black Creek site, situated on a low terrace of the Black Creek floodplain, is thought to have been one of the immediate predecessor sites to the Parsons community. Professor Norman Emerson of the University of Toronto carried out limited excavations at the site in 1948, and found evidence of a palisaded community, perhaps two hectares in size. An unusual double palisade was discovered along the west side of the site, beside the creek. One row was placed at the base of the terrace, while the other was embedded halfway up the slope. Excavators observed a similar pattern at the Parsons site, with one row at the top of slope and the other halfway down, suggesting that the same architectural team designed the palisades of both sites.

The fourteenth-century predecessor villages for this community sequence were likely located along the lower Humber close to Lake Ontario. These sites, along with sites on the lower reaches of other rivers in the Toronto area, were destroyed by land development before they could be documented by archaeologists.

There was a similar but much later blending of local villages in the upper reaches of the Humber Valley. Scholars do not know whether the two sequences were related. The Boyd site (AkGv-3), situated on the East Humber River near Woodbridge, extends over an area of one hectare. It may have been occupied at the same time as the McKenzie-Woodbridge site (AkGv-2), a larger, two-hectare village about three kilometres downstream from Boyd. Professor Emerson excavated portions of 17 longhouses and a palisade at McKenzie-Woodbridge. Later excavations during the 1970s and 1980s revealed additional structures. Aboriginal people occupied both communities during the mid- to late sixteenth century, when European goods became available to them, as to other Aboriginal people in southern Ontario, through trade. The Latree village (AkGv-139) is located less than a kilometre northwest of Boyd on the west side of the East Humber River.

The Seed-Barker site (AkHv-1), with an area of about two hectares, is situated on a plateau overlooking the East Humber River. The presence of trade goods dates it to the second half of the sixteenth century. Archaeologists uncovered a multiple-row palisade and parts of fourteen longhouses. One of the longhouses contained an architectural feature characteristic of contact-period Neutral longhouses even though the site was more likely occupied by ancestral Huron. At the time of European exploration, the Neutral were located around the west end of Lake Ontario and in the Niagara Peninsula, although their influence is evident at a number of other regional sites, including this one. The discovery of planks related to longhouse benches at Seed-Barker suggests that a Neutral house builder was there, away from his homeland.

The Skandatut site (AlGv-193) is a three-to-four-hectare ancestral Huron village, situated on a steep-sided promontory overlooking the east branch of the Humber River, approximately one kilometre north of Seed-Barker. The artifacts recovered from a surface collection include over twenty-five ground stone axes and close to a dozen chert arrow points (one of them manufactured from Knife River flint from South Dakota), glass trade beads and copper scrap. The site probably dates to 1580–1600, and represents the latest occupation in the upper Humber River sequence. The site is also located close to the Kleinburg Ossuary, which dates to the same period. The ossuary was excavated in 1970 — it was a deep pit, 4.2 metres in diameter and 1 metre deep, and it contained the remains of 561 individuals who had died, probably during the occupation of Skandatut village. At the time the ossuary was formed, the remains of people who had been buried previously within or next to the village were disinterred and moved to the pit and mixed together to create a community of the dead. The grave goods buried with the deposit include similar-aged artifacts; some of these are bone and ceramic objects, early-style iron trade axes, an iron kettle, shell beads, native copper beads and large glass trade beads. The Huron-Wendat council in Wendake, Quebec, is currently engaged in efforts to ensure that the site and associated ossuary are permanently protected and commemorated.



Also on the east branch of the Humber River just north of Skandatut is the earlier Damiani site (AlGv-231). Damiani is a large, plough-disturbed, ancestral Huron-Wendat village that covers an area of approximately 1.5 hectares. The site dates to the second half of the fifteenth century. The site is currently being excavated and a total of 21 longhouses have been excavated so far. Remnants of a multiple-row palisade extend across part of the site.

A number of villages have been identified along the east and west branches of the Don River in the City of Vaughan. The Keffer site (AkGv-14), an early to mid-sixteenth century ancestral Huron village, was situated along the West Don. At its maximum size, it is estimated that Keffer supported a population of 800-1000 people (Finlayson et al. 1985). The Keffer ossuary is located approximately 150-200 metres south of the village site. The Jarrett-Lahmer site (AlGv-18) sits on a high, narrow promontory at the confluence of two tributaries of the West Don River, approximately four kilometres northwest of Keffer. The site covers an area of approximately one hectare and was enclosed by a multiple-row palisade. No detailed settlement pattern data are available for the site, which likely dates to the mid- to late fifteenth century, based on the ceramic assemblage (ASI 2005a). Further north is the ShurGain site (AlGv-39), situated at the confluence of the Don River and a tributary. According to the OASD information sheet, this palisaded site covered approximately one acre and was not rich in artifacts.

The Teston site and ossuary (AlGv-2) comprises a 2-3 hectare village that occupies flat high tableland on the west bank of the West Don River. It was first observed and recorded by A.J. Clark in 1925 at the northeast corner of Teston Road and Jane Street. The recovery of a small artifact sample from the site in the late 1980s led MPPA (1988: Volume 3 Part B: 111-119) to suggest that the site was occupied between circa 1450 and 1500 by ancestral Hurons. Northeast of Teston is the Hope site (AlGv-199). The plough-disturbed site was encountered as two scatters of artifacts occupying the summits and upper flanks of two broad ridges separated from one another by the seasonal tributary of the Don River and an area that had previously been disturbed by grading activities. Excavations at the site resulted in the discovery of six longhouses in the north locus and seven longhouses and a curvilinear fence line in the south locus.

The Baker site (AkGu-15) is located in the East Don watershed and was originally registered in 1972 by Arthur Roberts of York University. The site is an early fifteenth century A.D. Iroquoian settlement that encompassed an area of approximately one hectare located on a southwest facing slope overlooking a series of minor creeks. The unpalisaded settlement contained four longhouses together with their associated interior and exterior features as well as three middens (ASI 2006). The site is likely related to one of the other broadly contemporary settlements that are also located along the East Don River. These include Walkington 2 (AlGu-341), Senang (AlGu-314), Mill Road (AlGu-77), and McNair (AlGu-8). Baker may also be connected to the small Somme site (AlGu-239), which likely served as a base for warm-weather activities on the part of a small party or task group originating from one of these larger sites. Despite the variability in the sizes of the four houses at Baker, all appear to have been intensively occupied. This occupation appears to have occurred shortly before the community amalgamations that led to the rise of large, heavily defended villages on the South Slope of the Oak Ridges Moraine in the mid- to late fifteenth century. The nearby Walkington 2 site, where a single grouping of three aligned house structures was documented, appears to represent a community of similar size and organization. McNair has proved to be somewhat larger. There is little information available for the other local sites.

As is typical of many of the Late Iroquoian to early contact period sites in the Lake Ontario basin, the ceramic vessels recovered from many of the sites include many that are generally considered to be “exotic” to south central Ontario, in that they are reminiscent of St. Lawrence Iroquoian, New York Iroquois, or south-western Ontario Neutral types, but at least some of which are likely to have been manufactured locally (Trigger et al. 1980:132). As research in the region has progressed, however, it has become apparent that such diversity in ceramics should be considered a general feature of the Late

Iroquoian ceramic assemblages of the area, attesting to the cosmopolitan contacts, relationships, or origins of the people who occupied these settlements (e.g., Williamson et al. 1998). Since clan membership cut across related communities, this aspect of kinship was an important source of tribal integration (Ramsden 1990a; Jamieson 1990; Lennox and Fitzgerald 1990).

Early Post-Contact Period (A.D. 1600-1650)

Following the final abandonment of the north shore in favour of Huronia in the mid- sixteenth century, it remains possible that these people did not relinquish all claims on their former territory, returning occasionally, to mount large-scale deer-hunting expeditions, similar to those known to take place as far east as Kingston on a more or less annual basis in the early seventeenth century (Biggar 1922-1936: 59). Such forays, however, were likely comparatively brief and any sites established would have been of short duration. It is also likely that Six Nations Iroquois hunting parties were attracted to the north shore (Konrad 1981:136-137).

The denouement of Ontario Iroquoian culture as it then existed—took place during the first half of the seventeenth century well to the north and west of York Region, in the seventeenth century territories of the Huron Confederacy in Simcoe County between Barrie and Midland, the Petun confederacy in the Collingwood area to the west and the Neutral confederacy at the head of Lake Ontario and in the Niagara Peninsula. Intertribal warfare with the Five Nations Iroquois of New York State (the Seneca, Cayuga, Onondaga, Oneida and Mohawk) during the seventeenth century, exacerbated by the deleterious effects of the intrusion of Europeans (most notably the spread of epidemic diseases), resulted in the dispersal of the three Ontario Iroquoian confederacies and many of their Algonquian-speaking allies of the southern Canadian Shield by circa 1650. While many of the surviving Ontario refugees were dispersed to Quebec, Michigan, Ohio (and ultimately Kansas and Oklahoma), many others were incorporated into the New York Iroquois populations. Seventeenth century European commentators frequently remarked upon the fact that former Hurons and Neutrals comprised high proportions of the residents of post-dispersal settlements, in certain New York villages (e.g., Thwaites 1896-1901:53:19, 54:79, 81) and Iroquois could be found as accepted members of the community on Algonquian settlements (e.g., Thwaites 1896-1901:41:176).

3.5 The Later Post-Contact Period (1650-1680)

The years immediately following the dispersal of the Huron, the Neutral and their Algonquin allies in the 1640s and 1650s are poorly documented. Migrations, fission and amalgamation of formerly independent groups, and shifting territories further complicate the picture. The continuing effects of European diseases, warfare and periods of starvation through the mid-and late seventeenth century contributed to further population reductions among all Aboriginal peoples. Those who survived were freely adopted into remaining groups.

During this period, the Five Nations Iroquois established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario (Konrad 1981:135). From east to west, these Iroquois villages consisted of Ganneious, on Napanee Bay, an arm of the Bay of Quinte; Quinte, near the isthmus of the Quinte Peninsula; Ganaraske, at the mouth of the Ganaraska River; Quintio, at the mouth of the Trent River on the north shore of Rice Lake; Ganestiquiagon, near the mouth of the Rouge River; Teyaiagon, near the mouth of the Humber River; and Quinaouatoua, on the portage between the western end of Lake Ontario and the Grand River (Konrad 1981:135). Ganestiquiagon, Teyaiagon and Quinaouatoua were primarily Seneca; Ganaraske, Quinte and Quintio were likely Cayuga, and Ganneious



was Oneida, but judging from accounts of Teyaiagon, all of the villages might have contained peoples from a number of the Iroquois constituencies. It seems likely that at least some of the people who occupied the Seneca north shore sites were former Huron who had been incorporated into Iroquois communities and were thus descendants of the South Slope Iroquoian communities of the sixteenth century. Some of these individuals may even have had first-hand familiarity with the area as a result of forays south from Huronia prior to the dispersal of the Huron Confederacy.

Their main settlements were located near the mouths of the Humber and Rouge Rivers, two branches of the Toronto Carrying Place, the route that linked Lake Ontario to the upper Great Lakes through Lake Simcoe. The west branch of the Carrying Place followed the Humber River valley northward over the drainage divide, skirting the west end of the Oak Ridges Moraine, to the East Branch of the Holland River. Another trail followed the Don River watershed.

Given the physiographic, hydrographic, and ecological foundations on which these major north-south trails were established, they are likely of great antiquity. While there is certainly a correspondence between the portage route and local Late Woodland settlement distribution – Mackenzie (AkGv-2), Seed-Barker (AkGv-1), Boyd (AkGv-3), Damiani (AIGv-231) and Skandatut (AIGv-193) are all villages located along the Humber River system – it is reasonable to presume that the residents of these communities simply availed themselves of the same access routes and resources that were of importance to their ancestors.

When the Senecas established Teiaigon at the mouth of the Humber, they were in command of the traffic across the peninsula to Lake Simcoe and the Georgian Bay. Later, Mississauga and earliest European presence along the north shore, was therefore also largely defined by the area's strategic importance for accessing and controlling long-established economic networks. Prior to the arrival of the Seneca, these economic networks would have been used by the Hurons for over five hundred years, and before them, by the Algonquians. While the trail played an important part during the fur trade, people would also travel the trail in order to exploit the resources available to them across south-central Ontario, including the various spawning runs, such as the salmon coming up from Lake Ontario or herring or lake trout in Lake Simcoe.

Due, in large part, to increased military pressure from the French upon their homelands south of Lake Ontario, the Iroquois abandoned their north shore frontier settlements by the late 1680s, although they did not relinquish their interest in the resources of the area, as they continued to claim the north shore as part of their traditional hunting territory (e.g., Lytwyn 1997). The settlement vacuum, however, was immediately filled by the Anishnaubeg, a collective term for the Algonquian-speaking groups of the upper Great Lakes such as the Mississauga, Ojibwa (or Chippewa) and Odawa. At the time of European contact in the early seventeenth century, the Anishnaubeg "homeland" was a vast area extending from the east shore of Georgian Bay, and the north shore of Lake Huron, to the northeast shore of Lake Superior and into the upper peninsula of Michigan (Rogers 1978:760). Individual bands were politically autonomous and numbered several hundred people. These groups were highly mobile, with a subsistence economy based on hunting, fishing, gathering of wild plants, and garden farming (Rogers 1978:760). During the Late Woodland period, extensive exchange systems had developed between the Odawa, Ojibwa and Cree of north-central and north-eastern Ontario and the Huron and other Iroquoian groups to the south. The Odawa, in particular, played an important role in this trade through dominating traffic in goods on the upper Great Lakes.

In the European-oriented fur trade that developed in the early contact period, the Odawa continued to play an important intermediary role, although this became increasingly difficult due to the disruptions caused by the conflict between the Neutral and the Algonquian Mascouten or "Fire Nation" of central Michigan



and between the Ontario Huron, Petun and Neutral and the League Iroquois of New York. There was also a brief period of rivalry with the Potawatomi, who were based on the southern shores of Lake Michigan and had long been on close terms with the Odawa, although peaceful relations were re-established in face of the greater threat posed by the Iroquois. In the battles fought in Georgian Bay and on the north shore of Lake Huron, however, the Odawa and Ojibwa were relatively successful against the Iroquois and were only temporarily driven westward from their homes on Lake Huron (Feest and Feest 1978; Schmalz 1991). The Potawatomi, on the other hand, were forced to relocate temporarily to the Green Bay area on the western side of Lake Michigan.

The Mississauga and other Ojibwa groups began expanding southward from their homelands in the upper Great Lakes in the late seventeenth century, coming into occasional conflict with the New York Iroquois, although alliances between the two groups were occasionally established as well. It is likely that the former Iroquois settlements were maintained. While the continued appearance of these sites on maps produced during the remainder of the French regime probably reflects, to a certain degree, simple copying of earlier sources, it seems that the villages were taken up by the Anishnaubeg. Since the same settlements continued to function in the fur trade, their original village names remained on the maps. (Konrad 1981:141-142)

4.0 THE ARCHAEOLOGICAL POTENTIAL MODEL

4.1 Introduction

Archaeological site potential modelling traces its origins to a variety of sources, including human geography, settlement archaeology, ecological archaeology, and paleoecology. The basic assumption is that pre-contact land use was constrained by ecological and socio-cultural parameters. If these parameters can be discovered, through archaeology and paleoecology, past land-use patterns can be reconstructed (MacDonald and Pihl 1994).

There are two basic approaches to predictive modelling. The first is an empirical or inductive approach, sometimes referred to as correlative (Sebastian and Judge 1988) or empiric correlative modelling (Kohler and Parker 1986). This method employs known site locations, derived from either extant inventories or through sample surveys, as a guide for predicting additional site locations. The second is a theoretical or deductive approach that predicts site locations on the basis of expected behavioural patterns as identified from suitable ethnographic, historical, geographical, ecological, and archaeological analogues. While data requirements or availability tend to influence the particular orientation of the study, every modelling exercise will incorporate both inductive and deductive elements. Foremost is the need to employ any and all available data effectively and expeditiously.

Archaeological sites in the City of Vaughan represent an important heritage resource for which only limited locational data exist. While access to such distributional information is imperative to land-use planners and heritage resource managers, the undertaking of a comprehensive archaeological survey of the City in order to compile a complete inventory is clearly not feasible. As an alternative, therefore, planners and managers must depend on a model which predicts how sites are likely to be distributed throughout the municipality. Such a model can take many forms depending on such factors as its desired function, the nature and availability of data used in its development, the geographic scope of the project, and the financial resources available. Ideally these constraints are balanced in order to produce a model of maximum validity and utility.

