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Contents

Articles:

- The Chew Site (BeGx-9): A Case Study in the Value of Archived Collections
*Bonnie Glencross, Gary Warrick, Katherine Anderson, Stefanie MacKinnon,
Shannon Millar, and Samantha Patterson* 3-20
- Ethnogenesis in the Lower Great Lakes and St. Lawrence Region
William Fox 21-32
- “Roger, I think I’ve Found It”: Archaeological Investigations of the Aarel Site
(BjGp-2), A Nineteenth-Century Camboose Shanty in Algonquin Provincial Park
Roderick I. MacKay 33-64

From Grey to Print

- Huron-Wendat Sweat Baths
Allen Tyyska 64-78

Profile

- A.J. Clark: A Life in Art and Archaeology
Martin S. Cooper and George W.J. Duncan 79-88

Book Reviews

- Caribou Hunting in the Upper Great Lakes:
Archaeological, Ethnographic, and Paleoenvironmental Perspectives
(edited by Elizabeth Sonnenburg, Ashley K. Lemke, and John M. O’Shea) 89-92
- Rethinking Colonial Pasts Through Archaeology
(edited by Neal Ferris, Rodney Harrison, and Michael V. Wilcox) 93-96

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The Chew Site (BeGx-9): A Case Study in the Value of Archived Collections

Bonnie Glencross, Gary Warrick, Katherine Anderson, Stefanie MacKinnon,
Shannon Millar, and Samantha Patterson

The Chew site (BeGx-9) is located in Penetanguishene, Ontario. The only known artifact collection was acquired during 1972 excavations by a local high school. The collection, housed at Sainte-Marie among the Hurons, had not been documented except for site registration purposes. In the context of a Wilfrid Laurier University archaeological field school in May and June 2014, four senior undergraduate students examined and reported on the collection for a course credit. The students discovered that the Chew site collection contains artifacts relating to the late fifteenth- and early seventeenth-century Wendat village occupations, as well as to nineteenth century use. This paper will present the results of the artifact analyses and discuss the ongoing educational and evidential value of archived collections to the Huron-Wendat and to Ontario archaeology and history.

Introduction

Archived collections and the records created during archaeological excavation are indispensable resources for the future. Their value is immeasurable, as both evidential and educational materials. Archived collections “serve as primary sources for understanding the past” (Podany 2006:201) and have been characterized as a “new frontier for research” (Childs 2006:204; de Grooth and Stoepker 1997:299; Mabulla 1996:209). As descendant communities have become increasingly concerned with the destructive nature of archaeological excavation, the use of archived collections takes on even more importance in the promotion of minimally invasive research strategies in the context of sustainable archaeology (Ferris and Welch 2014; Sustainable Archaeology 2015). Archived collections also present needed opportunities for student experiential training and active learning. However, many existing archaeological collections have not received the attention they deserve (Childs 2006) despite their obvious value in research and education (Longford 2004; Sullivan and Childs 2003).

The Chew site (BeGx-9) is located in what is now the Town of Penetanguishene, Tay Township,

Simcoe County, Ontario (Figures 1 and 2). The Chew site is of particular importance because it is arguably the remains of Quieunonascaran, a large Wendat village and an important site for contact and trade with the French during the early seventeenth century. The only known artifact collection from the Chew site, which is the subject of this paper, was obtained during excavations that took place more than 40 years ago. With the exception of a preliminary catalogue produced for site registration purposes, the collection had not been documented. In May and June 2014, four senior undergraduate students (KA, SM, SM, and SP) examined and reported on the collection for a course credit in the context of a Wilfrid Laurier University archaeological field school directed by Bonnie Glencross and Gary Warrick. The students acquired technical and analytical skills and an awareness of the value of archived collections to minimally invasive approaches and Indigenous and sustainable archaeology. The work conducted is also significant in light of issues surrounding under-utilized archived collections, and their potential to make substantial contributions to understanding the past.

Background

History

Bordered on three sides by the waters of Georgian Bay and covering about 25 km², Tay Point includes the archaeological remains of several Wendat villages. Occupied between A.D. 1450 and 1650, the village sites likely represent the successive moves of a single community. There is a strong possibility that two of the village sites, Chew and Ahatsitstari (formerly Allen Tract), are the remains of Quieunonascaran and Carhagouha, respectively, villages visited and described in the early seventeenth century by Joseph Le Caron, Samuel de Champlain (Biggar 1922-1936), and Gabriel Sagard (Wrong 1939). Observations of Champlain and Sagard while residing in these villages comprise the first documentation of early seventeenth-century Wendat life, adding to the significance of archaeological work on Tay Point both past and present.



Figure 1. Map showing the location of the Chew site (BeGx-9).

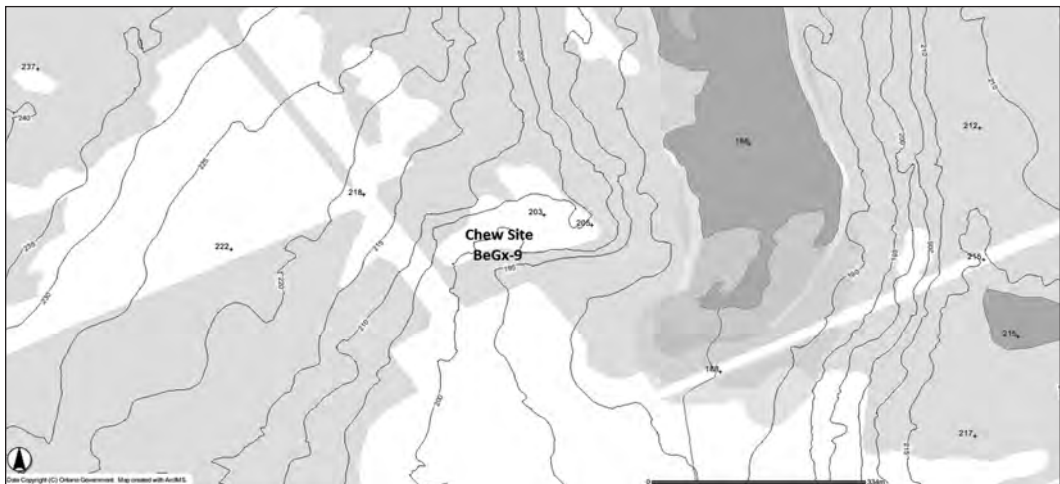


Figure 2. Topographic map showing the location of the Chew site (BeGx-9) (data from Ontario Basic Mapping).

The Wendat were one of the first Indigenous groups to experience sustained contact with Europeans in eastern Canada. The Wendat were visited in their home territory by Etienne Brûlé between 1611 and 1615 (Trigger 1976: 262) and by Joseph Le Caron, Samuel de Champlain, and 14 other Frenchmen in 1615. In 1623, Gabriel Sagard; two other Recollect friars, Joseph Le Caron and Nicolas Viel; and 11 other Frenchmen

travelled to the Wendat country (Heidenreich 1971:242-243; Trigger 1976:384). Shortly after arriving at the village of Carhagouha, where he had overwintered in 1615–1616, Le Caron moved with the village community to a new site, Quieunonascaran, where Sagard and Viel joined him (Trigger 1976:384). Sagard noted that Quieunonascaran was situated half a league (about 1.75–2.5 km [Heidenreich 2014:34-36]) from

Carhagouha, but he did not provide the direction (Heidenreich 2014:16). Here the French priests overwintered in a cabin built for them outside the village walls. The headmen of Quieunonascaran, who provided accommodations for the Recollets, claimed to control the trade route leading to Quebec (Trigger 1976:391). The resident Recollet priests and European traders had made Carhagouha and, later, Quieunonascaran important sites for contact and trade with the French in Huronia. However, Sagard and Le Caron returned to Quebec before the winter of 1624, and it is believed that Quieunonascaran declined in importance between 1623 and 1637, after which the village eventually split into three smaller hamlets (Trigger 1976:475).

Quieunonascaran is mentioned again in the Jesuit Relations pertaining to the epidemic of 1637 as one of the villages visited by Jesuit priests who regarded as their duty the baptism of as many of the sick and dying as possible (Trigger 1976:530). By A.D. 1651, the majority of Wendat people had either succumbed to disease or were dispersed as a result of warfare with the Five Nations Iroquois (Trigger 1976). Tay Point was not occupied again until the early nineteenth century, when European settlers arrived in Simcoe County (Hunter 1909). Over the course of the 300 years following the Wendat occupation of Tay Point, the once vibrant villages of Quieunonascaran and its predecessor Carhagouha faded into history. Conrad Heidenreich has reviewed available documents, maps, and archaeological evidence to determine the location of Wendat villages visited by Champlain and Sagard. Heidenreich (1968, 1971, 2014) believes that Carhagouha was located on the southeastern side of Tay Point, near Midland, and that Quieunonascaran was situated west of Carhagouha, at the south end of Penetang Bay. Confirmation of the locations of both villages can only be provided by archaeological investigations. Curiously, despite the detailed set of historical documents on the seventeenth-century Wendat, there has been relatively limited archaeological investigation of historic Wendat sites in Simcoe County. Work carried out in the 1970s, 1980s, and 1990s, mainly in the context of university

field schools (Fitzgerald et al. 1995; Johnston and Jackson 1980; Knight 1987; Latta 1985) and research (Warrick 2008), did not produce any new information regarding the location of Quieunonascaran or Carhagouha. One possible exception is found in the limited excavation conducted in 1972 at the Chew site, which produced a small collection of artifacts that remained unanalyzed until the summer of 2014. This small archived collection presents some intriguing evidence suggestive of the location of Quieunonascaran.

1972 Excavations

In 1972, the Time Sweepers, members of a secondary school archaeology club in Penetanguishene, led by teachers Paul Quilty and Raymond Marchand and local archaeologist Jamie Hunter, carried out archaeological excavations at the Chew site on Tay Point. A total of 67 contiguous 5 × 5 foot squares were dug as a trench 355 feet (108.2 m) long that transected the site east to west, and 12 additional units were excavated along the northern and southern borders of the trench to explore locations of identified longhouses. Also, 4 units were excavated in a midden located approximately 100 feet (30.5 m) south of the trench. Sieves (6.4 mm mesh) were used in the midden excavation, but no sieves were used during the trench excavation. The archaeology club dissolved sometime around 1975 when legislation regulating archaeology in the province of Ontario was introduced; however, the artifacts from the Chew site excavations remained at the secondary school. In 1979, Jamie Hunter returned to the Chew site, collecting a few more artifacts from the surface of the site, and, in 1981, he became curator at Sainte-Marie among the Hurons and requested that the Chew site assemblage be removed to Sainte-Marie's curatorial facilities, where it remains to this day. The collection is organized by artifact class—pottery, lithic, bone, European, and miscellaneous, and summarized in a catalogue. Unit provenience is recorded in ink on most artifacts. Those lacking a recorded provenience are artifacts recovered from the surface in 1979.

2014 Collection Assessment

In May and June 2014, four senior undergraduate students from the Department of Archaeology and Classical Studies, Wilfrid Laurier University, examined and reported on the Chew site collection for a course credit in the context of an archaeological field school. Because the collection lacked records and maps from the 1972 excavation, the students first recreated a map based on the artifact proveniences, as noted above. The recreated site map gives insight as to the size of the site and the spatial distribution of artifacts by unit. Students then divided the collection by artifact class with each responsible for the analysis of a separate category of artifacts—pottery, lithics, bone, and European goods.

Materials and Methods

The Chew site assemblage includes the remains of precontact and historic Wendat ceramic vessels, smoking pipes, lithic and bone artifacts, as well as a variety of European-manufactured items. A catalogue following the Parks Canada coding guide for database artifact inventory was created during the assessment of this collection.

Artifact identifications were made through gross observation and comparison to type artifacts. Ceramic vessels were identified on the basis of MacNeish's (1952) Iroquois pottery types, and ceramic pipes were categorized based on attributes described by Lennox (2000), Mathews (1980, 1981), Ramsden (1990), Ridley (1952), and Von Gernet (1985). Lithic artifacts were identified and measured according to Fox (1979). Modified bone artifacts were identified using Finlayson (1998) and White and Folkens (2005), and European items (Jesuit ring, beads, iron trade knives, gunflint, copper, and glazed ceramics) were identified with the assistance of Campbell (2006), Cleland (1972), Fitzgerald (1990), Fitzgerald et al. (1995), Garrad (1969, 2001, 2003), Kent (1983), Kidd and Kidd (1970), Mason (2003), Nelson (1968), Walthall (1991), and Wood and Wood (1974).

Results

A total of 4277 artifacts were collected from the Chew site.

Ceramic Vessels

The vast majority of artifacts in the Chew site collection are pieces of Wendat ceramic vessels, including 196 rim sherds, 41 collared rim fragments, 148 shoulder sherds, 243 neck sherds, and a total of 2029 body sherds. Five pieces were identified as juvenile vessel fragments.

Rim sherd types were identified following MacNeish (1952) (Table 1). Rims recovered from

Table 1. Rim type frequencies from Chew site.

Rim Type (after MacNeish 1952)	n	%
Huron Incised	90	46
Black Necked	34	17
Lalonde High Collar	27	14
Warminster Crossed	15	8
Lawson Incised	12	6
Sidey Notched	8	4
Middleport Criss Cross	6	3
Middleport Oblique	2	1
Untyped	2	1
Total	196	100

the trench are mostly Huron Incised (Figure 3), followed by Black Necked, with a number of Lalonde High Collar rims as well. The Lalonde High Collar rims (Figure 4) are confined to the western half of the trench and the south midden area, suggesting that the precontact Lalonde component of the site is restricted to the southwestern half of the site area. The most common type of rim recovered from the midden is Huron Incised, followed by Lalonde High Collar. It is important to note here that no Sidey Notched rims, a hallmark type of contact Wendat sites, were recovered from the south midden. The juvenile ceramics are Huron Incised, Black Necked, and Middleport Oblique. Average rim protrusion and collar thickness were recorded for all of the analyzable rims (i.e. those complete enough to record an accurate measurement). Average thickness of rims from the midden is 1 mm greater than that of rims from the trench. Collars from the midden are also on average 3 mm shorter than those from the trench.

Collared rim fragments show two motifs, linear (n=13) and triangular punctuation (n=18); the remaining collars are plain (n=10) (Figure 5).



Figure 3. Examples of Huron Incised ceramic vessel rims.

Shoulders are decorated with stamped triangular impressions (n=83) or incised linear patterns (n=33). All neck sherds are undecorated, and of the 2029 body sherds, only 80 are decorated, although none are diagnostic.

Pipes

There are 126 smoking pipe fragments in the Chew site collection: 84 pipe bowls and 42 pipe stems. Of these, 35 pipe fragments that were recorded in the original artifact catalogue, are currently missing from the collection. A total of 19 pipe fragments (6 bowls and 13 stems) were recovered from the midden area, with the remaining pipe pieces recovered from the trench. Pipe bowls were identified by type: seven acorn, seven ring, seven trumpet, five barrel, two vasiform, two plain, one coronet, one effigy, one juvenile, and one steatite (Figure 6). It is important to note that no contact-period pipe

bowls (i.e. effigy) were recovered from the south midden, reinforcing the rim sherd data to suggest that the south midden is a precontact Lalonde deposit. Of the bowl fragments, 16 could not be identified to type. Of the 40 stem fragments available, 1 likely belongs to an effigy pipe, while the other 39 pieces have no diagnostic features. Of special note is one stem fragment that is made of black steatite, which may be from an outcrop near Camden Lake, Ontario. The fragment consists of a cross-section of a pipe stem that also bears an additional drill hole indicative of the piece having been hung on some type of line and perhaps worn.

Lithics

A total of 303 lithic artifacts were recovered during excavation. Only one projectile point fragment (a base) was found. The remainder of the chipped lithics are either bipolar reduction flakes or shatter/debitage. A variety of lithic raw materials



Figure 4. Examples of Lalonde High Collar ceramic vessel rims.



Figure 5. Collared rim fragment showing linear and triangular decoration.

are represented, including quartz crystal, quartzite, Huronia chert, Onondaga chert, Kettle Point chert, Trent chert, and flakes of limestone/dolomite and sandstone. Most of the lithic raw material has a glacial origin and would have been deposited in the area as glacial till. Huronia chert, from a local source, is the most common chert type (Table 2). The single projectile point fragment was manufactured from Onondaga chert.

Bone

A total of 465 pieces of bone were recovered from the excavations. The zooarchaeological assemblage includes fish, bird, and mammal. Fish bones (90%



Figure 6. Pipe bowls. Top row, left to right: ring (a, b), acorn (c), ring (d), trumpet. Middle row, left to right: ring (f, g), juvenile (h), trumpet (i, j). Bottom row, left to right: ring (k), vasiform (l), coronet (m), acorn (n), ring (o).

of all identifiable bone) far outnumber the other classes of zooarchaeological remains. All of the bone was recovered from either the surface or from the midden area (using 6.4 mm mesh).

Human Remains

The human remains consist of two fibulae, an incisor, and a rib fragment. Both fibulae have been modified. The first, a midshaft section, has been

Table 2. *Lithic material type by weight from the Chew site.*

	Lithic Material Type					
	Huronia Chert	Kettle Point Chert	Onondaga Chert	Trent Chert	Limestone & Sandstone	Quartz & Quartzite
Projectile Point	0.00g	0.00g	0.43g	0.00g	0.00g	0.00g
Bi-Polar Flakes	36.85g	9.84g	1.28g	3.26g	15.03g	7.37g
Flake Fragments	2.41g	0.43g	0.43g	0.00g	14.03g	12.90g
Shatter/Debitage	91.00g	28.07g	3.40g	0.00g	206.10g	85.19g
Total	130.26g	38.34g	5.54g	3.26g	235.16g	105.46g



Figure 7. *European glazed earthenware.*

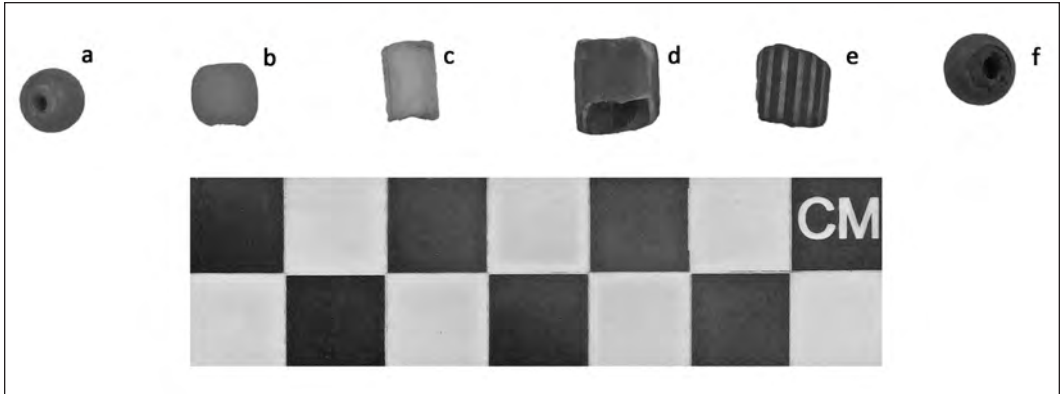


Figure 8. Glass trade beads. From left to right: Type IIa43 (a, b), Type Ia4/Ia5 (c), Type IIIc'3 (d), Type IIb10 (e), Type IVa5 (f).

cut at an oblique angle at one end, forming a point, while the second, a distal shaft section, has been cut transversely on one end. Curatorial staff of Sainte-Marie among the Hurons were made aware of the identification of human remains in the Chew site collection, and they are in the process of arranging for repatriation of the human remains with the Huron-Wendat First Nation at Wendake, Quebec.

European Artifacts

Of the 4277 artifacts recovered from the Chew site, 81 (approximately 2%) are of European origin. These include glazed ceramics; glass beads; gunflints; and copper, metal, and iron items.

Ceramics, Glass beads, and Gunflints. Three types of European ceramics are represented in the Chew site collection: spongeware (n=1), gilded refined whiteware (n=2), and glazed earthenware (n=18) (Figure 7).

Six glass trade beads are present in the collection (Figure 8). None of the beads date to glass bead period 1 (GBP1), which covers the years AD 1580–1600. A single bead typed as Ia4/Ia5 dates to GBP2, approximately AD 1600–1625/1630. The remaining beads, two typed as IIa43, and one each of type IIIc 3 and IVa5, date to GBP3, approximately AD 1625/1630–1650, and one typed IIb10 dates to the late sixteenth to early seventeenth century (Fitzgerald 1990; Fitzgerald et al. 1995). Two gunflints were found;

one is made of caramel-coloured French flint and the other is made of black flint originating in England.

Copper, Metal, and Iron. A total of 26 copper artifacts were found at the Chew site. These include 11 pieces of worked copper (including 2 rolled copper beads), 1 rivet, 1 unknown piece, and 13 additional fragments found concentrated in a single unit. The copper artifacts were not tested chemically to determine whether they are of native or European origin. The collection contains one metal ring of cast-relief with a sacred heart motif, the letter V and a crown (Figure 9). The ring is on display at the Sainte-Marie among the Hurons museum.

A total of 16 pieces of iron are present in the collection: four knives, two awls, four nails, three horseshoe nails, and three undetermined pieces. Of the three undetermined pieces, one is considered twentieth century due to the thinness of the piece and evidence of it having been bent by machinery. Three of the four knives from the Chew site date to the early seventeenth century (Figure 10). The first, a collared knife (Type 2, contact period A.D.1615–1639 or GBP2-3a, A.D. 1600–1641) would have had a handle of either wood, bone, or horn and cutting end that was either blunt rounded or sharp pointed. The second is a clasp knife (Type 1, contact A.D. 1615–1639 or GBP3, A.D. 1625–1650) with the blade held in place by a rivet. The third and final



Figure 9. *European trade ring showing detail of icons (photograph courtesy of Bill Fox).*



Figure 10. *European trade knife, stemmed with a tapered heel.*

knife has a tapered heel (Type 4, early contact period prior to A.D. 1615 or GPB2-3a, A.D. 1600–1641). This is the most complete and longest knife, measuring 121.74 mm (Garrad 2014:368–372).

The largest awl measures 160 mm in length. Fitzgerald (1990) refers to this type of awl as type 3A—an elongated, bi-pointed awl with a circular diameter. The second awl is 77.76 mm in length by 4.45 mm; has a very square cross-section; and is tapered at both ends, with one end smaller than the other. Fitzgerald (1990) refers to this type of awl as type 2A—a small, bi-pointed awl. The four nails that were recovered have uniform heads and shanks indicative of modern machine-cut nails dating to the late 1830s through to the present. Three additional nails are identified as horseshoe nails. One is considered a sprig and is 43.51 mm in length.

Miscellaneous. There are five pieces of metal that are not copper or iron; a tip of a spatula that is an iron and steel mix, one piece of a small dark metal indicative of twentieth-century materials, and three pieces similar to mason jar lids or square wash basins that are also likely early twentieth century. In addition the collection includes four pieces of mined material, two pieces of slate, one piece of coal and one piece of coke.

Discussion

Occupation History

On the basis of artifact analyses, three periods of occupation are identified at the Chew site: a late fifteenth century Wendat village (ca. A.D. 1450–1500), an early seventeenth-century postcontact Wendat village (ca. A.D. 1620–1640), and a nineteenth-century European pioneer occupation. Much of the evidence for the Wendat occupations of the Chew site comes from ceramic pipes and vessels. The ceramic evidence clearly shows that there were two separate Wendat occupations of the site, based on early and late decorative motifs and metric data. The majority of the pipes have trumpet- and ring-type bowls typical of the middle late precontact period (A.D. 1450–1500), although postcontact period acorn, barrel, vasiform, juvenile, and effigy pipe bowls are also present. The absence of contact period pipe bowls (i.e. effigy) and Sidey Notched rims from the south midden indicates that the midden is contemporaneous with the late precontact phase of the site. High frequencies of Huron Incised, Black Necked, and Lalonde High Collar sherds were recovered from areas limited to the western half of the trench that correspond to expanded excavations undertaken to investigate longhouse floors. Ceramic concentrations indicate the location of two, possibly three, longhouses also

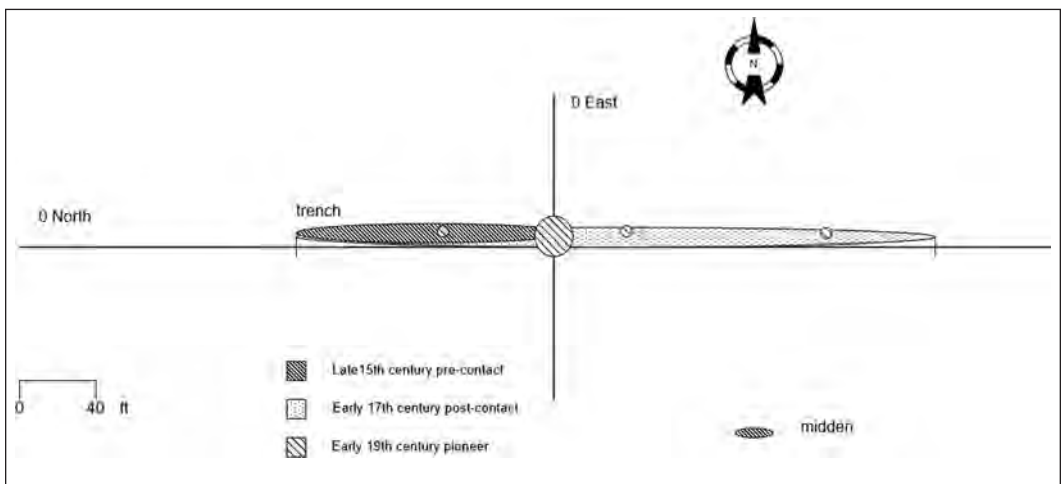


Figure 11. Map showing the locations of the different occupations.

from the late precontact period occupation. The mix of late precontact and postcontact ceramics demonstrates that the two occupations used the same location for their village. But they did not completely overlap, since late precontact period materials appear to be restricted to the western portion of the site (Figure 11). Multicomponent Wendat sites in Simcoe County have also been noted by Hawkins (2014), although village site data compiled by Warrick (1990:155) suggests that multiple occupations are rare (only 8 of the 306 well-documented Wendat sites known in 1990 were multicomponent). Birch and Williamson (2015:142) argue that village sites were never re-occupied based on evidence from the ancestral Wendat occupation of the north-west shore of Lake Ontario.

In addition to the ceramic evidence for a postcontact Wendat occupation at the Chew site, there is evidence of a European presence. First and most telling is the metal finger ring. Similar finger rings from southern Ontario appear to be restricted to sites that date to A.D. 1625/30–1650, the period during which Jesuit priests from France established missions and resided amongst the Wendat. These rings have generally been referred to as “Jesuit” rings, although recent research suggests a variety of iconographic rings were being used during the seventeenth century as trade items (Mercier 2011:21). The icons depicted on the Chew site ring clearly indicate European origins. The ring bears a cast motif with the letter V, a heart, and a crown. Fitzgerald et al. (1994:14) state that the letter V likely stands for “Veritas (Truth) while the latter two symbols represent love and loyalty.” However, the Chew site ring bears a unique combination of symbols, unlike any iconographic finger rings reported for the Northeast (Quimby 1978; Wood and Wood 1974) or rings recovered from other sites occupied by the Wendat, Petun, and Neutral in southern Ontario (Fitzgerald et al. 1994; Garrad 1994; Lennox 1984; Mason 2003; Smith and Matilla 1989).

Mercier (2011:27), who studied North American distribution networks for iconographic rings, suggests that the supply of cast rings was somewhat limited to the Northeast during the

second quarter of the seventeenth century. Also, most cast rings from this period likely originated from the commercial port of La Rochelle, France, which played a dominant role in transatlantic trade with New France (Mercier 2011:29). Importantly, the archaeological context of “Jesuit” rings from Wendat, Petun, and Neutral sites “correspond closely with the port’s most active period, the second quarter of the 17th century through early 18th century” (Mercier 2011:29).

Additional evidence for a European presence at the Chew site during the second quarter of the seventeenth century comes from the small collection of glass beads and from the earthenware sherds and iron knives. The site is believed to post-date A.D. 1600 on the basis of the absence of beads characteristic of GBP1 (A.D. 1580–1600). All but one bead is characteristic of GBP3, A.D.1625–1650. While the earthenware sherds cannot be definitively identified as early seventeenth century in age, five of the earthenware sherds were found in the same unit as the Jesuit ring. In addition, four sherds of earthenware were found in a unit that also contained remnants of a clasp knife dating to the period A.D. 1600–1641.

Finally, evidence exists for a more recent European occupation of the Chew site, likely dating from the early nineteenth century. Fragments of spongeware and gilded refined whiteware were recovered during the 1972 excavation. The spongeware was made on either pearlware, dating to A.D.1770 –A.D.1830 (Florida Museum of Natural History 2014) or whiteware, dating to A.D.1840–1920 (SMUACD 2014). Despite the fact that documents held by the land registry office show that lots in the vicinity of the Chew site were held by the British Crown until 1871, Hunter (1909:62–65, 86–87) cites the presence of traders around Penetanguishene Harbour as early as 1798, followed by a small number of families settling around Penetanguishene in 1818, and the establishment of a small Francophone community in the area in 1828. The presence of spongeware at the Chew site supports the idea of a European pioneer occupation of Tay Township beginning in the early nineteenth century.

The Chew Site: A Candidate for Quieunonascaran? Resident Recollet priests and European traders made Carhagouha and Quieunonascaran important sites for contact and trade with the French in early seventeenth-century Huronia. The locations of Carhagouha and Quieunonascaran are first alluded to by Sagard (Heidenreich 2014:34-36), who describes the locations of the two villages as being separated by half a league (1.75–2.5 km). A reference to the geographical location of Carhagouha appears later on the François-Joseph Bressani map titled *Huronum Explicata Tabula*, of 1657, marking the village's location at the southeast corner of Tay Point, near Midland. However, his pinpointing of the exact location of Carhagouha on Tay Point is questionable, given that Bressani, who was captured by Mohawk warriors while en route to Huronia, did not visit Carhagouha and would not have had first-hand knowledge of the village's exact location.

The Chew site is approximately 1.2 km (-half a league) from Ahatsitstari, a second historic period Wendat village on Tay Point. While excavation of the Chew site was limited and the exact size of the village therefore remains unknown, the size of the Ahatsitstari village can be estimated. It was about 2.2 ha and likely home to approximately 1,000 individuals. The proximity of the Chew site to the Ahatsitstari site (dating to ca. A.D. 1600–1625 based on glass bead chronology [Hawkins 2015]) and the proposed A.D. 1625–1637 date for the Chew site suggest that the Chew site represents a relocation of the Ahatsitstari site. The geographical location of the sites, their close proximity, and their dates of occupation are congruent with the descriptions and relationship of Carhagouha and Quieunonascaran as described in the historical accounts of the visits of Champlain, Le Caron, Sagard, and Viel (Trigger 1976: 384). The likelihood of multiple Wendat villages of this period and this size existing on Tay Point seems unlikely given the size of Tay Point (approximately 25 km²) and the fact that it is dominated by a single major cold water stream. Preliminary research by Bonnie Glencross and Gary Warrick, focused on field use and village relocation patterns and based on maize field requirements provided

by Birch and Williamson (2013:91-101), suggests that Tay Point could have sustained only a single large Huron village at any given time.

The European artifact data, while important to our understanding of the village relocation sequence on Tay Point, are also key to understanding the occupation history of the two village sites and the potential of Ahatsitstari and Chew as candidates for the historically documented Wendat villages of Carhagouha and Quieunonascaran, respectively. The pre-nineteenth-century European artifacts from Ahatsitstari date to the first quarter of the seventeenth century and those from the Chew site, to the second quarter of the seventeenth century, coinciding with the recorded occupations of Carhagouha and Quieunonascaran (Heidenreich 1971:34-35). Quieunonascaran, or Khionascaran (Wendat name meaning “where hemp is gathered” [Steckley 2007:138-139]), was one of the principal villages of the Attignawantan until 1637, at which time the village split into three hamlets, with the original village presumably still remaining occupied (Heidenreich 2014; Trigger 1976:531). Interestingly, the Chew site is perched on an upland area overlooking an extensive swamp, perfect habitat for swamp milkweed, a type of hemp that was gathered by the Wendat according to Sagard (Heidenreich 1971:200). While the Chew site artifact collection is somewhat limited, it does contain a unique finger ring of European origin. In addition, preliminary work conducted at Ahatsitstari suggests a significant site with a strong European influence. The density of recovered glass beads from Ahatsitstari appears to be at least 100 times higher than at other sites from the same period. Further, a wide variety of European and other (e.g., marine shell, red siltstone) trade materials have been recovered. The Frenchmen who overwintered in Carhagouha with Champlain and Le Caron in 1615–1616 likely traded for furs. In 1622–1623, French traders were living in the 1615–1616 cabin of Le Caron, situated just outside of Carhagouha, for which the Ahatsitstari site is a possible candidate (Heidenreich 1971:243, 2014). If Carhagouha was used as a trading post by these and other French traders active in the Wendat country

between 1616 and 1623, this would result in an exceptionally high density of glass beads and other European trade items being deposited in and around the village site. However, only through continued investigation of the region will the complete village relocation sequence and evidence for Wendat-European interactions be understood.

Evidential and Educational Value of Archived Collections

The work conducted by the Wilfrid Laurier University students provides an excellent case study highlighting the significance of often under-utilized archived collections. The evidential value of the Chew site collection is enormous, with implications for understanding the historical geography of the Wendat and their interactions with the French. The Chew site collection is also an example of archived collections as new “frontiers” for research. Although archaeology is equated with excavation in the minds of most archaeologists and the general public, over the past few years, Indigenous peoples have set increased restrictions on archaeological excavation and investigation of their ancestral sites (Mills et al. 2008; Nicholas 2008). In accordance with the ethics of Indigenous archaeology (i.e., archaeology that engages with and benefits Indigenous people and is sensitive to Indigenous values), analysis of existing collections honours the values of Indigenous descendant communities by limiting additional invasive excavation.

The Chew site artifacts present needed opportunities for student experiential and active learning. Students acquired a highly specialized skill set while receiving training in procedures for analysis of ceramic vessels and pipes, lithics, bone, and European trade artifacts. In most instances, these skills are not taught in the classroom and can only be gained in a real research setting. Experiential learning of this type is vital given the powerful impact upon student learning (Kolb 1984; Kolb and Fry 1975). The students, having acquired these skills, can now apply them independently in other settings and to different research questions. Through their participation in the analysis of the Chew site artifacts, the students were also provided with the opportunity to

participate in a conference presentation and co-authorship on publications, thereby strengthening their training in research and their position for entry into graduate programs. This research project also provides an exemplary undergraduate teaching resource that is essential in our commitment to incorporating research into the classroom. Undergraduate students from Wilfrid Laurier University will be exposed to our research design and results in classroom settings. As such, students will also receive sensitivity training regarding Indigenous rights and ethical issues in archaeology.

Conclusions

Iroquoian archaeology is being revitalized. The analysis of collections from past excavations, such as that of the Chew site, will allow for additional and enhanced information about Wendat culture and history to become known while also presenting new possibilities for archaeological investigations in Simcoe County. In this instance, the analysis of the Chew site artifacts has brought to light new and revealing evidence for multiple occupations of the site, including a seventeenth-century Wendat occupation that appears to correspond with the historically documented Quieunonascaran. The analysis of the Chew site artifacts has also addressed descendant community concerns regarding the destructive nature of continued archaeological excavation and serves as another integral aspect of minimally invasive research strategies. Importantly, the next generation of archaeologists have gained valuable training.

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References Cited

- Biggar, H.P.
1922-1936 *The Works of Samuel de Champlain in Six Volumes: 1615–1618*, edited by J.H. Cameron, W.F. Ganong, and H.H. Langton. Champlain Society, Toronto.
- Birch, J. and R.F. Williamson
2013 *The Mantle Site: An Archaeological History of an Ancestral Wendat Community*. AltaMira Press, Lanham, MD.
2015 Navigating Ancestral Landscapes in the Northern Iroquoian World. *Journal of Anthropological Archaeology* 39:139-150.
- Campbell, G.
2006 *The Grove Encyclopedia of Decorative Arts*. 2 vols. Oxford University Press, Oxford.
- Childs, S.T.
2006 Archaeological Collections: Valuing and Managing an Emerging Frontier. In *Of the Past, for the Future: Integrating Archaeology and Conservation: Part Seven: Challenges in Conserving Archaeological Collections*, edited by N. Agnew and J. Bridgland, pp. 201-203. Getty Conservation Institute, Los Angeles.
- Cleland, C.E.
1972 From Sacred to Profane: Style Drift in the Decoration of Jesuit Finger Rings. *American Antiquity* 37(2):202-210.
- de Grooth, M.E., and H. Stoecker
1997 Archaeological Finds in Depots and Museums: The End of the Line or the Beginning? In *Archaeological Heritage Management in the Netherlands*, edited by W.J.H. Willems, H. Kars, and D.P. Hallewas, pp. 296-315. Van Gorcum, Amersfoort.
- Ferris, N., and J.R. Welch
2014 Beyond Archaeological Agendas: In the Service of a Sustainable Archaeology. In *Transforming Archaeology: Activist Practices and Prospects*, edited by S. Atalay, L.R. Clauss, R.H. McGuire, and J.R. Welch, pp. 215-238. Left Coast Press, Walnut Creek, CA.
- Finlayson, W.D.
1998 *Iroquoian Peoples of the Land of Rocks and Water, A.D. 1000–1650: A Study in Settlement Archaeology*. Special Publication 1. London Museum of Archaeology, University of Western Ontario, London, Ontario.
- Fitzgerald, W.R.
1990 *Chronology to Cultural Process: Lower Great Lakes Archaeology, 1500–1650*. Unpublished PhD dissertation, Department of Anthropology, McGill University, Montreal.
- Fitzgerald, W.R., D.H. Knight, and P. Lennox
1994 Catholic Devotional Items from 17th Century Ontario Archaeological Sites. *Arch Notes* 94(2):9-19.
- Fitzgerald, W.R., D.H. Knight, and A. Bain
1995 Untanglers of Matters Temporal and Cultural: Glass Beads and the Early Contact Period Huron Ball Site. *Canadian Journal of Archaeology* 19:117-138.
- Florida Museum of Natural History
2014 Digital Type Collections - Pearlware, Sponged or Spattered – Type Index. https://www.flmnh.ufl.edu/histarch/gallery_types/type_index_display.asp?type_name=PEARLWARE,%20SPONGED%20OR%20SPATTERED.
- Fox, W.A.
1979 An Analysis of a Historic Huron Attignawantan Lithic Assemblage. *Ontario Archaeology* 11: 39-46.
- Garrad, C.
1969 Iron Trade Knives on Historic Petun Sites. *Ontario Archaeology* 13:3-15.
1994 Three Jesuit Rings and a Medallion from Petunia. *Arch Notes* 94(1):23-27.
2014 *Petun to Wyandot: The Ontario Petun from the Sixteenth Century*. Edited by J-L. Pilon and W. Fox. Mercury Series Archaeology Paper 174. Canadian Museum of History, Gatineau, PQ.
- Hawkins, A.
2014 Just How Anomalous Is the Ellery Site? Paper presented at the Canadian Archaeological Association Annual Meeting, London, Ontario.
2015 Report on the Public Archaeology at the Allen Tract (BeGx-76), Lot 45 Military Reserve, Town of Penetanguishene, Simcoe County, Ontario Under Licence P-081-0017-2013 (Public Archaeology). Report submitted to the Ontario Ministry of Tourism, Culture, and Sport, Toronto.

- Heidenreich, C.
 1968 A New Location for Carhagouha, Recollet Mission in Huronia. *Ontario Archaeology* 11:39-46.
 1971 *Huronia: A History and Geography of the Huron Indians, 1600–1650*. McClelland and Stewart, Toronto.
 2014 *Samuel de Champlain in Wendake: The Country of the Huron in Ontario, 1615–1616*. Oak Cottage Productions, De Grassi Point, Ontario.
- Hunter, A.F.
 1909 *A History of Simcoe County*, Vol. I. Warwick Brothers and Rutter, Toronto.
- Johnston, R.B., and L.J Jackson
 1980 Settlement Pattern at the Le Caron Site, a 17th Century Huron Village. *Journal of Field Archaeology* 7:173-99.
- Kent, B.C.
 1983 More on Gunflints. *Historical Archaeology* 17(2):27-30.
- Kidd, K.E., and M.A. Kidd
 1970 *A Classification System for Glass Beads for the Use of Field Archaeologists*. Canadian Historic Sites: Occasional Papers in Archaeology and History 1. Department of Indian Affairs and Northern Development, Ottawa.
- Knight, D.
 1987 Settlement Patterns at the Ball Site: A 17th Century Huron Village. *Archaeology of Eastern North America* 15:177-188.
- Kolb, D.A.
 1984 *Experiential Learning: Experience as the Source of Learning and Development*. Prentice-Hall, Englewood Cliffs, NJ.
- Kolb, D.A., and R. Fry
 1975 Toward an Applied Theory of Experiential Learning. In *Theories of Group Process*, edited by C. Cooper, pp. 33-58. John Wiley, London.
- Latta, M.
 1985 Archaeology of the Penetang Peninsula. *Ontario Archaeology* 20:3-24.
- Lennox, P.A.
 1984 *The Hood Site: A Historic Neutral Town of 1640 AD*. Archaeology Survey of Canada, Mercury Series Paper 121. National Museum of Man, Ottawa.
- 2000 *The Molson Site: Early 17th Century, First Nations Settlement, Simcoe County, Ontario*. London Museum of Archaeology, University of Western Ontario, London, Ontario.
- Longford, N.
 2004 Cutting through the Dirt: Training Archaeologists to Identify Their Roles in the Preservation and Conservation of Archaeological Materials. In *Our Collective Responsibility: The Ethics and Practice of Archaeological Collections Stewardship*, edited by S.T. Childs, pp. 149-168. Society of American Archaeology, Washington, D.C.
- Mabulla, A.
 1996 Tanzania's Endangered Heritage: A Call for a Protection Program. *African Archaeological Review* 13(3):197-214.
- MacNeish, R.S.
 1952 *Iroquois Pottery Types: A Technique for the Study of Iroquois Prehistory*. Bulletin 124. Anthropological Series 31. National Museum of Canada, Ottawa.
- Mason, C.I.
 2003 Jesuit Rings, Jesuits, and Chronology. *Midcontinental Journal of Archaeology* 28(2):233-257.
- Mathews, Z.P.
 1980 Of Man and Beast: The Chronology of Effigy Pipes among Ontario Iroquoians. *Ethnohistory* 27(4):295-307.
 1981 The Identification of Animals on Ontario Iroquoian Pipes. *Canadian Journal of Archaeology* 5:31-48.
- Mercier, C.
 2011 Jesuit Rings in Trade Exchanges Between France and New France: Contribution of a Technological Typology to Identify Supply and Distribution Networks. *Northeast Historical Archaeology* 40(1):21-42.
- Mills, B.J., M. Altaha, J.R. Welch, and T.J. Ferguson
 2008 Field Schools without Trowels: Teaching Archaeological Ethics and Heritage Preservation in a Collaborative Context. In *Collaborating at the Trowel's Edge: Teaching and Learning in Indigenous Archaeology*, edited by Stephen W. Silliman, pp. 25-49. University of Arizona Press, Tucson.

- Nelson, L.H.
1968 *Nail Chronology as an Aid to Dating Old Buildings*. American Association for State and Local History Technical Leaflet 48. History News 24(11). National Park Service, United States.
- Nicholas, G.
2008 Native Peoples and Archaeology. In *Encyclopedia of Archaeology*, Vol. 3, edited by D. Pearsall, pp. 1660-1669. Elsevier, Oxford.
- Podany, J.
2006 Introduction. In *Of the Past, for the Future: Integrating Archaeology and Conservation: Part Seven: Challenges in Conserving Archaeological Collections*, edited by N. Agnew and J. Bridgland, pp. 201-203. Getty Conservation Institute, Los Angeles.
- Quimby, G.I.
1978 *Indian Culture and European Trade Goods*. Greenwood Press, Westport, Connecticut.
- Ramsden, P.J.
1990 The Hurons: Archaeology and Culture History. In *The Archaeology of Southern Ontario to AD 1650*, edited by C.J. Ellis and N. Ferris, pp. 361-385. Occasional Publication 5. London Chapter, Ontario Archaeological Society, London.
- Ridley, F.
1952 The Huron and Lalonde Occupation of Ontario. *American Antiquity* 17(3):197-210.
- Sagard, G.
1939 [1632] *The Long Journey to the Country of the Hurons*, edited by G.M. Wrong. Translated by H.H. Langton. Champlain Society, Toronto.
- Saint Mary's University Archaeology Ceramics Database (SMUACD)
2014 Scottish Spongeware.
<<http://www.smu.ca/academics/departments/anthropology-scottish-spongeware.html>>
- Smith D.G., and H.U. Mattila
1989 French Jesuit "L-Heart" Finger Rings from Christian Island. *Palisade Post* 10(3):5-6.
- Steckley, J.L.
2007 *Words of the Huron*. Wilfrid Laurier University Press, Waterloo.
- Sullivan, L.P., and S.T. Childs
2003 *Curating Archaeological Collections: From the Field to the Repository*. Altamira Press, Walnut Creek, California.
- Sustainable Archaeology
2015 "Sustainable Archaeology – Our Mission Statement."
<http://sustainablearchaeology.org/about.html#mission>.
- Trigger, B.
1976 *The Children of Aataentsic: A History of the Huron People to 1660*. 2 vols. McGill-Queen's University Press, Montreal and London.
- Von Gernet, A.D.
1985 Analysis of Intrasite Artifact Spatial Distributions: The Draper Site Smoking Pipes. Museum of Indian Archaeology, University of Western Ontario, London.
- Warrick, G.
1990 *A Population History of the Huron-Petun, A.D. 900-1650*. Unpublished PhD dissertation, Department of Anthropology, McGill University, Montreal.
2008 *A Population History of the Huron-Petun, A.D. 500-1650*. Cambridge University Press, New York.
- Walthall, J.A.
1991 Faience in French Colonial Illinois. *Historical Archaeology* 25(1):80-105.
- White, T.D., and P.A. Folkens
2005 *The Human Bone Manual*. Elsevier Academic Press, New York.
- Wood, A.S., and A.H.C. Wood
1974 A Catalogue of Jesuit and Ornamental Rings from Western New York State: Collections of Charles F. Wray and the Rochester Museum and Science Center. *Historical Archaeology* 8:83-104.

Le site Chew (BeGx-9) se situe à Penetanguishene en Ontario. La seule collection connue d'artéfacts a été obtenue par une école secondaire de la localité lors de fouilles en 1972. La collection, logée à Sainte-Marie-aux-pays-des-Hurons, n'avait pas été documentée, sauf pour des raisons d'enregistrement de site. Lors d'un stage de pratique de terrain de l'Université Wilfrid Laurier en mai et juin 2014, pour obtenir des crédits, quatre finissants du premier cycle ont examiné la collection et ils ont rapporté à son sujet. Les étudiants ont découvert que la collection du site Chew contenait des artéfacts associés aux occupations de villages Wendat de la fin du 15^e siècle et du 17^e siècle et qu'elle démontrait des utilisations associées au 19^e siècle. Ce rapport présentera les résultats des analyses des artéfacts et il discutera de la valeur éducative et celle de témoignage des collections archivées relativement aux Hurons-Wendat, à l'archéologie et à l'histoire de l'Ontario.

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Ethnogenesis in the Lower Great Lakes and St. Lawrence Region

William Fox

Historical documentary sources are combined with archaeological evidence in an attempt to understand the ethnogenesis of lower Great Lakes and St. Lawrence River valley indigenous populations over a four-hundred-year period, culminating with the sustained European contact of the early seventeenth century. Late Woodland archaeological evidence from southeastern Ontario and adjacent Quebec is presented in an attempt to document the evolving relationship between Algonquian speaking groups and their Iroquoian neighbours to the east and west.

In this paper, I attempt to refine our understanding of the ethnogenesis of various indigenous groups in the eastern Great Lakes/upper St. Lawrence River valley area using documentary and archaeological data sources. Central to the discussion is one particular map (see cover illustration and Figure 1). Towards the end of 1641, the engineer Jean Bourdon travelled to the court of the French king, Louis XIII, in order to report on the status of the nascent colony of Nouvelle France (Heidenreich 1988:105). He carried with him a coloured map on native (deerskin) parchment, describing the region of northeastern North America as he knew it—indicating the various colonial territories claimed by other European nations, including the English, the Dutch, and the Spanish. More importantly, he also provided the earliest depiction of the geographic location of First Nations in the region, based on information assembled by the Jesuits, including Father Paul Le Jeune and Father Paul Ragueneau, and adventurers, such as Jean Nicolet.

This map and its coloured zones is nothing less than a political document describing the relationship of the French with particular tribes and confederacies, or at least, collectives (Heidenreich 1988:71). Centred in the map is the

green island occupied by the “bons Sauvages,” the Ontario Iroquoian confederacies—perhaps this location is the original “turtle island,” or ancient Wendake. This location may explain how the coalescent Seneca Nation came to assume responsibility for the Iroquoian “Mother of Nations” following the dispersal of the Neutral Confederacy some 10 years later (Wright 1963:57). That Neutral lineage was said to descend from the Iroquois creation mother Aataentsic, through her daughter Djigohsahse, otherwise known as Yegowaneh.

To the south are the “mechants Sauvages,” outlined in red. These were the Five Nations Iroquois, who were at war with the Wendat and their allies, the Erie, and the Central Algonquian tribes known collectively as the Fire Nation—the Sauk, Fox, Kickapoo, Mascouten, and a lesser known tribe in the Maumee River valley of northwestern Ohio, with whom the western Neutral and Odawa were at war. “Apparently, the Siouian speaking Winnebagos – with whom the Odawa were also warring (Assikinack 1858: 307), were not considered particularly friendly either.”

To the east and north are the “Algomquins,” who, for some reason, are clearly differentiated from the “Montaignets” (Innu). The eastern



Figure 1. Bourdon's map describing the extent of "Algonquin" territory. See cover of this volume of OA for a colour reproduction of this figure.

boundary separating the Wendat from the Algonquins is clearly the Trent-Severn waterway, constituting the western perimeter of the Canadian Shield and the Frontenac Axis. The southern boundary separating the Algonquins from the Iroquois is the upper St. Lawrence River. Interestingly, the Odawa territory in southern Ontario is entirely missing, and this group is relegated to a minuscule Manitoulin Island, despite their description as "a great nation" by Father Gabriel Sagard (1939:66). This depiction tends to emphasize the "island" homeland of the Ontario Iroquoian population.

Returning to the absolute and colourful boundaries on Bourdon's map between the Algonquins and Iroquoian confederacies in what are today southern Ontario and upstate New York, we should attempt to understand their meaning to the map-maker. Clearly, it is a political map, which apparently was its primary purpose.

However, if it was intended to depict simply allies and enemies or other European interests, why differentiate the friendly Algonquins from the friendly Ontario Iroquoians? The answer would appear to be simple—the Algonquins and Ontario Iroquoians spoke different languages and practiced different life styles, facts with which we are well acquainted. But what difference would this make to the French court? I suggest that it reflects logistics and, consequently, the cost of doing business. As the Jesuit Relations reiterated regularly, priests were expected to master at least one language; therefore, in multi-ethnic or paired communities such as those of the Wyandot (Petun and Odawa), two priests were required to address the spiritual reform of these peoples (Fox and Garrad 2004:126). Furthermore, while missions among the Ontario Iroquoian agriculturalists could include chapels within permanent villages, the Mission of the Holy Ghost and Mission of

Saint Peter to northern Algonquin groups were transient, or “flying operations,” due to the mobile Algonquin lifestyle, often requiring the efforts of several priests, as reported by Ragueneau in 1648 (Thwaites 1898:33:155).

By 1641, the Iroquoian lifestyle had disappeared from the St. Lawrence River valley, but it had extended to the west in southern Ontario. There were no more Central Algonquian residents east of the Detroit–St. Clair River corridor, and the Neutral and Odawa’s war against the Fire Nations had escalated to the point where Father Hierosme Lalemant reports the capture of 800 men, women, and children in a summer 1642 attack on a fortified village possibly located on the Maumee River (Stothers 1981; Thwaites 1898:27:25-27). Most groups who spoke Algonquian languages maintained a patrilineal, patrilineal society and practiced a seasonal round that mirrored those which had been the norm in the Northeast for millennia—warm season band agglomeration and winter dispersal into nuclear or extended family units (Spence et al. 1984). While their dependence on cultigens varied within environmental parameters and their dependence on fish, game, and wild plants was substantial, the differences from an Iroquoian village subsistence economy were more a matter of degree, and they were subject to trade. Dried corn had been an important trade commodity for centuries, as Le Jeune reports in 1637, when he observes that the Wendat “take corn to the Algonquins, and bring back quantities of fish” during the winter (Thwaites 1898:13:249). Algonquin groups were more mobile than most Iroquoian villagers and no doubt more adept on average at water-based travel (Thwaites 1898:21:239-241), creating the basis for a complementary, albeit fragile at times (Biggar 1929:3:101), exchange relationship. The Algonquin seasonal round for some bands modified as relations developed with the pioneering Wendat north of Lake Simcoe (Thwaites 1898:20:41) and pioneering Petun-Wyandot in the Blue Mountain region (Garrad 2014:493). Nipissing Algonquin winter camps and/or villages were established among the former and Odawa winter villages among the latter (Biggar 1929:3:96). And of course, integration

resulted in a certain amount of multi-ethnicity in most Wendat and Wyandot villages (Thwaites 1898:21:125).

Do Bourdon’s absolute and colourful boundaries delineate biologically unique populations? Not surprisingly, the initial mtDNA results of Susan Pfeiffer and co-authors suggest otherwise, with genetic mixing occurring over millennia. The authors note that “The Middle and Late Woodland periods were times of population movement, mixing and diversification in the Lower Great Lakes” (Pfeiffer et al. 2014:344). Their preliminary results suggest hazy and fluid genetic boundaries.

Turning to the archaeological evidence for the Algonquin boundary, we need to consider the genesis of Ontario Iroquoians, including the Wendat of ancient Wendake. How did this differentiation evolve and how is it evidenced? Over the past century and a half, scholars have considered the origin of the northern Iroquoians, referencing linguistic, economic, social structure, and material culture attributes. Lacking pre-contact maps, archaeologists have struggled with this issue, and they continue to do so. Interpretations based on material culture evidence have progressed and become more nuanced, as I believe that we all now agree that “ceramic vessels don’t talk.” That is, as argued 40 years ago by Hetty Jo Brumbach (1975) for the Mohawk River valley and by Fox (1990) subsequently for Odawa assemblages, they don’t speak to the ethnicity of the users, but rather to that of the producers. Likewise, cultigens, such as corn, were widely traded from horticultural producers to hunter-gatherer groups (Boyd and Surette 2010), as were faunal resources in the opposite direction, influencing ecofact and artifact geographic distributions. We also realize that longhouses were constructed by both Algonquian and Iroquoian communities, although those of the former tended to be more function-specific and transient (Fox and Garrad 2004:122). Given the ambiguity of the standard data sets considered by archaeologists attempting to assign ethnicity to northeastern sites, it is no surprise that there is as yet no consensus concerning northern Iroquoian origins.

In their seminal article entitled “The Death

of Owasco,” Hart and Brumbach (2003) similarly argue against the equation of archaeological culture-historical taxa with ethnicity and discuss the social contingency of the latter. Considering Ritchie’s “Owasco tradition” as the origin of the Five Nations Iroquois, the authors review current evidence related to specific ceramic types, longhouses and inferred matrilineal residence, nucleated villages, and maize-bean-squash (also known as “the three sisters” or the “sister triad”) agriculture. They present carbonized residue AMS dates showing that the early Owasco ceramic types considerably precede A.D. 1000; that large longhouses do not appear until the thirteenth century; that the two best documented early nucleated villages (Sackett and Kelso) date to the thirteenth century at the earliest; and that the common bean of the “sister triad” is not evident

until c. A.D. 1300. Interestingly, the Sackett village is situated in the Ontario Iroquois/Owasco frontier of upstate New York, as defined by Niemczycki (1995:Figure 1).

Using the same attributes to define northern Iroquoia, we are left with the distribution presented in Figure 2. The darker grey area at the western end of Lake Ontario encompasses all the known sites producing early Ontario Iroquoian ceramics, large longhouses, a nucleated or palisaded community pattern, and evidence for the sister triad by the mid-thirteenth century. This ceramic complex begins sometime in the tenth century, as do nucleated villages such as Porteous (Stothers 1977:125, Map 8) and Elliott II (Fox 1986:14, Figure 3). Larger longhouses are being constructed during the thirteenth century, and beans have been identified from the thirteenth-

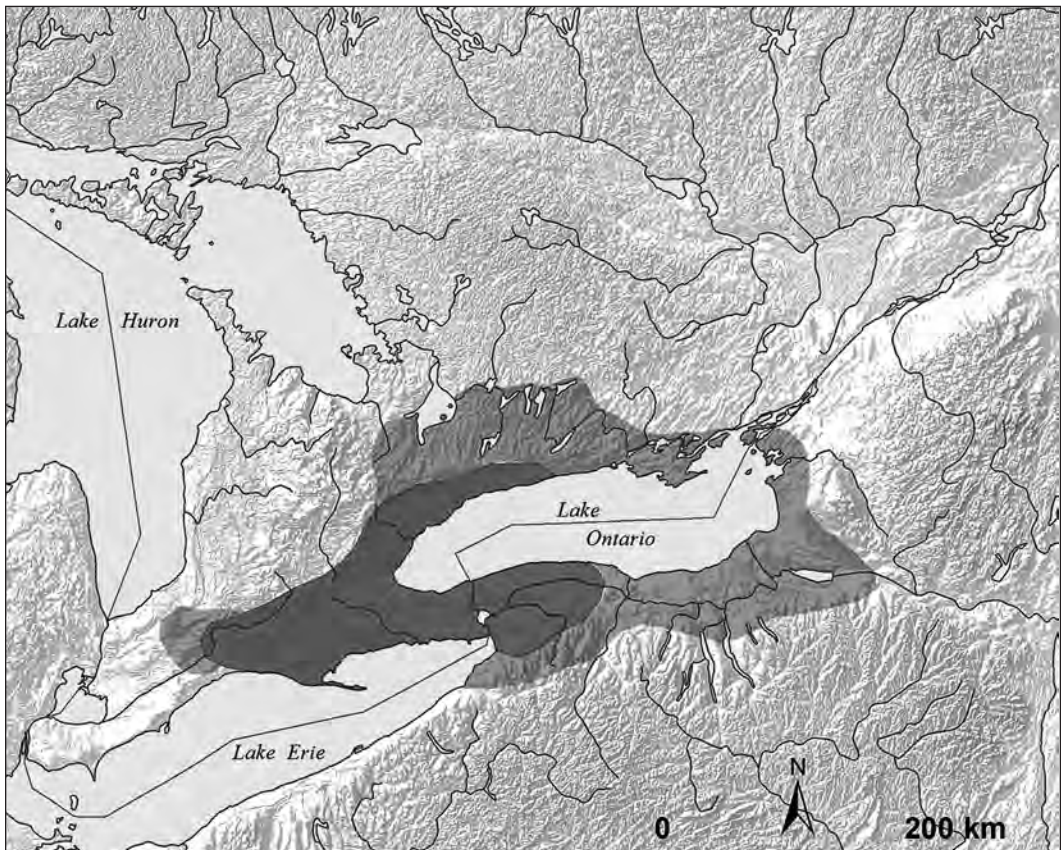


Figure 2. Regional distribution of “Iroquoians” c. 1250 A.D., with subsequent extent of Iroquoian ethnogenesis by 1300 A.D.

century Gunby village site, north of Hamilton (Fecteau 1985:210, Appendix 1). The lighter grey zone around all of Lake Ontario (Figure 2) encompasses the subsequent geographic distribution of these attributes during the fourteenth century. If this material culture constellation can be equated with Iroquoian ethnicity (Williamson 2012), then this map may reflect the process and progress of ethnogenesis among Algonquian groups and/or the movement of Iroquoians into their territory, as with the Wendat Bear Tribe arriving in Kiskakon Odawa lands (Fox 1990:473).

Assuming for the moment that it does, and understanding that there is a rapid expansion of this archaeological expression to the north and east during the fourteen century, the question becomes, how far east and how quickly did this process of ethnogenesis, or “Iroquoianization,” spread among resident populations? Seventeenth-century historical records and archaeological evidence relating to the preceding centuries would seem to indicate that this process terminated at or around the Hudson River in New York state, although the Algonquian-speaking Mahican did occupy longhouses in palisaded villages and appear to have displayed a matrilineal descent system when contacted by Europeans in the early seventeenth century (Brasser 1978:198-200, Figure 2). In the St. Lawrence River valley, excavations on the fourteenth-century Lanoraie site northeast of Montreal have documented the earliest longhouse structure in the region. Ceramics of Iroquoian form and decorative motif are present, albeit often decorated in anomalous techniques for the period, at least for among Iroquoians to the west—fine cord-wrapped stick and dentate impressions (Clermont et al. 1983:77), characteristic of earlier Middle Woodland (Abel and Fuerst 1999:20-24, Figures 12 and 13; Chapdelaine 1990:Table 4, Plates 4–6; Wright 1980) and later Transitional wares in the upper St. Lawrence River valley (Abel and Fuerst 1999:24-27, Figure 14; Morin 2001:69).

To the northeast, along the Richelieu River, a scattered community pattern of five longhouses was recorded on the mid-fifteenth-century Mandeville site (Chapdelaine 1989), while south

of Montreal, a similarly diffuse distribution of six longhouses with no palisade was recorded on the sixteenth-century Mailhot-Curran site (Chapdelaine 2015:136). The neighbouring late fifteenth-century Droulers village community pattern is more compact, but has not yet produced evidence of a palisade. These sites appear quite different than the palisaded and earthwork defended Prescott cluster of early sixteenth-century St. Lawrence Iroquoian villages, including Roebuck (Jamieson 1990:Figure 12.9; Wintemberg 1936) and Maynard-McKeown (Jamieson 1990:398; Pendergast 1988), which are similar to Jefferson County villages in upstate New York. In fact, Tim Abel (2001:173, 180, Figure 48, 2002:149) has suggested that the Prescott cluster represents a direct continuation of the Black Lake cluster sequence, situated immediately to the south and across the St. Lawrence River. I believe that it is significant that Cartier only references a palisade surrounding the village of Hochelaga, and not at other “villages” further downstream along the St. Lawrence, such as Stadacona. Similarly, there are no compact, palisaded villages immediately to the west and north of the South Nation River homeland of the Prescott cluster St. Lawrence Iroquoians.

The strongest evidence for an Iroquoian occupation of the St. Lawrence River valley derives from Cartier’s reports concerning his first and, particularly, his second and third voyages. During his first voyage, in 1534, Cartier surveyed only the Gulf of St. Lawrence coast, meeting a number of different indigenous peoples, including a group at Chaleur Bay who held up skins on sticks (Cook 1993:20), an obvious invitation to trade, which Cartier accepted. An important piece of linguistic evidence is the lexicon recorded by Cartier on this voyage, which is clearly Iroquoian in form (Cook 1993:32-34). However, it should be remembered that trade or pidgin languages existed in what are now the maritime provinces of Canada. The linguist Peter Bakker (1989) has demonstrated that a Basque-Native language had developed in the Gulf of St. Lawrence region by the mid-sixteenth century, and John Steckley (2012:154) has commented on the probable St. Lawrence Iroquoian origin of trade-related words in Sagard’s

Wendat dictionary, referring to them as “pidgin St. Lawrence Iroquoian terms”. Perhaps Donnacona’s people were attempting to converse with the French in an Iroquoian trade language. During his second voyage, in 1535–1536, Cartier (Cook 1993:90-95) again provided an Iroquoian lexicon, which he recorded from Donnacona’s people and from his brief visit to the palisaded village of Hochelaga.

There have been no palisaded Iroquoian villages reported in the Frontenac Axis of the Canadian Shield, nor do we expect to discover any, given the environmental character of this region. But despite the green-yellow Trent-Severn boundary on the Bourdon map, centuries of interaction between Iroquoian lowlanders and Algonquin highlanders (Ramsden in press) had modified the material culture of both groups. Consequently, Alexander von Gernet, regarding an archaeological assemblage from the sixteenth-century Highland Lake site, which is situated squarely in Algonquin territory in the backwaters of the Madawaska River drainage, has noted that

“many of these specimens would not be out of place in a prehistoric Huron site several hundred kilometres to the west” (Von Gernet 1992:122). Further west in that drainage, the Baptiste Lake site (Boyle 1892a:13-15) has produced an artifact assemblage roughly contemporary with the Bourdon map, which illustrates the diverse material culture characteristic of an Algonquin band who controlled the important Madawaska to Lake Simcoe route between the Ottawa River valley Algonquins and the Wendat. These were the Mataouchkarini or, perhaps, the Sagahiganirini (Figure 3), and they are very likely the group called the Tontthrataronons by the Wendat, who moved to the Arendharonon mission village of Saint-Jean Baptiste in 1641 (Thwaites 1898:21:247). John Steckley (1990:22) has suggested that this Wendat name may be translated as “they are living at a height of land,” which could well refer to a location on a divide between watersheds. The Baptiste Lake site has produced goods reflecting trade connections with the French (metal goods) and Wendat (ceramic vessels), as well as a range of

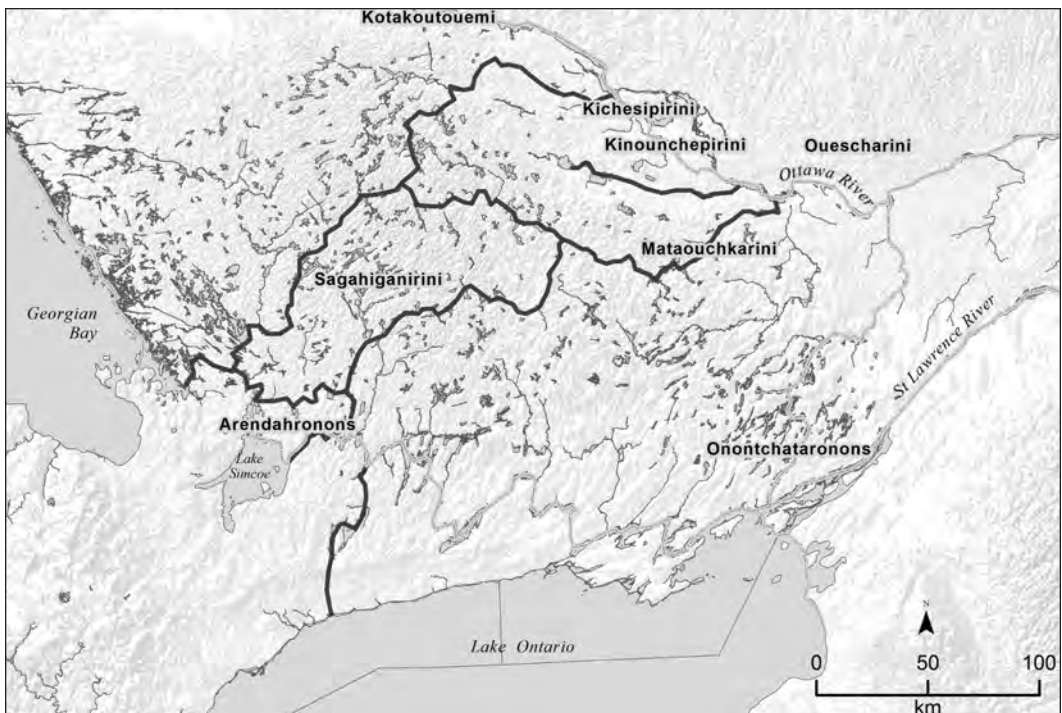


Figure 3. Location of early-seventeenth-century Algonquin bands and the Wendat Rock Tribe.

Algonquin artifacts, such as carved antler paint sticks (Fox and Pilon 2016). Among them is a form of stone pipe which holds a story concerning Algonquin–Iroquoian artifact industries and exchange. The Baptiste Lake site produced the largest and most diverse collection of vasiform steatite pipes from anywhere in Ontario (Figure 4a–c). While we have not yet pinpointed the source of this pipestone, we assume that it is situated at no great distance in this region of the Canadian Shield. No similar specimens have been reported from contemporary Wendat or Petun sites. However, these pipes do occur regularly in c.1620–1640 Neutral cemeteries, and just recently, Jean-Luc Pilon has brought to the author’s attention an Ohio pipestone disc pipe from the Nepean area. It almost certainly derives from the Fort Ancient population of the Ohio River valley, via the Neutral (Fox 2002), but it is unique in displaying a possible totemic symbol—a beaver (Figure 4d).

An observation by the Recollet priest Father Joseph de la Roche Daillon during his visit to the Neutral in 1626–1627 may be illuminating. Daillon laments that, during his attempt to encourage the Neutral to trade directly with the French on the St. Lawrence River, “Yroquet, a savage well known in those parts, who had come

there with twenty of his people to hunt beaver and had killed quite five hundred of them, would never give us any indication by which to find out the mouth of the [St. Lawrence] river” (Sagard 1937:880–892). Here we have an Algonquin withholding geographic information to protect a trade relationship with the French traders at Lachine, and what better symbol of alliance and friendship could there be than a gift exchange of a stone pipe or calumet (Lawson 1984:217)? Iroquet was a chief of the Algonquin Onontchataronons, and a very influential friend of Champlain. He was the person entrusted by Champlain to bring a young French boy, Etienne Brulé, to live among the Onontchataronons and Arendarhonons at their joint winter village in the winter of 1610–1611 (Biggar 1925:2:138–142). Iroquet and his Wendat connections were the reason that the Arendarhonon tribe retained control of the Wendat–French trade during the first decades of the seventeenth century.

The location of Iroquet’s people is not clearly indicated on Bourdon’s map, but Conrad Heidenreich raises the possibility that the names “Chonkande” and “Tovkhiaronon” may refer to the Onontchataronon “or some other remnant of the St. Lawrence Iroquois” (Heidenreich 1988:105). He cites Jesuit references to

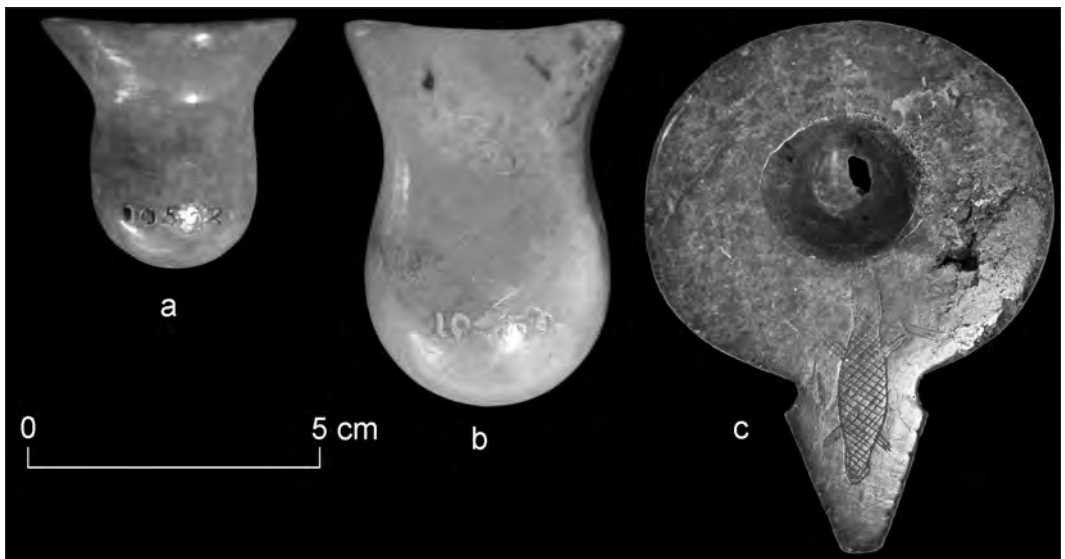


Figure 4. Baptiste Lake steatite vasiform pipes (a, b) and Nepean Ohio pipestone disc pipe (c).

Onontcharonon chiefs—two with Iroquoian and two with Algonquian names—and suggests that the group “were a remnant of the Iroquoian speaking Hochelagans, occupants of Montreal Island in the 16th century” (Heidenreich 1988:102-3; see also Pendergast 1999:90-92 for an extensive discussion of this matter). In his linguistic analysis of the Bourdon map, John Steckley suggests that “Chonkande” is a poor rendition of a group name in the Jesuit Relations which can be translated as “people who are joined”—essentially, a coalescent group (Steckley 1990:20). He sees in “Tovkhiaronon” a possible reference to Montreal Island, and he further suggests that the term “Otohiaden” on the map may relate to a portage at the “height of land between the Ottawa and Trent River systems” (Steckley 1990:22). This may well be a reference to the homeland of the Baptiste Lake people. Given the above, the southern Algonquin Onontcharonon at the turn of the seventeenth century may well have been a coalescent group, who further coalesced with Algonquin bands to the north by the 1630s, when epidemics diminished local populations and the Iroquois threat intensified. Brulé’s defection to the Wendat Bear Tribe or Attignawantan at this time may reflect the passing of Iroquet and the transfer of control of the French trade from the Arendharonon to the more senior and powerful Attignawantan of the Wendat confederacy.

The ubiquitous distribution of fifteenth- and sixteenth-century Wendat ceramics throughout the Frontenac Axis and the lower Ottawa River drainage basin speaks to the ties between the resident Algonquins and colonizing Wendat tribes to the west, as does the seventeenth-century distribution of Wendat ceramics and French goods. This stands in contrast to the limited distribution of sixteenth-century St. Lawrence Iroquoian vessels north of the Prescott cluster of St. Lawrence Iroquoian villages (Boyle 1892b:24, Figure 2; Fox and Pilon 2016; Pilon 2006), which led James Pendergast (1999:112) to suggest that “a hiatus in the [Algonquin] occupation of the Ottawa River valley prior to circa 1580... must remain a credible option which demands reconciliation.” The Highland Lake site, among

others, argues against this potential scenario. What the archaeological evidence does confirm is a trade relationship between the Wendat and Algonquins of the Frontenac Axis and Ottawa River valley, which existed between the fourteenth and seventeenth centuries (see also Williamson in press). It was strong, being mutually beneficial, with the major commodities being corn from the Wendat and game and hides from the Algonquins. It may be that this multi-ethnic alliance, at times aggressive to other trade networks, constituted the “Agojuda, which means bad people, who were armed to the teeth” and who lived up the Ottawa river, as described by the Hochelagans to Cartier in 1535 (Cook 1993:65).

The Prescott cluster St. Lawrence Iroquoians and their brothers and sisters to the east at Hochelaga were relative newcomers to what is now southeastern Ontario and the island of Montreal, having moved north and east down the upper St. Lawrence River at the turn of the sixteenth century (Fox and Pilon 2016). These people were not the trading partners of the Algonquins or Wendat during the succeeding century, and they had inserted themselves into a strategic position to intercept the burgeoning trade with an ever increasing number of European vessels plying the upper St. Lawrence River. Their regular contact with Europeans by the time of Cartier’s visit is supported by Bakker’s (1989:126) identification of two Basque words in Cartier’s second voyage word list. Given the negative Stadaconan response to Cartier’s desire to visit Hochelaga (Cook 1993:53-56), they were not considered close allies of Donnacona’s people either, as suggested by Trigger (1972:45).

In his seminal paper entitled “The Ottawa River Algonquin Bands in a St. Lawrence Iroquoian Context,” James Pendergast (1999:93) provides a succinct summary of the evolving military-based trade relationship between Champlain and the French and a variety of primarily Algonquian groups, beginning with his 1603 encounter at Tadoussac with the Montagnais, Etchemin (Eastern Abenaki or Maliseets), and Algonquins (Kichisiperini) during their victory celebration over a defeat of the Mohawk (Biggar 1922:1:107-109). The war party

he accompanied to Lake Champlain to attack the Mohawk in 1609 included Montagnais, Algonquins (Onontchataronons), and Wendat (Arendharonons) (Biggar 1925:2:68, 104-105). The relationship between the French and the Onontchataronon and Arendharonon was strengthened through an exchange of children (Etienne Brulé and “Savignon”) between Champlain and Iroquet in 1610 (Biggar 1925:2:138-142) and was further reinforced by Champlain’s visit to ancient Wendake in 1615, during which time he participated in Iroquet’s war party against the Five Nations Iroquois (either the Oneida or the Onondaga). The relationship between Iroquet’s people, a coalescent Algonquin–St. Lawrence Iroquoian group, and the Arendharonon tribe of the Wendat was expressed in the co-location of their principal winter settlements (Fox and Garrad 2004:129), which in all likelihood stemmed from the coalescent nature of the Arendharonon population, based on archaeological evidence from the Kawartha Lakes region, their sixteenth-century homeland. Peter Ramsden’s research has evidenced an influx of St. Lawrence Iroquoian peoples into late-period (1570–1600) Wendat communities in the region (Ramsden 1990:91, Table 1, in press), including on the five-hectare Trent-Foster village site (Fox and Pilon 2016: 209). Given the above, there is a considerable possibility that there were consanguineal ties between the Onontchataronon and Arendharonon peoples related to the late sixteenth-century adoption of western St. Lawrence Iroquoian refugees.

And what of the Stadaconan peoples? As noted by Martijn, “Evaluating the significance of Iroquoian or Iroquoian-like material from sites on the north shore [of the St. Lawrence] is more complicated than was previously assumed. Problems raised by the importation, utilization, and imitation of Iroquoian ceramic wares by Northern Algonquians require careful consideration” (Martijn 1990:58). In wrestling with the application of the term “Iroquoian” in the context of ethnicity, language, and material culture, Abel (2001:168) asks, “should we technically call all horticultural late prehistoric populations of the St. Lawrence Valley St.

Lawrence Iroquoians?” How far had Iroquoian ethnogenesis proceeded among the “St. Lawrence Iroquoians” to the east of Hochelaga? If a portion of the Prescott cluster population of palisaded villagers could amalgamate with adjacent Algonquin populations to the extent that the Onontchataronon would be identified as ethnically Algonquin by Champlain, how difficult would it be for the less acculturated Stadaconans to be incorporated into the more easterly Algonquian peoples mentioned by him? Were they “Etchemin” and “Montagnais” by the first decade of the seventeenth century? Perhaps we should believe the Algonquin Elders who informed the Jesuits that their “ancestors formerly inhabited the Island of Montreal” (Thwaites 1898:29:147).

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References Cited

- Abel, T.J.
 2001 *The Clayton Cluster: Cultural Dynamics of a Late Prehistoric Village Sequence in the Upper St. Lawrence Valley*. Unpublished PhD dissertation, Department of Anthropology, State University of New York, Albany.
 2002 Recent Research on the St. Lawrence Iroquoians. *Archaeology of Eastern North America* 30:137-154.
- Abel, T.J., and D.N. Fuerst
 1999 Prehistory of the St. Lawrence River Headwaters Region. *Archaeology of Eastern North America* 27:1-53.
- Assikinack, F.
 1858 Social and Warlike Customs of the Odahwah Indians. *The Canadian Journal of Industry, Science, and Art: Conducted by the Editing Committee of the Canadian Institute*: 297-309. Toronto.
- Bakker, P.
 1989 "The Language of the Coast Tribes Is Half Basque": A Basque-American Indian Pidgin in Use between Europeans and Native Americans in North America, ca. 1540–ca. 1640. *Anthropological Linguistics* 31(3-4):117-147.
- Biggar, H.P.
 1922–1936 *The Works of Samuel de Champlain in Six Volumes: 1615–1618*, edited by J.H. Cameron, W.F. Ganong, and H.H. Langton. Champlain Society, Toronto.
- Boyd, M., and C. Surette
 2010 Northernmost Precontact Maize in North America. *American Antiquity* 75(1):117-133.
- Boyle, D.
 1892a Herschell. *Annual Archaeological Report and Canadian Institute* (Session 1891). Being an Appendix to the Report of the Minister of Education, Ontario, pp. 13-15. Toronto.
- 1892b Pottery. *Annual Archaeological Report and Canadian Institute* (Session 1891). Being an Appendix to the Report of the Minister of Education, Ontario, pp. 23-26. Toronto.
- Brasser, T.J.
 1978 Mahican. In *Northeast*, edited by B.G. Trigger, pp. 198-212. Handbook of North American Indians, vol. 15, W.C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Brumbach, H.J.
 1975 "Iroquoian" Ceramics in "Algonkian" Territory. *Man in the Northeast* 10:17-28.
- Chapdelaine, C.
 1989 *Le Site Mandeville à Tracy: variabilité culturelle des Iroquoiens du Saint-Laurent*. Recherches Amérindiennes au Québec, Saint-Laurent.
 1990 Un Site du Sylvicole Moyen Ancien sur la plage d'Oka (BiFm-1). *Recherches Amérindiennes au Québec* 20(1):19-35.
- Chapdelaine, C. (editor)
 2015 *Mailhot-Curran: un village Iroquoien du XVIIe siècle*. Paléo-Québec 35. Recherches Amérindiennes au Québec, Montreal.
- Clermont, N., C. Chapdelaine, and G. Barré
 1983 *Le Site Iroquoien de Lanoraie: témoignage d'une maison-longue*. Recherches Amérindiennes au Québec, Saint-Laurent.
- Cook, R. (editor)
 1993 *The Voyages of Jacques Cartier*. University of Toronto Press, Toronto.
- Fecteau, R.D.
 1985 *The Introduction and Diffusion of Cultivated Plants in Southern Ontario*. Unpublished MA thesis, Department of Geography, York University, Toronto.
- Fox, W.A.
 1986 The Elliott Villages (AfHc-2)—An Introduction. *KEWA (Newsletter of the London Chapter, Ontario Archaeological Society)* 86(1):11-17.
 1990 The Odawa. In *The Archaeology of Southern Ontario to A.D. 1650*, edited by C.J. Ellis and N. Ferris, pp. 457-473. Occasional Publication 5. London Chapter, Ontario Archaeological Society, London.
- 2002 Thaniba Wakandagi among the Ontario Iroquois. *Canadian Journal of Archaeology* 26(2):130-151.

- Fox, W.A., and C. Garrad
 2004 Hurons in an Algonquian Land. *Ontario Archaeology* 77/78:121-134. [Papers in Honour of Martha Latta, guest edited by M. Kapches and P. Reed]
- Fox, W.A., and J.-L. Pilon
 2016 Evidence for Sixteenth Century Exchange: The Ottawa and Upper St. Lawrence Waterways. In *Contact in the 16th Century: Networks among Fishers, Foragers and Farmers*, edited by B. Loewen and C. Chapdelaine, pp. 199-215. Mercury Series Archaeology Paper 176. Canadian Museum of History, Gatineau, and University of Ottawa Press, Ottawa.
- Garrad, C.
 2014 *Petun to Wyandot: The Ontario Petun from the Sixteenth Century*, edited by J.-L. Pilon and W. Fox. Mercury Series Archaeology Paper 174. Canadian Museum of History, Gatineau, and University of Ottawa Press.
- Hart, J.P. and H.J. Brumbach
 2003 The Death of Owasco. *American Antiquity* 68(4):737-752.
- Heidenreich, C.E.
 1988 An Analysis of the 17th Century Map 'Nouvelle France'. *Cartographica* 25(3):67-111.
- Jamieson, J.B.
 1990 The Archaeology of the St. Lawrence Iroquoians. In *The Archaeology of Southern Ontario to A.D. 1650*, edited by C.J. Ellis and N. Ferris, pp. 385-404. Occasional Publication 5. London Chapter, Ontario Archaeological Society, London.
- Lawson, J.
 1984 *A New Voyage to Carolina*, edited by H. Lefler. University of North Carolina Press, Chapel Hill. Originally published in 1709.
- Martijn, C.A.
 1990 The Iroquoian Presence in the Estuary and Gulf of the Saint Lawrence River Valley: A Reevaluation. *Man in the Northeast* 40:45-63.
- Morin, E.
 2001 Early Late Woodland Social Interaction in the St. Lawrence River Valley. *Archaeology of Eastern North America* 29:65-100.
- Niemczycki, M.A.P.
 1995 Ceramics and Ethnicity in West-Central New York: Exploring Owasco-Iroquois Connections. *Northeast Anthropology* 49:43-54.
- Pendergast, J.F.
 1988 The Maynard-McKeown Site. *Arch Notes* 88(5):11-22.
 1999 The Ottawa River Algonquin Bands in a St. Lawrence Iroquoian Context. *Canadian Journal of Archaeology* 23(1-2):63-136.
- Pfeiffer, S., R.F. Williamson, J.C. Sealy, D.G. Smith, and M.H. Snow
 2014 Stable Dietary Isotopes and mtDNA from Woodland Period Southern Ontario People: Results from a Tooth Sampling Protocol. *Journal of Archaeological Science* 42:334-345.
- Pilon, J.-L.
 2006 The Archaeological Site on the James Lusk Farm, Luskville, Quebec: St. Lawrence Iroquoians in the Ottawa Valley? Manuscript on file at the Canadian Museum of History, Gatineau.
- Ramsden, P.G.
 1990 Saint Lawrence Iroquoians in the Upper Trent River Valley. *Man in the Northeast* 39:87-95.
 in press Becoming Wendat: Negotiating a New Identity around Balsam Lake in the Late Sixteenth Century. In *The Huron-Wendat Nation and St. Lawrence Iroquoians: Their Origins and Relations*, edited by N. Gupta and L. Lesage. Special Publication of the Ontario Archaeological Society and the Huron-Wendat Nation.
- Sagard, G.
 1937 *Histoire du Canada et voyages que les Frères mineurs récollets y ont faits pour la conversion des infidèles*. Translated by H.H. Langton. 4 vols. Paris.
 1939 [1632] *The Long Journey to the Country of the Hurons*, edited by G.M. Wrong. Translated by H.H. Langton. Champlain Society, Toronto.
- Spence, M.W., R.H. Pihl, and J.E. Molto
 1984 Hunter-Gatherer Social Group Identification: A Case Study from Middle Woodland Southern Ontario. In *Exploring the Limits: Frontiers and Boundaries in Prehistory*, edited by S. De Atley and F. Findlow, pp. 117-142. BAR International Series 223. Oxford: British Archaeological Reports.
- Steckley, J.L.
 1990 The Early Map "Nouvelle France": A Linguistic Analysis. *Ontario Archaeology* 51:17-29.

- 2012 Trade Goods and Nations in Sagard's Dictionary: A St. Lawrence Iroquoian Perspective. *Ontario History* 54(2):139-154.
- Stothers, D.M.
1977 *The Princess Point Complex*. Mercury Series Paper 58. Archaeological Survey of Canada, National Museum of Man, Ottawa.
- 1981 Indian Hills (33W04): A Protohistoric Village in the Maumee River Valley of Northwestern Ohio. *Ontario Archaeology* 36:47-56.
- Thwaites, R.G. (editor)
1896-1901 *The Jesuit Relations and Allied Documents*. 73 vols. Burrows Brothers Company, Cleveland.
- Trigger, B.G.
1972 Hochelaga: History and Ethnohistory. In *Cartier's Hochelaga and the Dawson Site*, edited by J.F. Pendergast and B.G. Trigger, pp. 2-108. McGill-Queen's University Press, Montreal.
- Von Gernet, A.
1992 A Possible Matouweskarini Hunting Camp: Excavations at the Highland Lake Site, Renfrew County. *Annual Archaeological Report Ontario, New Series* 2:120-124. Ontario Heritage Foundation, Toronto.
- Williamson, R.F.
2012 What Will Be Has Always Been: The Past and Present of Northern Iroquoians. In *The Oxford Handbook of North American Archaeology*, edited by T. Pauketat, pp. 273-284. Oxford, Oxford University Press.
- in press East-West Interaction among Fifteenth-Century St. Lawrence Iroquoian and North Shore of Lake Ontario Ancestral Wendat Communities. In *The Huron-Wendat Nation and St. Lawrence Iroquoians: Their Origins and Relations*, edited by N. Gupta and L. Lesage. Special Publication of the Ontario Archaeological Society and the Huron-Wendat Nation.
- Wintemberg, W.J.
1936 *Roebuck Prehistoric Village Site, Grenville County, Ontario*. Bulletin 83. National Museum of Canada, Ottawa.
- Wright, G.K.
1963 *The Neutral Indians: A Source Book*. Occasional Paper 4. New York State Archaeological Association, Rochester.
- Wright, P.J.
1980 Prehistoric Ceramics from the Red Horse Lake Portage Site (BdGa-12) Eastern Ontario. *Archaeology of Eastern North America* 8:53-70.

Des sources documentaires historiques sont jumelées avec des documents archéologiques afin de tenter de comprendre l'ethnogenèse des populations indigènes de la vallée du Saint-Laurent sur une période de quatre cents ans, culminant avec le contact européen prolongé du début du dix-septième siècle. Des documents archéologiques de la période sylvicole supérieure du sud-est de l'Ontario, et à proximité du Québec, sont présentés afin de tenter de documenter l'évolution des relations entre les groupes de langue algonquienne et leurs voisins iroquoiens, à l'est et à l'ouest.

**“Roger, I think I’ve Found It”:
Archaeological Investigations of the Aarel Site
(BjGp-2), A Nineteenth-Century Camboose Shanty in
Algonquin Provincial Park**

Roderick I. MacKay

The remains of a camboose shanty dating from about 1871 were located in Algonquin Provincial Park. Some camboose shanty remains in the park have been “explored” for artifacts by woods-workers or canoeists, but this site appears to have been undisturbed in that manner. Excavations were carried out periodically between 2008 and 2012 to examine the hearth and living areas inside the foundation mound footprint and the immediate surrounding area. The artifacts, and historical documents, suggest that the shanty was operated by the Perley and Pattee Lumber Company of Ottawa. Although the shanty itself appears to be “complete,” the outbuildings that should be associated with it are absent or have not yet been located. It is here suggested that such logging period structures should be investigated with a degree of urgency, before erosion and other environmental factors further modify the archaeological record.

Introduction

Much of the history of the nineteenth century of the Ottawa Valley and the area that became Algonquin Provincial Park was involved with the annual cut of red pine and white pine that would be shipped to Great Britain or the United States. The men who cut the pine overwintered in log structures known as camboose camps or camboose shanties (Figure 1). When they went to work in the woods, they “went to shanty” and were known as shantymen.

The term shanty may have been derived from the French *chantier*, meaning a workplace. The term camboose is said to be a nautical term originating from the Low German word meaning “the cook’s galley on a merchantman” (Whitton 1943:112) or from the Dutch word for a ship’s cabin house (Lower 1973:199). Another suggested derivation is from an Algonquian word for a

hearth, cambass (Craig Macdonald, personal communication 2013). The term *camboose* originally may have been used for the mound of sand placed for cooking purposes on the timber rafts that drifted down the Ottawa River post-1806, before the term and design were brought “indoors.”

The camboose shanty (Figure 1) appears to have been a distinctive architectural feature of the Ottawa Valley, although not unique to that area. Literature references tell us a camboose shanty was a dwelling made of pine logs, constructed by the very men who would live in it over the winter (MacKay 2015:16, 18, 20, 27, 32). Its single room was generally rectangular, a bit longer than wide, measuring anywhere from roughly 25 feet (7.6 m) square (Anonymous 1862:48) to 40 feet (12 m) by 30 feet (9.1 m) inside (Phipps 1885:108). The structure would house up to 50 men nightly from



Figure 1. *Camboose shanty at Black River, Quebec, about 1900. Charles Macnamara collection, Ontario Archives. Used with permission.*

November to April, within the pine stands it was their job to cut (Figure 2). Central in the building was a raised mound of sand, framed by squared wooden beams, over which gaped a chimney up to 2 m across at its base. On the mound of sand was an arrangement of stones within which a fire was kept burning, day and night, from the early autumn through to the early days of spring. There, we are told, the cook was “an absolute sovereign in his own domain” (Timber Trades Journal 1897:9), preparing meals of salt pork and beans and bread in large pots buried in the sand, while a large kettle of tea simmered on a crane over the fire (Figure 3).

The camboose shanty was once common throughout the Ottawa Valley and present-day Algonquin Park, up until about 1900, when the multi-function structure was replaced by separate buildings for sleeping and cooking. As with any structure built almost completely of wood, little remains to show where they were after a hundred

or more years.

The Aarel site camboose shanty (BjGp-2), the subject of this research, was sought and found in early September 2008 by the author and his friend Roger Lupton (=RL=Aarel). The shanty was one of a few such structures indicated on an old map of timber limits on the Madawaska River (Bell 1871a). It lies in a roughly south-central location in Algonquin Provincial Park, within two hours’ walking distance of Highway 60 (Figure 4). The rare occasion of finding the remains of a camboose shanty reawakened my long-time interest in the ways of the shantymen. A research-level archaeological license provided the means to both satisfy my curiosity and add to knowledge.

Low mounds of earth defined the foundations of the building, which was situated on a flat area adjacent to but well above the level of a river. A mound located centrally, on which a large coniferous tree had had time to grow,



Figure 2. *Camboose shanty at Aylen Lake with outbuildings nearby. Library and Archives Canada C-075264. Used with permission.*



Figure 3. *Camboose in a shanty, with rocks and sand surrounded by beams, and showing a bean hole in the foreground. Charles Macnamara collection, Ontario Archives. Used with permission.*

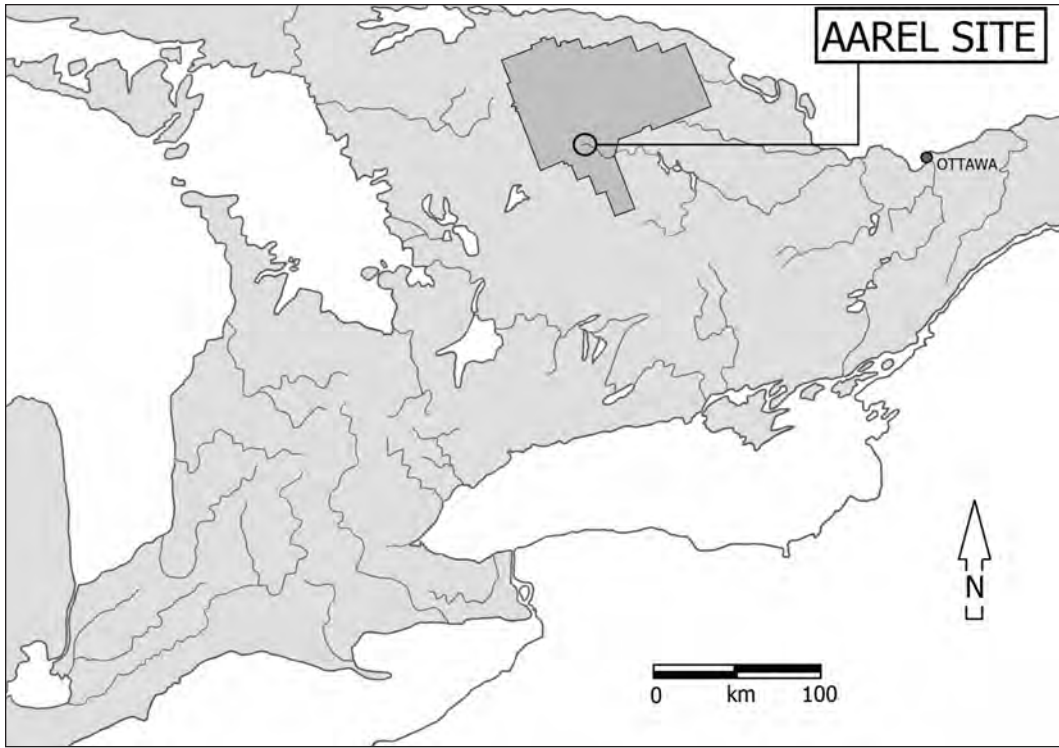


Figure 4. Approximate location of the Aarel site in Algonquin Provincial Park (shaded area). Graphic by Don Webb.

suggested that the foundations were associated with a camboose shanty and not a later type of building. Directly north of the central mound was a deep depression, somewhat rectangular in shape. Ditches were located on the outside of the foundation mounds.

Site Description

The Aarel site is on fairly level sandy ground and covered with a mixture of sapling-stage, mature, and aging coniferous trees of various diameters. This coniferous forest canopy prevents a view of the foundations in aerial photographs. The ground cover includes pine, spruce, and balsam needles; bracken fern; bunchberry; sarsaparilla; and other low vegetation. The west side of the plateau is a steep undercut slope above a stretch of river with good current. The top edge of the river bank is within 2.5 m of a ditch feature on the site (Figure 5). The eastern side of the plateau is also

characterized by a steep slope, but in this case tree sizes indicate it has been a long time since the river was actively at its base. The north side is heavily wooded with balsam fir, growing on a moderate slope down to the river. The southern part of the plateau is also wooded, but fairly flat. The site is built on sand containing very few pebbles. The only rocks on the site or in the immediate vicinity appear to have been brought from a location some distance upstream.

Terminology

For the purposes of this article, the entire dwelling structure will be referred to as the camboose shanty or as the shanty, as delineated by its foundation mound. The sand mound that was surrounded by wooden beams, presumably squared, will be referred to, properly, as the camboose. The material within the wooden beams will be referred to as the camboose hearth.



Figure 5. River bank erosion (left) within 5 m of foundation mound (right). R. MacKay collection.

Methodology

Archaeological work began in October 2008. A pedestrian survey of the vicinity of the feature was carried out, but no additional foundation mounds were found. A 30 m datum line and a 30 m baseline were established. A line was also established running north–south at 2 m west of the datum line, as the presence of the river bank did not permit a line at a distance of 5 m to the west.

At first one could obtain only a limited view of the site due to obstruction by tree branches (Figure 6). There was more clarity once most of the low, dead, “eye-poker” branches on the balsam and spruce trees on site had been removed from the trunks of the trees (Figures 7 and 8). The site retains a degree of “openness” not present when it was initially found.

The foundation mounds form an almost complete enclosure aligned with the greatest

dimension north–south and the lesser dimension east–west. In the middle of the southern foundation mound there is a gap, 1.25 m wide, which has the appearance of an entrance to a doorway. The estimated size of the original building is 9 m (or 33 feet) by 12 m (or 42 feet). The width of the camboose mound is 3.3 m (10.8 feet) by 3.3 m (Figure 9).

Measurements were made to determine the elevations of the foundation mounds along two transects. A longitudinal transect passed through the door opening, across the camboose mound, into the pit, and over the back foundation mound. A transverse transect passed over two foundation mounds and across the floor south of the camboose mound. Elevation data were calculated from the measurements. Along these transects, ditches were about 0.5 m in depth relative to the surrounding plateau and floor of the shanty; mounds were as much as 0.5 m high relative to the same surface. The pit adjacent to the camboose mound was 1 m deep at its deepest part.



Figure 6. Northwest corner of mounds as found. R. MacKay collection.



Figure 7. Northwest corner of mounds after clearing of “eye-pokers.” R. MacKay collection.



Figure 8. *The camboose mound as cleared, looking southeast. R. MacKay collection.*

Shovel Testing

Shovel testing was carried out over two field seasons by field assistant Roger Lupton, the author, and a few others, on a five-metre grid. No shovel testing was done within the limits of the foundation mounds of the camboose shanty. The baseline was tested out to 30 m. The land begins to slope downward to the river fairly quickly as one proceeds north of 30 m from the baseline. It was decided that it was unlikely that a stable would be located on the slope, but a cursory investigation was made. No test pits were located to the west of the datum line due to the close proximity of the sandy bank of the river and the steep incline thereof.

Test pits were excavated to subsoil at a shovel-blade's depth, and all materials were screened through 6.4 mm mesh. At the end of 2009, a total of 40 test pits had been completed, with one positive test.

In 2010, shovel testing was carried out at five-metre intervals from the datum line to 30 m east of the datum line and to 30 m north of the baseline, but excluding the area inside the foundation mounds. Similar tests at five-metre intervals were carried out to 20 m south of the baseline along its 30 m length. Shovel testing was also carried out on the flat area just to the east of the camboose shanty foundations, at a two-metre interval and overlapping the area that had been investigated at five-metre intervals. Those investigations were carried out in an area 15 m by 20 m to the east of the foundation mounds. A further 194 shovel test pits were dug that year. Only a few artifacts were found.

Since shovel testing on a grid had not indicated the presence of a stable or storage building, it was decided that shovel testing based on metal detector use, with permission of the park authorities, would possibly provide a further

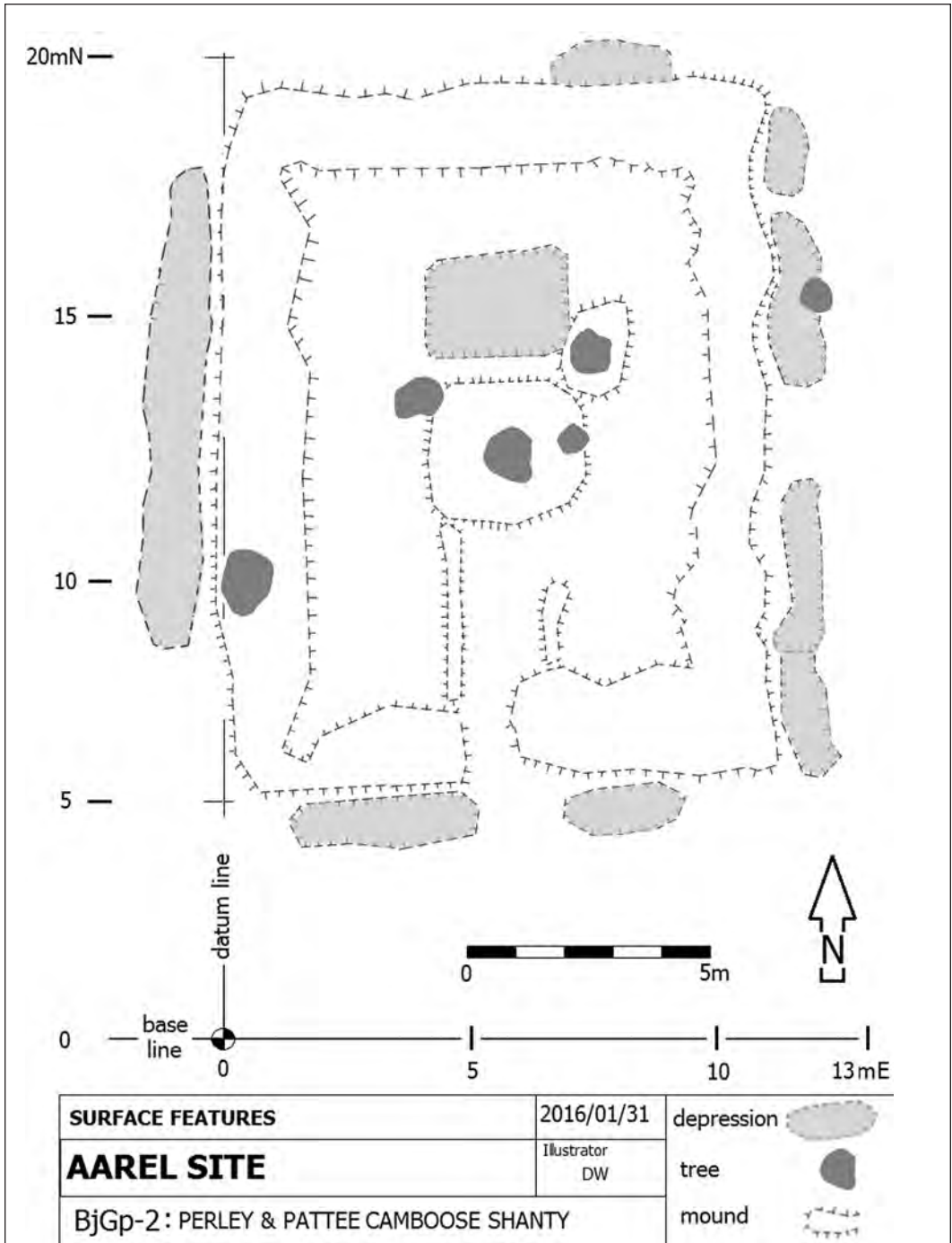


Figure 9. Plan of the Aarel site, showing mounds and depressions (ditches and pit). Graphic by Don Webb.

understanding of what remained on the site. The metal detector was used to locate areas where metal was concentrated outside the foundation mounds. In some instances, artifacts were found lying within centimetres of previous grid shovel tests. All such tests of the areas identified by the metal detector were carried out as a standard shovel test, in case artifacts other than those made of metal were present.

Excavation

Extensive work on the site began after the Thanksgiving weekend in 2008, with assistance from Tom Ballantine, an experienced professional archaeologist and then curator of the Haliburton Highlands Museum.

The first unit was opened just south of the opening in the mounds for the doorway. Excavation revealed no artifacts in the dark organic layer, but it did reveal two small pieces of wire in the ash-grey layer below, both found by

screening. No artifacts appeared in the orange sand layer that underlay the grey layer. A sondage was excavated to a depth of 40 cm, which revealed that the natural sequence in the soil was a duff layer and black organic layer, over an ash-grey leached layer typical of podzolic soils, over a layer of orange sand, beneath which was yellow sand. No bedrock was found in this area of glacial outwash sand.

Next, an area of 2 × 2 m was excavated, effectively quartering the camboose mound and partly skirting the trunk of the large spruce tree growing on top of the mound. The duff layer of this southeast quadrant of the camboose was removed and screened. It was noted that there were large rocks which seemed to be unusually high on the mound. Removal of the duff layer and in the uppermost unit revealed that rectangular rocks were perched on the tree's roots, which had grown to a substantial dimension, thus raising the rocks from their original position (Figure 10).



Figure 10. *Fireplace rocks elevated from original position by tree roots growing underneath, looking north (scale interval 10 cm). R. MacKay collection.*

At the top of the hearth mound were many small fragments of burnt bone and small fire-cracked rocks mixed into the ash-grey sand matrix that comprises the second layer in that location. As excavation continued downward through the hearth, below a large tree root, a buff or yellowish sand became noticeable, and many more bone fragments, less than a centimetre in length, were found, mostly by screening. Only one bone appeared to be complete; a vertebra about 2.5 cm in length. Also found were lumps of grey, solid concretion, apparently of ash, but much harder, which included small fragments of bone.

As excavation of the hearth sand continued downward and outward, a layer of yellow sand was revealed, bordered on the east and south (less apparent) by the remains of wooden beams at the edge of the camboose hearth (Figure 11). There was possibly a faint indication of a second wooden beam about 0.5 m to the south, with soil of an ashy grey colour between.

Further excavation through the hearth mound revealed that below the yellow sand there was a layer of orange sand. The yellow-over-orange sequence was in reverse to the orange-over-yellow profile that we had seen elsewhere on the site, in shovel tests. Some of the sand well beneath the surface was what Tom Ballantine described as “salmon-coloured,” suggesting exposure to considerable heat (Ballantine, personal communication, 2008).

Continued removal of soil in the other three units peripheral to the camboose hearth revealed what appeared to be lengths of wood laid horizontally and alternating with soil. Removal of soil with a whisk revealed what appeared to be poles flattened on the upper surface. These appeared to be parallel to the sides of the camboose, on both the south and east sides, and presumably meeting at the corner, although that was not observed.

At the lower depth of the wood, or just a little



Figure 11. Excavation through the yellow sand of the camboose hearth, looking west. Retaining beams of the eastern and southern edge of the camboose are beginning to show. Trowel points to a double hook (scale interval 10 cm). R. MacKay collection.

below it, and at the bottom of the layer of orange sand, was a black organic layer, the former duff layer of the forest floor before the sand of the camboose was piled on top of it. Beneath was the ash-grey layer of a typical podzolic soil, then a horizon of orange sand, and then, in one deeper part of the excavation, yellow sand below. A total of five one-metre squares had been excavated before snow and cold ended the work a few days later.

Excavation in 2009 began with an investigation of a one-metre square unit on the east side of the depression or “pit,” extending from the upper edge to the deepest part. Examination of the north and south walls suggested that a new set of soil horizons had become established over the 140 years since the pit had been dug. In some places on the north wall there appeared to be a few pieces of rotted wood that may have been floorboards which once spanned the pit. The top of the soil profile on the east side was overlain by a rotted wooden log or beam. The yellow sand at the bottom of the east profile appears to be continuous with that on the north and south

profiles, suggesting that the sand in this location was undisturbed.

The apparent remains of two beams projected from the base of the camboose mound into the pit’s southern rim. At first they were thought to be wooden, but tapping with a trowel confirmed that not to be the case. Further examination revealed that both projections were made of a substance resembling grey concrete or mortar, 8–10 cm thick. A close look revealed bone fragments in the matrix. Bone fragments were also associated with the material underneath the projections, as were some lumps of concretion. The soil overlying the projection was removed, revealing a flat, grey surface. That surface extended from the pit onto the camboose.

Work continued with an investigation of the northwest quadrant of the hearth, diagonally opposite the quadrant opened the previous autumn. The duff layer was removed, followed by a “root layer” of brown sand. Below the brown sand was a hard concretion layer mixed with thick, flat rocks (Figure 12). In most cases the rocks were



Figure 12. Excavation of the northwest quadrant of the camboose, looking south, showing rocks and the concretion layer. Roots from the tree were unable to penetrate the hard concretion layer (scale interval 5 cm). R. MacKay collection.

firmly embedded in the concretion, so the configuration of their undersides could not be determined. The roots of the tree on the mound spread horizontally over the concretion, only reaching downward where the edge was met. An attempt was made to remove the concretion layer and rocks with a hand pick, but that proved to be quite difficult. It was decided after some consideration that the object of the doing the archaeology was to determine the structure of the camboose, not to mine it for all the artifacts within.

Excavation continued around the edge of the concretion and into the sand below, to a depth of about 1 m. In the profile, yellow sand overlay orange sand, although there was some mixing of layers in this section of the hearth. The yellow sand overlay the roots of an old stump, which in turn extended down into the organic, grey, and then orange layers of the palaeosol.

A rotted retaining log to hold back the hearth sand was found along the western edge of the camboose, lying on the original soil surface. Beneath the log was an axe head. The log appeared to have changed in profile as it aged and decayed. Once we cut through it, we were able to establish that it was somewhat oval-shaped, possibly a change in its original shape due to rotting and the effects of gravity. The log did not retain any indication of its original cross-section (Figure 13).

The western projection of concretion at the southern edge of the pit was excavated along its west side to a depth of 40 cm and between tree roots. Some yellow sand lay over the original soil layer. The northern end of the aforementioned rotted beam which held back the sand of the camboose overlay part of the concretion layer. Where there was contact between the beam and the concretion there appeared to be charring of the wood.

A trench was excavated in a north–south direction through the northern foundation mound and extended north through the ditch outside the foundation. Although only 0.5 m wide, this 3 m long trench revealed that the ditch had been cut into the original soil level and that the base logs of the shanty walls occupied the inner part of the mound—at least at that

location—with sand piled on the outside, some of which presumably came from the trench. It appeared that there was sand underlying the base logs, and above the natural soil layer.

Work continued during 2010, a few days at a time in August, September, and early October. Three adjacent units were excavated in the northwest corner, or “back,” of the camboose shanty, presumed to have been the location of the men’s sleeping bunks and a storage area for belongings. A very few metal and non-metal artifacts were recovered, including a few small, white buttons.

Another trench, 1 m wide, was excavated through the eastern mound and ditch. That location was chosen because there was a gap in the ditch. It turned out that a large stump had prevented continuous extension of the ditch. Two pieces of wire and fragments of what appear to have been a clear medicine bottle were located just above the very bottom of the ditch. As in the other mound profile, the base log was in the inner side of the mound and had been placed directly onto the soil, without foundation stones beneath (Figure 14).

A 50 cm section of the southwest quadrant of the camboose was excavated in 2012, so as to determine if that side contained rocks. Flat stones were found stacked on top of each other, in fireplace fashion. As was the case in the southeast quadrant of the camboose, there was no sign of a concretion layer on the south side of the southwest quadrant, but there was a well-defined edge of the concretion layer to the north of the piled rocks.

A low mound, roughly in line with the west side of the camboose and about halfway to the doorway, was investigated. What appeared to be some portion of the remains of a beam lying oriented north–south was found. Beneath were poles lying side by side, running east–west, overlying the original soil layer (Figure 15).

A visual inspection of the top half of the steep sandy slope between the river and the western edge of the plateau was made in 2010, but no surface artifacts appeared to be present.

Following excavation each year, the completed excavation units were mapped (Figure 16), back-filled to regain their original profiles,



Figure 13. Beam at edge of the camboose, holding back sand. The place chosen for a cross-section of the wood happened to reveal a broken axe beneath the beam. (scale interval 5 cm). R. MacKay collection.



Figure 14. Cross-section through eastern foundation mound, looking south. A base log shows dark in cross-section. Soil was dug from ditches and piled against the log walls of the shanty (scale interval 10 cm). R. MacKay collection.



Figure 15. *East–west running poles for floorboards appear to run beneath the north–south running scoop-bearer beam. (scale interval 1 cm). R. MacKay collection.*

and then covered with pine and spruce needles and branches to approximate an undisturbed appearance.

Artifacts and Features

Surface-collected finds in the vicinity of the shanty foundations included a rotted tin can (possibly contemporary with the shanty but of uncertain age); a “stubby” beer bottle; a hame from a horse harness; and, near an apparently temporary campsite to the north, a red, slightly rusted Coke can with a white “classic wave” design, a tab opening, and notation that the volume was 284 ml or 10 fluid ounces, and a trade-mark written in French and English. Under a rock of a small fire-ring at the campsite was a 1981 Canadian five-cent coin.

Shovel testing and excavation yielded 1800 artifacts. A glass flask fragment, flask mouth, and body sherds were found near the bottom of the ash-grey sand near the top of the camboose mound. Also found there were three fragments of a clay pipe, including parts of the stem and bowl, as well as a broken metal spoon (Ballantine 2008:2).

Other significant artifacts recovered on the site included pieces of melted glass; an additional four fragments of clay pipe; a large axe head, presumably for scoring logs during timber-making; four smaller axe heads (one of which was broken through the eye); a “saw wedge” for use with a cross-cut saw (Figure 17); and a bill and ferrule for a cant hook (Figure 18), which would have been used for rolling or positioning either sawlogs or logs being used in construction. The letter K was chiseled into one of the axe heads and into the cant hook bill. A metal file, with the tang bent over on itself, rested on top of the remains of the retaining beam in the southwest corner of the camboose, and another was found in the camboose hearth. A cut chain link was found between floorboards. A square-tapered spike, 14.6 cm long and 1.8 cm in largest diameter, was found within the remains of the retaining beam on the south side of the camboose. The axe found beneath the rotted retaining log on the west side of the camboose appeared to have been discarded because of a failed weld at the leading edge of the eye.

That horses were present on site is indicated

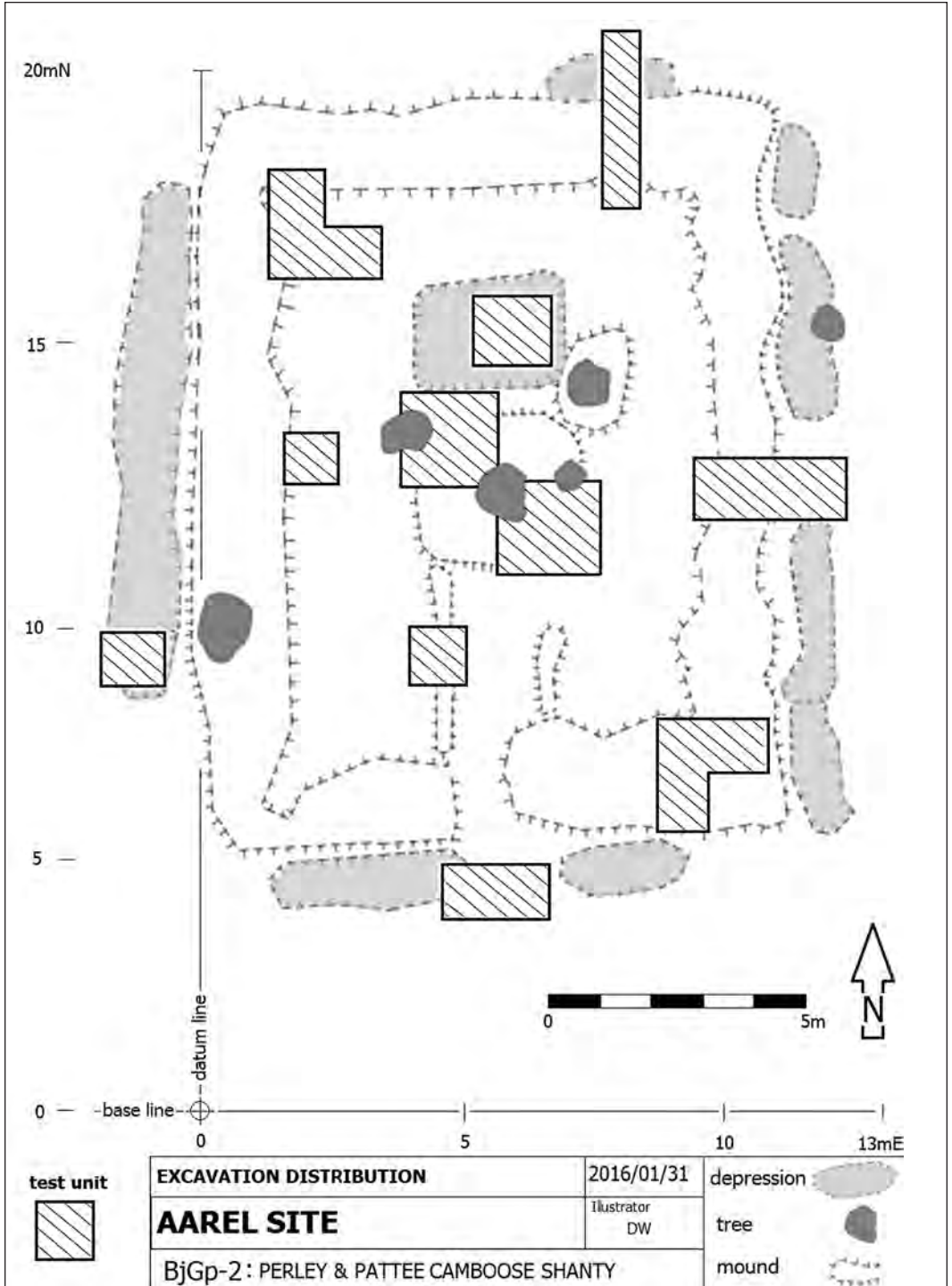


Figure 16. Plan of Aarel site, showing excavation units completed. Graphic by Don Webb.

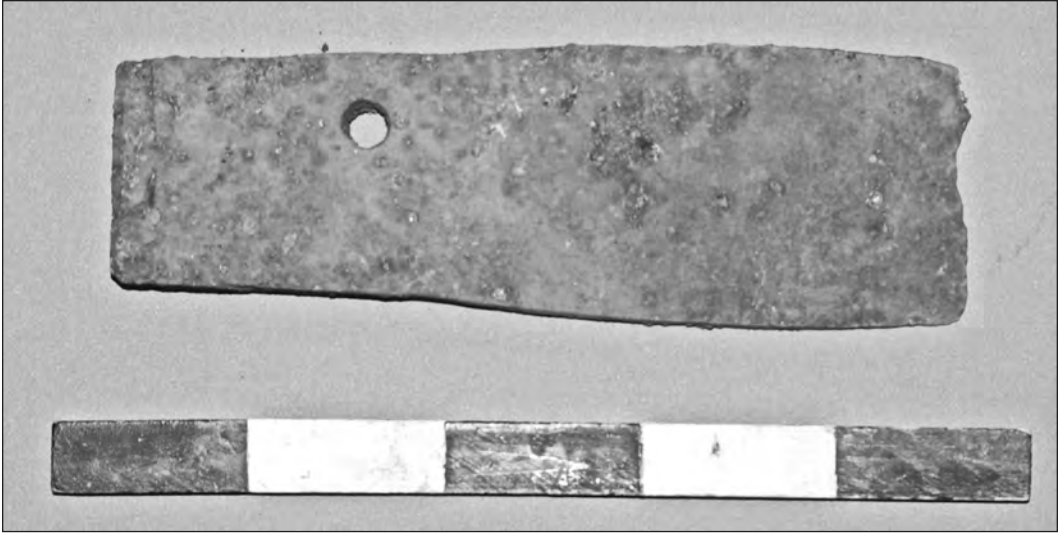


Figure 17. Saw wedge, suggesting use with a cross-cut saw. (scale interval 5 cm). R. MacKay collection.

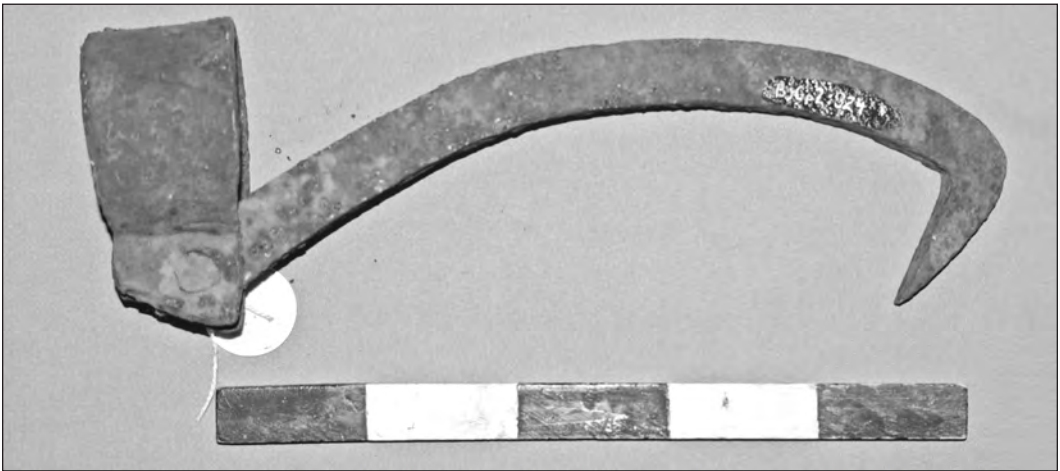


Figure 18. A cant hook ferrule and bill, marked with the letter K. (scale interval 5 cm). R. MacKay collection.

by the presence of the aforementioned harness hame, lacking the wooden parts. It was found leaning against a rotting stump just a few metres southwest of the shanty door. A large horseshoe was found at the southeast corner of the foundation. In addition, a small clasp, suggestive of what might be found on harness, was also found, about 17 m from the hame, and to the east of the shanty foundations.

A metal bowl, tea panniken, tea dish, or “shanty-mug” (Saunders 1946:36) was found

partially embedded in the north wall of the hearth excavation, near the eastern edge of the yellow sand (Figure 19). Although rusted and missing sections, it retained its general shape, possibly because it was tilted on its rim within the sand rather than resting flat in such a manner that it would collect water.

Parts of what appear to have been at least two separate glass liquor bottles were found in the sand of the camboose. One, of quite thick greenish glass, seems to have been melted for the most part.



Figure 19. *Tea dish as found in the camboose, looking north (scale interval 10 cm). R. MacKay collection.*

The other was represented by the shoulder and neck of a flask, along with two clear fragments bearing raised lettering reading “AISLE” and “EWART &,” respectively. Pieces of soft lead foil, seemingly of a type used to seal liquor bottles, were also found in the camboose.

A few additional clay pipe fragments (without identifying marks) were found within the camboose hearth, as well as one small piece of burnt undecorated ceramic, which appears to be ironstone. A couple of blobs of melted metal and a tiny rivet and washer were found separately. A considerable number of cut nails were recovered from the hearth, most of which seemed to have been burned in the fire.

A number of pieces of “hay” wire, of fairly heavy (3 mm) thickness, were found in the camboose itself or adjacent to it. Some long pieces were found outside the foundation walls, in what appears to have been an activity area about 10 m

to the south and east of the shanty door. One length of wire, found to the east and about 2 m long, comprised two separate pieces joined with a twist. A few pieces of metal strapping, some hinged and apparently part of the lid of a box, were found, one within the boundary of the foundation mounds, another in the camboose itself, and a third just to the east of the shanty.

As excavation proceeded down to the floorboards surrounding the camboose, a number of artifacts were found that were either on the floor boards or between the floorboards and the camboose sand. These included a cut chain link; a large, bolt-like pin with a rectangular hole at one end and a domed head at the other, which may have been associated with a fireplace crane (Figure 20); and a metal hook with a large curve and, above, a smaller curve perpendicular to the first (Figure 21).

Also between the floorboards to the south of



Figure 20. Large metal pin found south of the camboose that may have been used as a pivot in the fireplace crane (scale interval 5 cm). R. MacKay collection.



Figure 21. Double curved hook found south of the camboose, above the floorboards (scale interval 5 cm). R. MacKay collection.

the camboose was a food item; an animal rib bone. Mixed with the sand in the camboose hearth were hundreds of fragments of animal bones, most less than a centimetre in length, including those embedded in or adjacent to the concretion layer. Some bone fragments appeared to have been cut, perhaps with the use of a saw or cleaver. A few larger bones, the largest being 13.4 cm long, were recovered as well. The only other food items found on site were three charred half-beans, conforming in size and shape to white “navy” beans, found in

the ash grey sand matrix layer at the top of the southeast quadrant of the camboose.

Other artifacts found on the site included what appears to be a broken, rectangular-bottomed medicinal bottle found in one of the ditches; two possible buckles, of fairly light construction, found in a floor unit; and a small, 8-link chain and attached hook of unknown purpose. Additional artifacts were found, but those are not listed here.

Analysis

Of the total artifact assemblage (N=1800 including faunal remains), 82 percent were bones or bone fragments. Nails make up about 6 percent of the total; food- and kitchen-related items comprise about 4 percent; personal items such as buttons (N=21) and smoking pipe fragments account for 2 percent; and ash, charcoal, burnt glass and concretion samples accounting for 1.4 percent. Other ceramics (N=1) account for 0.1 percent.

A selection of 44 bones, those being generally intact and possibly identifiable, was forwarded in January 2010 for analysis by Suzanne Needs-Howarth, Perca Zooarchaeological Research. Most of the bone submitted was “in the size range of pig,” and the bones identified as possibly pig “consisted mostly of vertebrae cut on the sagittal plane (to create a side of pork initially, which would then be cut into smaller sections) and of portions of ribs” (Needs-Howarth 2010:1). One bone was identified as cow, two as bony fish (species undeterminable) and one as a beaver vertebra from the tail. Thirteen other bones of pig- or deer-sized mammals could not be identified below the taxonomic level of class (Needs-Howarth 2010).

A sample of the hard concretion material from the camboose hearth was recovered and saved. An unsuccessful attempt was made to dissolve the sample of the ash concretions in water; mechanical means were required to break down the material, but that just produced smaller pieces. A few bone fragments and a blob of green glass were revealed. Another concretion sample contained a horseshoe nail.

Through a fortunate sequence of relationships it was possible to examine the sample with an electron microscope capable of using spectral analysis to determine the composition of materials within the sample. This examination was carried out by Paul Alexandre of the Queen's University Department of Geology, during off-work hours. Examination of three thin-sections of concretion revealed the presence of sand particles of calcite, quartz, olivine, amphibole, and plagioclase, all suggesting a wide diversity of sources of origin, as well fragments of calcium phosphate (bone) and organic particles presumed

to be charcoal. It was noted that in many locations within the samples, when examined at very high powers of magnification, there was an indication that there had been a flow of material around some of the sand grains, bone, and organic matter (Paul Alexandre, personal communication 2010).

Discussion

Work has been carried out on other styles of logging camps, in Michigan and elsewhere (Rohe 1985). Structures similar to the camboose shanty are said to have been used in New Brunswick and are known as “State-of-Maine” camps in the United States of America (Rohe 1996:10). A two-room type of shanty, the dingle, has been examined and excavated in Wisconsin, the investigator of which commented: “no other logging camp from the 1870s has been subjected to archaeological excavation” (Rohe 1996:9). However, one pine logging camp dating “post-1870” and eight other pine logging camps dating “post-1881” had been studied in northern Michigan through surface collection of ceramics and faunal remains in an effort to understand logging camp “foodways” (Franzen 1992:74-98).

In a very brief outline article, “Archaeology in Algonquin Park,” avocational archaeologist C.H.D. Clarke (1957), then a supervisor in the Ontario Department of Lands and Forests, wrote of an investigation on Lake Opeongo. He did no archaeological excavation, but “much of the short time available was spent in getting measurements and information from the ruins of a camboose or open hearth logging camp and an adjacent ox stable for use in possible reconstruction” (Clarke 1957:20). If there were written records of that work, they have not been retained in the Algonquin Park Museum Archives. Neither are there any notes or records of that work in the files of former Park Naturalist Grant Tayler, who indicated that he had become quite adept at locating shanty sites through the use of 1958 aerial photographs (Grant Tayler, personal communication 2008). There are also no records of what clues were used to find them.

Based on its description, the site examined by Clarke (1957) may be the same one examined by Hurley in 1970 and registered as BkGn-4 during

archaeological inventory work preparatory to the Algonquin Park Master Plan. The latter site included a camboose shanty and stable. Located on Annie Bay of Lake Opeongo, the site was recommended for immediate salvage excavation (Hurley 1971), but that has yet to occur. Hurley noted that in a small excavation in one of the foundation mounds, the sequence of layers above the natural soil was the reverse of those in the natural soil. A brief visit to that site by the author in September 2015, only to confirm its location, revealed ditches around a foundation mound measuring about 12 m by 9 m, with a raised hearth and, adjacent to the hearth, a deep pit approximately 1 m deep. The similarities with the Aarel site shanty are striking. The remains of a cedar-log stable were about 30 m to the north of the shanty foundations. It is thought that the structures are contemporary in age, with the pine logs of the shanty and the cedar logs of the stable displaying differential rates of decay. Other camboose shanty sites are known to Park officials, but few have been registered with a Borden number.

The upper regions of the Madawaska River, on which the Aarel site is located, was not in the heart of pine country, but still had merchantable stands of pine scattered amongst hardwoods. Surveyor John Snow's map of 1854 bears notations indicating stands of red pine on the sandy plain at the head of Lake of Two Rivers and a mix of white pine and hardwoods surrounding the lake (Snow 1854).

By the late-nineteenth century, the headwaters of the Madawaska River had come under the influence of the timbermakers and lumbermen, who since the 1830s had been working their way up the tributaries of the Ottawa River.

In the autumn of 1869, Thomas Nightingale and his trapping partner, John Ray, visited the upper Madawaska River on a trapping expedition. Nightingale kept a diary of his travels. Apparently he could stay overnight in the shanties, then being used by the lumbermen, and he visited the "Perly and Pettis" depot farm on Long (Galeairy) Lake a number of times (Wallbridge 1967:71, 72). W.G. Perley and his partner Gordon Pattee were noted lumbermen at Ottawa, with sawmills

located at the Chaudière Falls. Counting all shanties mentioned, Thomas Nightingale's diary suggests there could have been seven or eight shanties associated with the Perley and Pattee depot farm.

Between September 1870 and April 1871, surveyor William Bell undertook a survey of timber limits on the Madawaska and Petawawa rivers (Bell 1871a). On his map he noted a number of shanties and clearings, as well as the farm at Galeairy Lake. A single square is shown on his map at roughly the Aarel site location, and his survey fieldnotes show a single square along with the notation "Perley's shanty" (Bell 1871b:121). Thus, it can be assumed that the Aarel site camboose shanty was associated with the Perley and Pattee depot farm.

Crown lands timber limit records from the Ontario Archives indicate that the timber limit on which the shanty was located was timber licence 472, of 1866–67. It was issued to A. and P. Coburn, G. Johnson, W. Kent, and H. Symmes in 1864–65, and to H. Symmes from 1865–66 to 1867–68. Thereafter, it passed to the firm of Perley and Pattee, from 1868–69 to 1870–71 (Crown Lands 1868). The limit was sold by Perley and Pattee to A. Kelly after the 1871 season.

The Perley farm operation continued at least through to 1878, when it was shown on a survey of the township of Nightingale (Niven 1878:58). The limit on which the Aarel site was located had exchanged hands, but there is no indication if the new owners continued to use that camboose shanty, and if so for how long.

There was still pine to be cut when the Township of Canisbay, which includes the Aarel site, was surveyed into farm lots in 1882. The surveyor, James Dickson, reported that "For about three fourths of a mile west of Lake of Two Rivers, north of the south branch, and extending about half a mile north of the north branch, the timber is mostly red pine of a good size.... It will form a valuable timber limit, not only owing to the large quantity of pine it contains, but also its proximity to water.... The timber is also of very fine quality, and good size...in very few places has it all been cut, but only thinned out along, and near to the floatable streams" (Dickson 1883:33).

Dickson reported on the north shore of Lake of Two Rivers “an old clearing of thirty one acres, with a good cedar log barn full of hay, and also a house of hewn logs. There is no one living on it, nor does it appear to have been occupied for some years...” (Dickson 1883:33). Dickson’s book of 1886, *Camping in the Muskoka Region*, states “this was a few years ago the central depot of a large lumbering establishment, the distributing point, whence the outlying camps were supplied” (Dickson 1886:160). A clearing at that location is not shown on Bell’s map of 1871, so it is likely that the depot farm on the north shore postdates 1871. Dickson also passed the Aarel site and reported it as being “an old lumber shanty” but made no specific reference to its condition (Dickson 1882:26).

Bell’s map and field notes (Bell 1871a, b) indicate the shanty’s presence with certainty in 1871, but it is uncertain for how long the Aarel site camboose shanty predated or postdated that survey. Once the trees had been cut in the vicinity, it was usual for the shanty to be abandoned. Most were only used for a few years, depending on the supply of timber. According to the annual report of the Park Superintendent for 1895, the shanty may have been partly removed: “Other camps have been demolished because of the material being required by the shantymen for other places; perhaps scoops taken off the roof, a window sash or some of the panes of glass gone” (Simpson 1896:60-61).

Today, as one gazes down on the Madawaska River’s gentle current of summer as it passes beneath a bridge on the Park’s Old Railway Bike Trail, it is hard to imagine the river filled to the brim with water and logs. Filled it was, but with logs of what kind, sawlogs or square timber?

The presence of a saw wedge at the Aarel site suggests that logs were cut by cross-cut saw in the woods surrounding it, but whether they were sawlogs, square timbers, or logs cut to length for the walls of a shanty is uncertain. The partial cant hook, when complete, could have been used in moving sawlogs, for moving logs out of roadways under construction, or for construction of the camboose shanty. The sawlog era was well under way by 1871. Sawlogs cut near the Aarel site

would have been hauled by horse-drawn sleigh to the riverbank and carried along with the spring flood. The Perley and Pattee sawmills were more than 300 km downstream, at Ottawa’s Chaudière Falls. In 1871 alone that company cut sawlogs originating on their many timber limits into 40 million board feet of lumber. Examination of the *Lumberman’s Timber Mark Guide* revealed that the letter K was the mark selected by the Perley and Pattee Company of Ottawa to stamp into the ends of their sawlogs (Aldred 1985:61). The company bark mark or stamp mark was also used by some companies to identify company equipment. The presence of the letter K, inscribed on one of the axes and on the cant hook found at the shanty, appears to confirm their ownership of the site.

Square timbers destined for England may have been cut here by Perley and Pattee in addition to sawlogs. James Dickson (1883) mentioned that the rivers flowing into Lake of Two Rivers were “capable of floating timber, and have already been used for that purpose” (Dickson 1883:33). Square timbers would have been floated to the Ottawa River and then rafted to Quebec City, another 450 km downstream beyond Ottawa. Raft clearance records at Ottawa from the period 1869 to 1871 indicate that the Perley and Pattee company’s rafts included timber from the Madawaska River in both 1869 and 1871; 869 white pine and 52 red pine from the Madawaska River in 1869 and 1592 white pine 39 red pine in a combined raft of 85 cribs from the Madawaska and Petawawa rivers in 1871 (Ottawa Timber District 1871).

The Aarel site camboose shanty itself was about the same size as the reconstructed shanty at the Algonquin Logging Museum, near the Park’s east gate, near Whitney. As abundant as they once must have been, it has been difficult to find other accessible camboose shanties in Algonquin Park with which to make comparisons.

The gap in the mounds at the south end is interpreted as a doorway, similar to the gap in the mounds that can be seen at a shanty photographed at Black River, Quebec, in about 1900. That camboose shanty appears to have mounds of earth on the outside of the foundation, with associated lower levels or ditches.

During construction of the shanty, any stumps or roots were cut down to grade. Sand appears to have been used to raise the grade as well. Then work began on the camboose, probably while logs for the walls were being cut and put in place. The archaeology confirms the evidence of old photographs and of descriptions that retaining logs held the sand of the camboose in place: "And now for the camboose, the heart of the shanty.... It was a square of logs in the middle of the shanty, 12 feet each way, retaining a foot or so of earth and sand, on which a fire for heating and cooking burned day and night" (Macnamara 1959:75). Above the camboose was a square chimney, between two long beams, also known as scoop-bearers, that supported the log scoops that made up the roof.

The archaeology on the Aarel site suggests that the beams to hold back the sand of the camboose were placed after construction of the mound had begun, since mixed yellow and orange sand underlies the excavated log along the west side of the camboose. Those logs or beams, possibly pinned together, were laid out in a square. That some heavy work at clearing the site took place prior to the building of the camboose mound is suggested by the presence of the discarded axe-head with the broken weld that was found beneath the retaining log. The remains of stump roots with axe marks were found in one unit excavated in the "floor" of the shanty, as well as beneath part of the camboose mound. Next, the frame of logs was laid and sand was piled onto the existing forest floor within the wooden frame. The expectation would be for "the cleanest sand available" (Hillis 1967:161), and that would be found beneath the surface. The sand for the camboose mound would have been excavated with shovels, forming a deep pit next to the mound. Excavation of both confirmed that the hearth mound and the adjacent deep pit are related in more than proximity: their respective stratigraphy is reversed. The topmost sand to be shoveled from the deep pit would have been orange, and that lies deepest in the camboose mound and on top of the old soil surface. The deepest sand in the depression is yellow, and that lies over the orange sand in the camboose mound.

Depending on how deeply disturbed the material at the base of the camboose mound was, the original and added soil layers would be somewhat mixed until a layer of homogeneous sand was being laid down. According to Tom Ballantine, "that likely accounts for some of the confusing stratigraphy or mixed soils depicted at the lower levels of the mound." He also surmised, "It is apparent that the process of building fires, stirring the coals, mounding hot sand around things etc. made a bit of a hole into the yellow sand which was filled with mixed ash, charcoal, the remains of dinners, etc." (Ballantine 2008:3).

A depression in another camboose shanty, of the type found on the Aarel site, was interpreted as a storage pit or "cold cellar" by Audrey Saunders (1946):

...an old-timer recalled the building of a camp in 1878, when the Hawkesbury Lumber Company was cutting on Cedar Lake. At this site it is possible to take measurements in order to determine the exact size of the original building.... On the far side of the fireplace, away from the door, there appears to have been a shallow pit, lined with stones. This was likely used by the cook as storage for potatoes and other supplies that he would need to have on hand (Saunders 1946:34).

Only one literature reference to such a pit being associated with a lumbering shanty has been found as yet, although not relating to the Ottawa Valley: "A pit is dug under the camp to preserve any thing [sic] liable to injury from the frost. The fire is either at the middle or at one end" (McGregor 1832:494). This describes a shanty much less sophisticated than the timber shanty of the Ottawa River, which was larger and had a scooped roof rather than one made with bark.

There is perhaps an oblique reference to an underground form of storage from James Pennock (1948): "The supply of beef and potatoes would run out about midwinter and we would feast on Chicago chicken (barrelled pork) which had been buried in the ground the previous summer" (Pennock 1948:36), but this reference does not necessarily imply that the barrels were buried

within the shanty itself, as the amount of food consumed in a shanty would have required a large cellar.

It may be that inclusion of a borrow pit was so commonplace in a winter shelter as not to deserve mention by other contemporaries describing the Ottawa Valley camps, but it may not have been commonplace at all. That such a pit is not well described may simply be the result of very few literate observers being present in the very early stages of construction of such a camp, combined with the presence of floor boards in a completed camp that would hide such a pit. Research on additional camboose shanties may bring greater clarity.

The stratigraphy of the unit in the east side of the deep pit is interpreted as indicating that feature in the Aarel site shanty served only as a source of sand. The pit did not appear to have been constructed for storage. There was no evidence of wooden supports to hold up vertical sides, and the soil beyond the limits of the pit did not appear to have been disturbed. No artifacts that could be associated with storage of food or other supplies, such as barrel hoops or nails, were found in the soil at the bottom. Essentially nothing other than what might have fallen through cracks between floor boards was found at the bottom of the pit. Profiles of the slope of the pit suggest that the slope of about 35 degrees was always that shape, and that soil had not slumped down over a vertical dug wall. It appears it was a simple borrow pit.

The presence of ditches adjacent to the outside of the foundation mounds of a camboose shanty had been previously reported by Audrey Saunders, author of *Algonquin Story*: “The actual rectangle formed by the walls still remains, because the earth was dug out on the outside in order to bank up the walls to prevent draughts along the floor” (Saunders 1946:34). Examination of the two trenches on the north and east sides of the Aarel site foundation mounds and ditches suggests that once the log walls had been constructed, sand was piled on the outside of the logs, with the taking of the sand resulting in a ditch adjacent to the piled sand. There appears to be no structural purpose for the ditch. The ditches around the

foundation mounds are not continuous. That may simply be the result of there being sections that were more difficult to dig, due to stumps or rocks, as was observed at the Aarel site.

Evidence was found suggesting that flattened poles formed part of the floor around the camboose. Notes made by Tom Ballantine during excavation suggest that the pole floorboards were laid over a somewhat levelled surface of the generally flat original forest floor, as the soil below the “flooring” was sometimes of the dark organic type and sometimes of the underlying grey layer of the soil (Ballantine 2008:3). As well, in one excavated “floor” unit the presence of orange sand over the natural black humus layer that was usually found on top of the soil suggests that “low areas” may have been brought up to level by the addition of sand before the wooden floor was laid. It is most likely that the flooring poles were placed after the fireplace had been constructed.

Although some shanties may not have had wooden floors, a few narratives suggest that most did: “The floor was made of balsam poles adzed off on the upper side to make a smoother surface for walking” (Pennock 1948:35). “The floor itself seems to have been made of small poles, set close together to make a corrugated surface” (Saunders 1946:34). Charles Macnamara (1959) wrote: “The floor was of flattened timber not very close fitted, and the spaces between the pieces soon filled up with rubbish” (Macnamara 1959:74). In this case, some of the “rubbish” included bone, a chain link and a large metal pin, all aligned in such manner as to suggest they had fallen into the same gap in the floor. The double-curved hook found nearby was unexpected, it being more likely to be found in a domestic setting with a metal fireplace crane. The hook appears to have been designed so it could slide along a metal rod, which may have been suspended from the fireplace crane or cramière. Moving a kettle or pot suspended from the hook toward or away from the fire would regulate the heat absorbed by the kettle or pot.

In most camboose shanties, but not in all, there were support posts at the corners of the camboose. Apparently, the posts were “placed with one end under the scoop-bearer timber and the other end resting on the caboose [sic]” (Hillis

1967:161). At the Aarel site there was no indication of post moulds at the corners of the camboose. Two linear mounds, one on either side of the doorway and aligned with the edge of the camboose, are thought to be remnants of the scoop-bearers that would have been supported by the end walls and the uprights at the edge of the camboose. One of the mounds was excavated to reveal the remains of a wooden beam, possibly larger in its original form.

No firm evidence was found for the presence of a so-called bean hole incorporated in the camboose. The bean hole was described as “a built-in space, also of hardwood, sixteen inches wide by twelve inches deep, next to the cook’s corner...used for cooking bread or meat by burying them in the sand” (Hillis 1967:161). However, to the south of the log retaining the sand there appears to have been some evidence of another wooden beam, which might have served to enclose such a bean hole. One historic photograph appears to show that the bean hole would sometimes be rock lined, but that was not the case on this site; such a lining would have been quite apparent in the soil.

It may seem obvious to some that there were beans in the lumber camps. Historian Arthur Lower wrote that in the early days of logging the men subsisted on split pea gruel, and that only between 1850 and 1870 were beans gradually brought into the camps (Lower 1973:200). Archaeological proof that beans made up a portion of the diet in the shanty at the site under investigation was found in the form of the three charred half-beans. For that particular discovery to be made, certain conditions must have occurred, either: “extremely dry conditions, wet oxygen-poor environments, or situations where plants were charred, or partially burned, in a fire.... In Ontario most macroscopic plant remains are preserved through charring” (Monckton 2013: 126). It is likely that the last time a large cooking fire was on the camboose mound would have been when the shanty was last used. Uncooked beans falling into the fire, perhaps while being added to a pot, would be burned up. Beans falling a distance from the fire would likely decay. But under the right conditions, perhaps

moderately high heat and low oxygen content such as one might find in the ashes under a fire, charring might permit preservation of a half-bean, or three half-beans in this case, for 140 years. A charred bean from some other source would not likely have been buried as a palatable source of food by a rodent, bird, or insect (Miller 1989:50). Ballantine noted that “the bones and beans came from an ashy grey sand matrix” within the camboose mound. “It is apparent that the process of building fires, stirring the coals, mounding hot sand around things etc. made a bit of a hole into the yellow sand which was filled with mixed ash, charcoal, the remains of dinners, etc.” (Ballantine 2008:3).

Hundreds of small bone fragments were found in the hearth of the Aarel site, amidst the ashes and sand. Meat prepared for soup or stew would be cut into small pieces, and the cooked bones would end up in the fire, where they would become fragments. Robert Taylor, a former shanty cook, recalled: “If you are looking for something special, the next time you bake a pot of beans in the old bean pot, get a partridge or two (if you can get them) clean and place them whole in the middle of the pot of beans. Bake them all together” (Taylor 1976:28-29). None of the 44 bones sent for analysis were identified as bird bones (Needs-Howarth 2010:2), but none of the hundreds of small bone fragments were included among the bones sent.

Of the larger bones sent for species analysis “very few of the bones were heat altered, suggesting that they were deposited around the fire rather than in the fire. The minimum number of individuals...is very small, and even the 17 pig bones could all have come from a single individual. So it is clear that most of the bone waste of the meals prepared and consumed in the shanty must have been deposited elsewhere” (Needs-Howarth 2010:2). At least one of the large bones submitted had been found between the floorboards, and others were found adjacent to the western retaining log of the camboose, both well away from the fire. The conclusions about exposure of the bones to fire may have been different had the hundreds of tiny bone fragments been included in the sample examined.

While it was understandable that bones of pig and of cow would be identified (Needs-Howarth 2010:2), the finding of a beaver vertebra among the bones sent for analysis was unexpected. Beaver would be a ready source of fresh meat, especially as sections of the river would remain open through the winter. An article in the *Ottawa Citizen* quoted a former shanty cook regarding the preparation of sea-pie, a shanty treat: "First he prepared a layer of dough and lard; then a thick layer of salt pork, followed by a layer of raw beaver. All this was topped by an inch and a half of dough. Then the pie was buried in the hot sand of the camboose and allowed to cook all night" (Wilson 1935:1).

By the 1860s liquor is said not to have been tolerated in most lumber camps (Lower 1973), but the inclusion of pieces of lead foil, such as might come as seals on liquor bottle necks, and bottle fragments in the ashes of the Aarel site camboose suggests that such a commodity was sometimes brought into the camp, whether carried openly or smuggled in. One of the producers of Scotch whisky at the Saucel Distillery at Paisley, near Glasgow, was James Stewart & Company. That name and location appear to complete the missing letters on the bottle fragments: JAMES STEWART & COMPANY and PAISLEY. The company name existed from 1825 and for a long period thereafter. In 1885, the writer Alfred Barnard visited the Saucel Distillery and reported that the establishment had an extensive bottling department, "wherein whisky for export is labelled under the trade marks [sic] of the 'Lion and Crown' James Stewart and Co" (Barnard 2013). The company continued until it was absorbed into Distillers Company Limited in 1903 (Townsend 1993). The Saucel distillery burned down in 1915. Since the bottle fragments were found near the top of the camboose mound, one might speculate that its contents provided a drink toward the end of the shanty's use.

A ban on scotch or other spirits there was, but there were other potential sources of alcohol that could be accessed. The broken medicine bottle in the ditch may have provided a remedy, or it may have been there because its contents included alcohol.

The metal tea dish was a common feature of this type of lumber camp. Such a container is mentioned in one of the earliest descriptions of an Ottawa Valley shanty, from 1845. Geologist William Logan described the manner of use of the panniken: "There is a tin dish for each man to take his tea or soup out of, but there are no plates; neither are there forks, though there is a knife for each person; anything to be cut is cut on the bread, which accompanies each man's pork & the thumb serves for a fork" (Smith and Dyck 2007:163).

The tea consumed was green tea, described as: "a double distilled, highly concentrated, compound extract of the Chinese shrub. It is, in fact, a tea soup, and has been described by one of themselves as 'strong enough to float an axe.'... it is cold drawn, and then boiled—the process being to fill the kettle with cold water, cram as much tea on the top as the cover can force in, and then place it on the fire; as it is poured out, fresh additions of tea and cold water are added.... The taste of this tea is alkaline, and it has a decided coppery flavor.... on the Ottawa there are thousands of men who drink their pound of tea per week, and some of them double this quantity" (Keefer 1854:63).

The lumps of concretion in the sand and ash near the top of the hearth seemed at first to be explainable as a normal process found in a hardwood fire. One often finds harder lumps of ash in the bottom of a woodstove or fireplace, but not lumps like mortar. An attempt to break down one of the small concretions from the Aarel site proved very difficult. It would not dissolve in water and it did not crumble easily. It was presumed that some chemical reaction might have contributed to the hardness.

Examination of literature revealed a discussion of lime mortar and its substitutes, in an excerpt from an 1834 dissertation on building log houses: "But you are not without an excellent substitute for lime mortar by mixing together two parts of wood ashes with one of red earth which is found by removing the surface stratum of black vegetable mould" (Hill 1957:365). That is roughly the combination of materials found in the camboose. The hearth mound was made of red

and yellow sand, to which wood ash was added from the fire. Water would be added through rainfall through the open chimney and once the hearth was open to the elements when the shanty no longer surrounded it. Such hard material had been previously associated with a camboose shanty: "A mile from the tong site we located one of their camboose camps, now outlined by 40-foot-long mounds of earth that once were walls, and in the centre the camboose itself.... The ashes puzzled us for a moment, for they had hardened into a semi-solid material resembling low-grade concrete" (Rutter 1993:9).

Charring of the wooden beam next to the concretion layer suggests that a great deal of heat was absorbed into the hearth material, even distant from the fire. It may have radiated heat even when the fire grew low. Pieces of green glass, melted into blobs, lying within the sand, confirmed that the fire was hot enough to melt glass. Based on the spectral analysis and personal experience, it was the opinion of the operator of the electron microscope that he saw evidence of a flow of material at the microscopic scale in the concretion, suggesting that at times the fire was hot enough to make new glass (Paul Alexandre, personal communication 2009). That might explain the difficulty in crushing small samples of concretion and the overall hardness and thickness of the concretion layer. Hot ash mixed with sand would periodically be removed as it built up in the fire, and was perhaps deposited over the backdrop of stones surrounding the fire, where it was spread out and cooled, making a hard layer. It is not known why an extensive concretion layer was absent in the excavation of the southeast quadrant directly opposite, and only decimetres from the thick concretion layer at the top of the hearth. It raises the question whether the ash-bone-sand mix formed a hard concretion while the camboose was in service, especially since the microscopically observed "glass" would be expected to cool and "solidify" quickly. The concretion remains a puzzle.

It was hoped that there might be items of a personal nature in excavation units that in 1871 would have been under the bunks, or in a unit just outside the shanty entrance, but the rarity of

artifacts in both locations suggested that what few personal items the men had were well cared for and seldom lost. The most common find within the confines of the foundation mounds, but beyond the camboose, were buttons, 21 in number. These included white buttons such as one might find on underwear or shirts, larger buttons that one might find on heavy shirts, and metal buttons that one might find on pants. The white buttons were 11 to 12 mm in diameter and both patterned and non-patterned.

One "artifact" was decidedly missing. In a lumberman's terminology, a shanty was not just the main building but a stable and/or storage building, a certain number of men, and a certain number of horses. An overall examination of the site did not reveal any indication of the outbuildings that would be expected on such a site, namely, a stable for the horses, a building for food storage for the horses and men, and a privy (farther away than the other outbuildings and downhill). Investigation of the surrounding forest floor revealed many natural straight-line mounds from fallen trees, but no additional foundation mounds were found.

A stable would seem to have been a necessity. It is unlikely that the men would want to walk very far from the shanty to the stable, especially when snowfall could be significant. So, as shown in some photographs, the stable, "and the combined grainery and meat house" (Macnamara 1959:74) should be nearby. But there are no obvious indications of a foundation for a stable in the vicinity surrounding the Aarel site shanty foundations.

Heavy work horses require feed and water. Indeed, in selecting a site for a shanty, a continuous supply of water was "of first importance" (Hillis 1967:159). Max Pecoski, a Bonnechere valley farmer of more than 70 years' experience, suggested that watering of the horses would take place twice a day, and that it would be more likely to place a stable closer to the supply of water than distant because of the necessity of carrying all that water (Max Pecoski, personal communication 2009).

At the Aarel site it would be possible to obtain water from the river to the west only with

much difficulty, due to the very steep nature of the bank and the vertical distance to the water. A similar condition would exist to the east, where the river was much farther away. A stable location to the south is possible, although the distance to the water and the shanty increases as one travels south. There is a slightly less steep slope to the river to the north, but it still is a slope. Slopes that were steep would become treacherous for both horses and men if freezing rain were to occur, thus making slope of the land an additional factor in locating a stable (Max Pecoski, personal communication 2009). Just where a stable would have been located at this shanty site is uncertain.

Shovel testing at two-metre intervals through the area east of the foundation mounds and at five-metre intervals to the south of the shanty failed to reveal evidence of a stable. Only three artifacts suggestive of a stable were found: the harness hame leaning against a stump to the south and west of the main door, the horseshoe at the southeast corner of the foundation, and the clip that looks similar to ones likely to be found on a harness, found some metres to the east of the front wall of the camboose shanty.

It may have been that there was a stable, but one lacking foundation mounds. James Hillis (1946) commented on the condition of some stables: "I was startled to find, on putting up my team for the night, that the roof of the stable had only brush for covering which, in turn, had a covering of about two feet of snow. Why there was no provision for a thaw was a mystery to me. My concern, however, was in vain for during my three month's stay in this region there was never a day warm enough for one to even make a snowball" (Hillis 1946:59). And in another instance: "This camp had been erected the previous year by a foreman named Jenkins who apparently knew nothing of the care of horses and cared less. I was horrified at the kind of stables he had used: they were built on a side hill with no flooring and the horses were obliged to stand at an angle and up to their fetlocks in mud" (Hillis 1946:68).

There is another possible consideration: that the stable once was adjacent to the shanty but has since been swept off the plateau by erosion from the bend in the river. In the field notes of the

aforementioned 1882 survey of Canisbay Township, in addition to the "old lumber shanty" the surveyor indicated two other buildings (Dickson 1882:26). Examination of aerial photographs from 1930, 1962 and 1998 indicates that the river has eroded the bank to the west of the shanty. It is not certain if sufficient erosion has occurred to remove a building, even when the approximate shape of the river from the 1871 map is considered.

No sign of any shanty foundations have been found to remain, as yet, at most of the other sites noted by Bell (1871a) along the chain of lakes on the Madawaska River. Most of those former sites are now within modern campgrounds or other locations modified by past disturbance or development. The Perley and Pattee depot farm with which the shanties were associated was ploughed and planted with pine many years ago. With respect to its accessibility and completeness of the remains, the Aarel site camboose shanty may be quite rare.

Notwithstanding riverbank erosion, it appears that the Aarel site shanty had not been much disturbed. The site appears not to have been visited much despite being metres away from a well-used canoe route. The steep bank next to the river is a contributing factor. But there had been visitors. The small stone fire ring on top of the river bank, and the associated artifacts left behind, the 1981 five-cent piece, the stubby beer bottle, and the early 1980s Coke can for Canadian distribution, suggest a brief visit by day-trippers. It is possible that the few flat rocks may have been borrowed from the camboose mound, but that seems unlikely. The mound would have been hard to see from the campsite through the small trees. The rocks would have been mostly covered by duff.

Left hanging from a branch of a small balsam near the western foundation mound was a dried tea bag of unknown age, complete with string and faded tag, found when the site was first investigated in 2008. That suggests at least a second visitor at a later time.

While the locations of a few other camboose shanty sites are known in Algonquin Park, with more likely yet to be discovered should a complete

inventory be attempted, it may be that very few are as undisturbed as the Aarel site. A former district forester provided the information that a common practice over the years had been for forest workers to run the plow blade of a mechanized “skidder” through the central fireplace to check for bottles and other “collectable” items (Jack Mihell, personal communication 2009). Henry Taylor, late of Bancroft and an old lumberman, wrote in *Sylva* magazine of his earlier days, locating “several old foundations in my travels in the bush and digging in the big pile of old ashes in the centre I have found the old clay tobacco pipes and pieces of charred beef bones” (Taylor 1951:11). In the past some recreational canoeists found camp ruins and checked out the fireplaces (Donald Beuprie, personal communication 2009). It is hoped that type of behavior has diminished in recent years, but, just in case it has not, the exact location of the Aarel site is kept confidential, along with the location of other known camboose shanties (excepting those in publicly identified historic zones).

There may seem to be no need for urgency in the archaeological study of camboose shanties and other such “recent” structures from the early days of lumbering. Camboose shanties and other historic sites in wooded areas, particularly in parks, may be considered low priority for archaeological investigation because there is little or no modern development to threaten that cultural resource. It is thought that artifacts in or on the ground are stable and will always retain their spatial context, as noted in a letter to the author by Algonquin Park Superintendent George Whitney: “From a purely historical research viewpoint, it is probably best to leave sites undisturbed until they can be fully studied.... the basic ‘integrity’ of the historical record... is not altered if this approach is followed” (Whitney 1984). Financial constraints have been a contributing factor: “The historical zone system for Algonquin Park requires additional research and review... [that] will require funding which we do not have at the moment” (Whitney 1984). Decades later, shortage of funding continues to be an obstacle to the “research and review” of archaeological resources, both within and beyond the park’s boundaries.

Evidence from the Aarel site suggests that, even on otherwise undisturbed sites, natural processes such as tree root growth or the uprooting of trees by wind may alter the vertical and horizontal position of artifacts or other aspects of a feature—significantly so, given enough time and enough roots. Regardless of the means, human interference, erosion, frost-heaving, or shifting by growth of tree roots, spatial orientation between artifacts or within soil horizons, once modified, becomes lost contextual fact that cannot be recovered (MacKay 2014:20).

Conclusions

The Aarel site camboose shanty has confirmed much of what has been learned from historical documents and latter-day recollection about shanty construction and the lives of the men therein. Observations from this particular investigation were used to influence the manner of reconstruction of the replica camboose at the Algonquin Logging Museum camboose shanty in Algonquin Provincial Park during 2011. The “missing” stable and the concretion layer provided some lasting mysteries. With over half of the site left intact, there may be more to learn from the Aarel site at some future date, before erosion destroys the site.

The results of the study of one example of a camboose shanty cannot be considered representative of all. With over a century since the last use of camboose shanties, perhaps their time has come to be considered “old enough” for serious attention by archaeology students seeking research topics, or by forest managers, park managers or managers of rural townships in a position to have research done. Further investigation of other camboose shanties (and other logging camps), not just in Algonquin Park but wherever they can be found throughout Ontario, should be a research priority while the archaeological record on those sites remains intact. *Acknowledgements:* Permission to work on this site was provided by Ontario Parks staff at Algonquin Park. Their co-operation is appreciated. Thanks also to Trina Chatelain, Collections Coordinator of the Algonquin Park Museum Archives at the Algonquin Park Visitor Centre, where the artifacts

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References Cited

- Aldred, D.
1985 *Registered Timber Marks of Eastern Canada: 1870 to 1984*. Multiscience Publications, Canadian Forestry Service, and Supply and Services Canada, Ottawa.
- Allen, W.
2005 Nineteenth Century Aboriginal Farmers on the Madawaska River. In *Partners to the Past: Making Connections in the Ottawa River Valley*, edited by J. Molnar, pp. 56-75. Proceedings of the 2005 Ontario Archaeological Society Symposium. Ontario Archaeological society, Toronto.
- Anonymous
1862 A Trip to the Timber Maker. *Once a Week*, January 4, pp. 47-51.
- Ballantine, T.,
2008 Letter to Roderick MacKay, December 18, 2008. On file with Aarel site fieldnote copies at the Algonquin Park Museum Archives, Algonquin Park Visitor Centre.
- Barnard, A.
2013 *The Whisky Distilleries of the United Kingdom*. Reprinted. Aaron Barker Publishing. Originally published 1887, Proprietors of Harpers Weekly Gazette, London.
- Bell, W.
1871a *Plan of Timber Limits on the Upper Waters of the Madawaska River*. R-M, Ontario Archives.
1871b Report, Field Notes and Diary of the Survey of Timber Limits Petawawa and Madawaska. FN 1932 RG1-59, MS924 Reel 23, Ontario Archives.
- Clarke, C.
1957 Archaeology in Algonquin Park. *New Pages in History*, p. 20. Ontario Archaeological Society, Toronto.
- Crown Lands Department
1868 *Timber Sales Branch Register of Licenses*. RG1 Series E-3-A, MS 894, Ontario Archives.
- Cummings, H.
1963 *Early Days in Haliburton*. Department of Lands and Forests, Toronto.
- Dickson, J.
1960 *Camping in the Muskoka Region*. Reprinted. Department of Lands and Forests Ontario. Originally published 1886, C.B. Robinson, Toronto.

- 1882 *Field Notes of Survey of Canisbay*. Office of the Surveyor General; Ontario Ministry of Natural Resources and Forestry, Toronto.
- 1883 *Survey of Canisbay Township*. Report of the Commissioner of Crown Lands, Appendix 21, Ontario Sessional Papers.
- Franzen, J.
1992 Northern Michigan Logging Camps: Material Culture and Worker Adaptation on the Industrial Frontier. *Historical Archaeology* 26(2):74-98.
- Hill, G.
1957 Building the Log House. In *The Valley of the Trent*, edited by E.C. Guillet, pp. 362-365. Champlain Society, University of Toronto Press, Toronto. Originally published 1834, A Guide for Emigrants from the British Shores to the Woods of Canada, R. Moore, Dublin.
- Hillis, J.
1946 *Rural Life in Ontario: 1867 to 1891*. Ms. (copy) on file, Algonquin Park Museum Archives, Algonquin Park Visitor Centre.
1967 Life in the Lumber Camp, 1883 [with a contribution by R. Hanson]. *Ontario History* 59(3):156-162.
- Hurley, W.
1971 Archaeology Field Notes for BkGn-4. Notes on file, Algonquin Park Museum Archives, Algonquin Park Visitor Centre.
- Keefer, T.
1854 *The Ottawa*. Mechanics Institute of Montreal, Montreal.
- Lower, A. *Great Britain's Woodyard*. McGill-Queen's University Press, Kingston and Montreal.
1973
- McGregor, J.
1833 *British America*. Vol. 2. William Blackwood, London.
- MacKay, R.
2008 The Aarel Site—BjGp-2: A Report on a Camboose Shanty Site in Algonquin Park. Report on file, Algonquin Park Visitor Centre library; Ontario Ministry of Tourism, Culture and Sport, Toronto.
2009a *The Aarel Site—BjGp-2: A report on Stage 2 and Stage 3 Investigations of a Camboose Shanty Site in Algonquin Park*. Report on file, Algonquin Park Visitor Centre library; Ontario Ministry of Tourism, Culture and Sport, Toronto.
2009b The Aarel Site Camboose Shanty, Algonquin Park. *Arch Notes* Nov/Dec:7-9.
- 2011 More Work at the Aarel Site—BjGp-2: A Report on Continued Stage 2 and Stage 3 Investigations of a Camboose Shanty Site in Algonquin Park. Report on file, Algonquin Park Visitor Centre library; Ontario Ministry of Tourism, Culture and Sport, Toronto.
2012 The Aarel Site, BjGp-2: Completion (presumed) of Stage Three excavations on a Camboose Shanty in Algonquin Park, District of Nipissing. Report on file, Algonquin Park Visitor Centre library; Ontario Ministry of Tourism, Culture and Sport, Toronto.
2014 *Looking at the Material Culture of Nineteenth Century Logging Camps: An Algonquin Park Perspective and Beyond*. APA Occasional Papers in Archaeology 1. Association of Professional Archaeologists <[http://www.apaontario.ca/Resources/Documents/APA Occasional Paper in Archaeology No. 01.pdf](http://www.apaontario.ca/Resources/Documents/APA%20Occasional%20Paper%20in%20Archaeology%20No.%2001.pdf)>
- 2015 More About...The Camboose Shanty: Home to the Shantymen of the 19th Century. FastPencil, Campbell, CA.
- MacKay, R., and W. Reynolds
1993 *Algonquin*. Boston Mills Press/Stoddart Publishing, Erin, Ontario.
- Macnamara, C.
1959 The Camboose Shanty. *Ontario History* 51(2):73-78.
- Miller, N.
1989 What Mean These Seeds: A Comparative Approach to Archaeological Seed Analysis. *Historical Archaeology* 23(2):50-59.
- Monckton, S.
2013 Plants and the Archaeology of the Invisible. In *Before Ontario: The Archaeology of a Province*, edited by M. Munson and S. Jamieson, pp. 124-133. McGill-Queen's University Press, Montreal and Kingston.
- Needs-Howarth, S.
2010 Zooarchaeological Inventory of the Aarel site (BjGp-2). Perca Zooarchaeological Research, Toronto. Report on file with Aarel Site fieldnote copies, Algonquin Park Museum Archives, Algonquin Park Visitor Centre.
- Niven, A.
1878 *Survey of Township of Nightingale*. Report of the Commissioner of Crown Lands, Appendix 35, Ontario Sessional Papers.
- Ottawa Timber District
1871 *Register of Clearances of Rafts*. RG1-196 MS 10725. Ontario Archives.

- Pennock, J.
1948 Life in the Camboose Camps. *Sylva* 4(1):33-39.
- Phipps, R.
1885 *The Watershed of Eastern Ontario*. Report of Clerk of Forestry. Ontario Sessional Papers, Number 4.
- Rohe, R.
1985 Settlement Patterns of Logging Camps in the Great Lakes Region. *Journal of Cultural Geography* 6 (1):79-107.
1996 The Material Culture of an 1870s Logging Camp: The Sherry and Gerry Site, Wisconsin. *Material Culture* 28(1):1-68.
- Rutter, R.
1993 La Belle Bonnechere. Reprinted. In *The Best of the Raven*, edited by D. Strickland, illustrated by P. Burke, with contributions by R. Rutter, pp. 8-9. The Friends of Algonquin Park, Whitney. Originally published 1963, *The Raven* 4(11):1-2.
- Saunders, A.
1946 *Algonquin Story*. Ontario Department of Lands and Forests, Toronto.
- Simpson, J.
1896 *Algonquin Provincial Park, Superintendent's Report for 1895*. Ontario Sessional Papers, Number 5.
- Smith, C., and I. Dyck
2007 *William Logan's 1845 Survey of the Upper Ottawa Valley*. Mercury Series History Paper 54. Canadian Museum of Civilization, Ottawa.
- Snow, J.
1854 *Plan of Part of the Madawaska River*. Hull. SR 7078, Ontario Archives.
- Taylor, H.
1951 The Camboose Camp. *Sylva* 7(1): 11-14.
- Taylor, R.
1976 The Old Bean Pot. *Your Forests* 9(2):27-29. Timber Trades Journal
- 1897 *The Wood Industries of Canada*. William Ryder and Son, London.
- Townsend, B.
2011 *Scotch Missed: The Last Distilleries of Scotland*. 3rd ed. Neil Wilson Publishing, Castle Douglas, UK.
- Wallbridge, M.
1967 *The Diary of Thomas Nightingale Farmer and Miner 1867 to 1871*. Private printing by Picton Gazette.
- Whitney, G.
1984 Letter to Roderick MacKay, 29 November, 1984. On file, Algonquin Park Museum Archives, Algonquin Park Visitor Centre.
- Whitton, C.
1974 *A Hundred Years A-Fellin': 1842-1942*. Gillies Brothers, Ottawa. Originally published 1943.
- Wilson, E.
1935 Required Sound Thrashing to Cure Lumber-jack of Swearing. *Ottawa Citizen*, Jan. 19.

Les vestiges d'une cambuse datant de 1871 ont été découverts au parc provincial Algonquin. Certains vestiges dans le parc ont été explorés par des ouvriers forestiers ou des canoteurs relativement aux artefacts, mais le site semble avoir été non perturbé. Des fouilles ont été entreprises périodiquement entre 2008 et 2012 pour examiner l'âtre et les espaces habitables à l'intérieur de l'empreinte en monticule de la fondation et les environs immédiats. Les artefacts, et certaines ressources historiques suggèrent que la cambuse était opérée par la compagnie Perley and Pattee Lumber Company d'Ottawa. Bien que la cambuse semble complète, les dépendances qui devraient y être associées sont absentes ou bien n'ont pas été localisées. Avant que l'érosion et d'autres facteurs environnementaux modifient les traces archéologiques, un certain degré d'urgence est suggéré quant à l'investigation de ce genre de structure.

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From Grey to Print

Huron-Wendat Sweat Baths¹

Allen Tyyska

The clusters of tiny posts that appear regularly in the middle of Huron-Wendat longhouses are in need of explication. In this paper, the archaeological record of their variance in size and structure at Cahiagué along with the documentary record of small posts in the centre of house structures are used to identify them as sequentially used, temporarily erected and dismantled, sweat baths. Their appearance at about the same time as communal ossuaries suggests they were powerful social integrative mechanisms, situated historically in a complex of ceremonial paraphernalia including pipes, tobacco, and smoking. The period of their evolution coincides with the appearance of larger palisaded villages perhaps resulting from greater stresses and conflicts with other Iroquoians and the concomitant need for more powerful ways of integrating increasing numbers of people living together. The practice of sweating was an important institution at a time when Huron-Wendat people were effectively redefining their operating concepts of community.

Introduction

There are clusters of tiny posts that appear regularly in the middle of Huron-Wendat longhouses. Little posts, long familiar to excavators but still enigmatic.

These tiny features are often called “hearth posts” by observers who have noted their association with hearths. This is an unfortunate term for something whose precise use is unknown, because it implies that the posts are subordinate to hearths, or incidental to hearths. It implies that the posts have no meaning apart from hearths. That implied dependency has restricted thoughts about the uses of the posts to inferring a place in activities like cooking. I propose we disabuse ourselves of these illusions, breaking the essential link between posts and hearths, then re-examining the posts, noticing their individual and group

characteristics. A local cluster of nine houses at Cahiagué (Warminster, a large village near Orillia, dating from the second decade of the seventeenth century) will be inspected toward that end. I will then introduce ethnohistoric material indicating a low probability that the posts are associated with food preparation, and a high probability that they represent structures with quite a different purpose. Finally, I will indulge in speculation about the prehistory of these structures, describing a counterpoint between them and ossuary burial.

The original connection between the posts and hearths seems to come from the fact that the posts appear, throughout the Huron-Wendat sequence after Miller (ca A.D. 1115), to occur in clusters, in the midline of longhouses, localized “around” or “beside” hearths (Figure 1). This restricted distribution is in contrast to that of

¹ The intent with the From Grey to Print section of *Ontario Archaeology* is to publish significant or influential studies/papers that are often cited but that, for whatever reason, were not previously published. The reports resulting from these studies are being presented here in their original form, without peer review. They have, however, been edited to conform to the journal's house style. To avoid interrupting the flow of the narrative, metric equivalents for measurements are not given. This instalment of From Grey to Print was originally written in 1972.

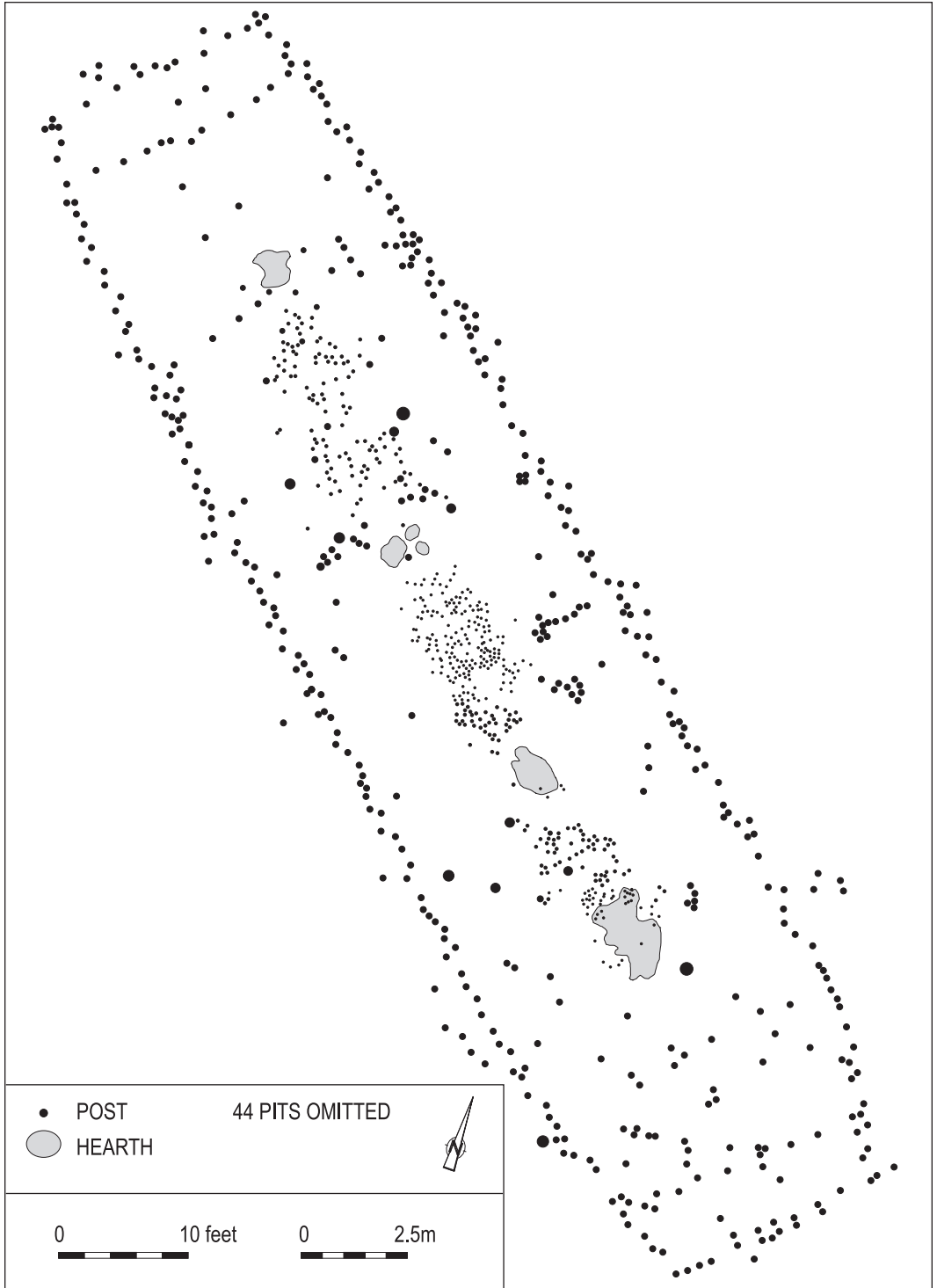


Figure 1. Example of post clusters, in the mid-line of longhouses, localised “around” or “beside” hearths, Cabiagué, House 4.

other posts and pits, which are spread widely across the house. Many of the “hearth posts” are filled with ash or charcoal, creating the illusion of association with hearths. The posts are very small, averaging one to two inches in diameter, in contrast to all other posts, which are larger. It is difficult from their size and scatter to imagine that they are necessary to the structure of the house, but why else should they occur so frequently? The immediate answer seems to be that “they supplement the fires.”

The answer is inadequate. First, the posts do not occur with all hearths. In fact, at Cahiagué, the posts do not even occur in all houses, and they are totally absent from four of the nine houses considered. To be sure, the little posts are absent only from the smaller houses, but even these all show evidence of the domestic use of fire-hearths: ash, charcoal, charred corn, charred bone, fire-cracked rock, and pottery. So, it is quite possible to have fireplaces, and cook at them, without leaving any trace of the small posts.

Second, one can find evidence of other constraints which would have led the inhabitants to place the small posts into the centre of houses, much as the hearths were placed there— independent of the hearths, but for parallel reasons. Within the houses, there are lines of posts on each side, several feet from the outer wall. These patterns coincide with the location of sidewall platforms or benches described by early explorers and missionaries, benches called *endicha* by the Huron-Wendat, about 4 feet high, on top of which people sometimes sat or slept, and under which they stored wood. Such benches need not have restricted the distribution of pits or even, in a pinch, structurally necessary posts. But they could have imposed restraints upon the location of a fireplace or upon the location of a temporary structure within the house. Both of these would bias toward the clear midline of the house, which is precisely where hearths and post clusters are normally found.

If it is possible to consider that hearths and post clusters may have been in the midline for similar, but independent reasons, it becomes immediately clear that, along this midline, the post clusters are, where the hearths are not. Indeed, some

of the posts are 10 to 15 feet away from the nearest hearth. And there is no evidence that the posts are arranged symmetrically around the hearths. Of all the little posts, a very, very few are “in” a hearth— this alone suggesting a temporary location when the fireplace was not in use.

Some systematic, general observations are possible about the Cahiagué posts, individually and in their groups:

- (a) For any given cluster, a width of 4 to 6 feet seems normal, while lengths range from 9 to 15 feet. Looking at some of the denser clusters, one gets the impression of circles or overlapping circles. Sometimes the circularity is clear (e.g., House 4); at other times it is confused.
- (b) The post clusters occupy the central aisle of the house; where there are several, they are normally in a straight line, punctuated by fireplaces. The example of House 6 at Cahiagué, however, suggests that post clusters may meander in a gentle crescent through a house.
- (c) One must admit some relationship to hearths, for in both House 5 and House 8, where there is room for a post cluster to be somewhat farther from a hearth, the clusters are near the hearths.
- (d) These posts are small, mostly one to two inches in diameter, with an upper limit of three inches. Other posts begin at two and one half inches and range up to five inches for outside walls and inner partitions or up to 12 inches for support posts. The little posts are relatively shallow, averaging two to three inches below the topsoil–subsoil interface (perhaps six inches below the living floor), as opposed to eight or ten inches to up to 2 feet for other kinds of posts. If these little posts are parts of structures, the structures would seem to be considerably less substantial than the longhouse itself, implying that they are relatively temporary or perhaps shielded from the elements.
- (e) Another line of evidence confirms that the posts are temporary. All of the posts contain “fill,” such as white ash; grey ash;

dark, charcoal-rich soil; or lighter blends of humus, ash, subsoil, and charcoal. The implication is that all of the posts were pulled out and filled with whatever happened to be on the floor at the time. The composition of the floor is related to various different kinds of recent events and to the frequent sweeping of the longhouse. Now, adjacent posts can have different fills, and more remote posts can have similar fills, implying that the posts were not all pulled out at the same time. Nor, one would think, were they all put in at the same time.

In summary, then,

- (a) The post groupings show circular tendencies.
- (b) They are somehow related to hearths.
- (c) Whole clusters should be “pulled apart” into groupings or perhaps structures of fewer posts.
- (d) These groupings were temporary and were removed when done with.
- (e) There was a house around them, because the holes are filled with house debris and the patterns are sensitive to house restraints.
- (f) If they composed structures, these were smaller and less substantial than the houses, although large enough in bulk or related activities that they could not be squeezed under the side-benches.

It is difficult to pull apart the clusters into specific, individual structures. But some advantage may be gained through a series of graded observations, proceeding in stages from clear and unequivocal situations to those that are more confused. Doing so, it is possible to discern at least six fairly clear patterns in the make-up of some clusters.

Pattern I is clear in three instances (Figures 2 and 3). Outside House 6, abutting the east end, there is a circle of shallow posts, measuring $2\frac{3}{4}$ by 3 feet. Partly overlapping the circle, there is a pit, actually an ashy stain, itself superimposing a deep post, and containing charcoal, burnt bone, and fire-cracked rock. Within House 3, at the eastern

end of a post cluster, there is a circle of shallow posts, measuring $2\frac{3}{4}$ feet by $3\frac{1}{4}$ feet. Directly in the centre of this circle, there is a shallow, ash-filled pit with some traces of fire-reddened sand. Within House 6, at the western end of a cluster, there is a single circular line of posts, enclosing an area 5 feet across. This, then, is Pattern I, a single circle of posts, whether approximating 3 feet or 5 feet in diameter.

Patterns II, III, and IV are more similar to one another than they are to the other patterns. A major step in recognizing each case involves inspecting the cluster's edge and reconciling it with the pattern of open spaces within the cluster. Pattern II (overlapping linear) is apparent in House 6, directly east of the individual pattern defined above. Here the cluster has a scalloped edge comprising various adjoining curves, while the open spaces within are interrupted by lines or groups of posts. If one continues the discrete edge curvatures across posts in the centre of the cluster, one can see a series of overlapping circles with diameters approximating $4\frac{1}{2}$ feet and 3 to $3\frac{1}{4}$ feet. Pattern III (honeycomb) represents one extreme of departure from Pattern II in that the circles are more adjacent and nestling than overlapping, creating a “honeycomb” effect in the open spaces. This is visible in House 6, west of the Pattern II manifestation, and the diameters of the recognizable circles approximate $4\frac{1}{2}$ feet, $3\frac{1}{2}$ feet, and $2\frac{3}{4}$ feet. Pattern IV (overlapping circular) represents another extreme of departure from Pattern II, since there are a large number of circles involved, they overlap, and their centres move through a circle or oval as large as the constituents themselves. This is visible in House 4, and the diameters of the constituent circles range from $2\frac{3}{4}$ feet to $3\frac{1}{2}$ feet.

Patterns V and VI are also more similar to one another, at least in localizing principle, than they are to any of the other patterns. Pattern V (concentric stable) can be seen in House 8, where there is a series of post clusters arranged in a circular pattern around an open centre. There is a pit in the centre. One can imagine a series of concentric circles here, stable as to centre on the pit, relatively stable as to size (with diameters around $4\frac{1}{2}$ to 5 feet), and each circle comprising

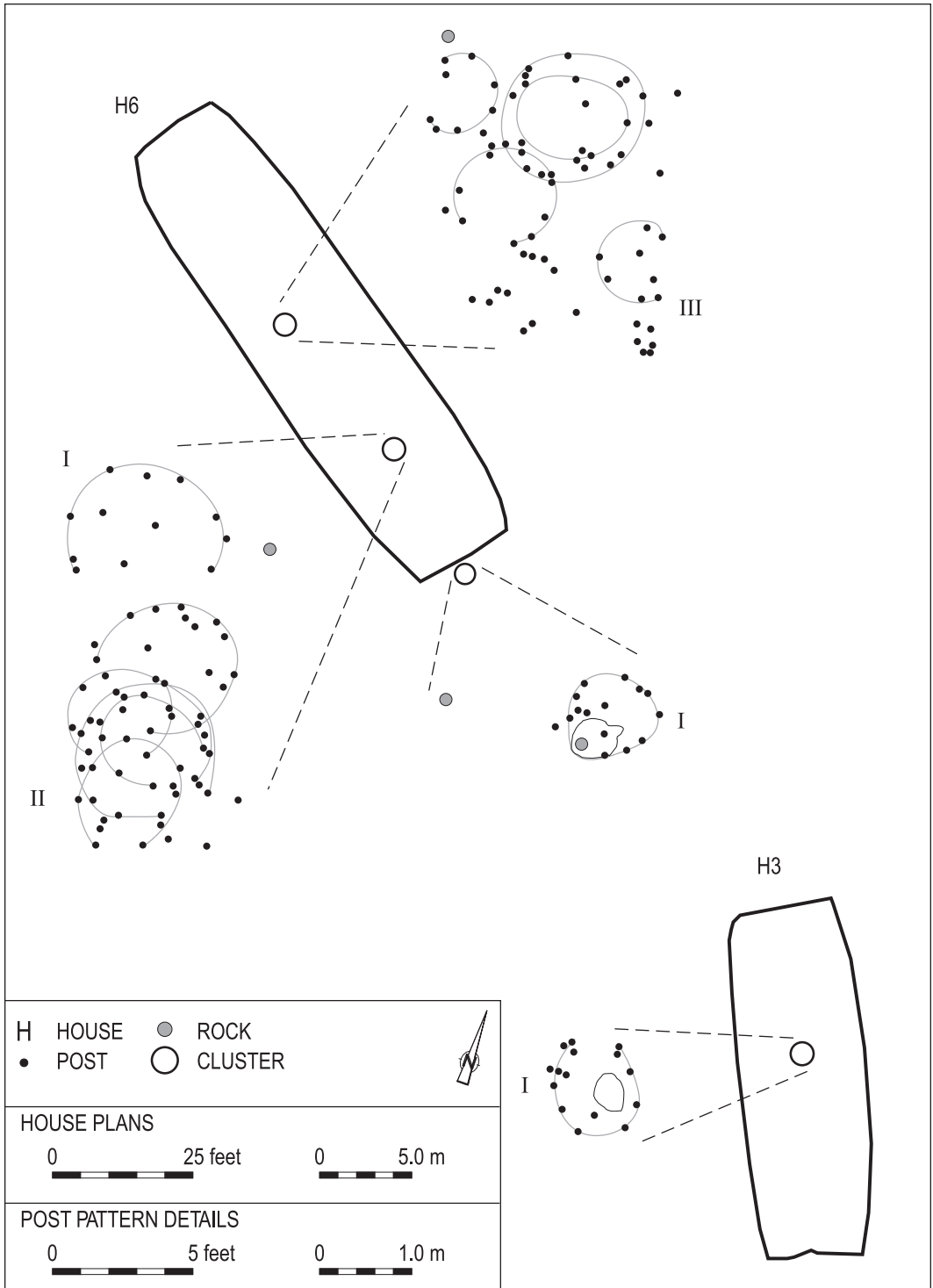


Figure 2. Post patterns, Cahiagué, Houses 6 and 3.

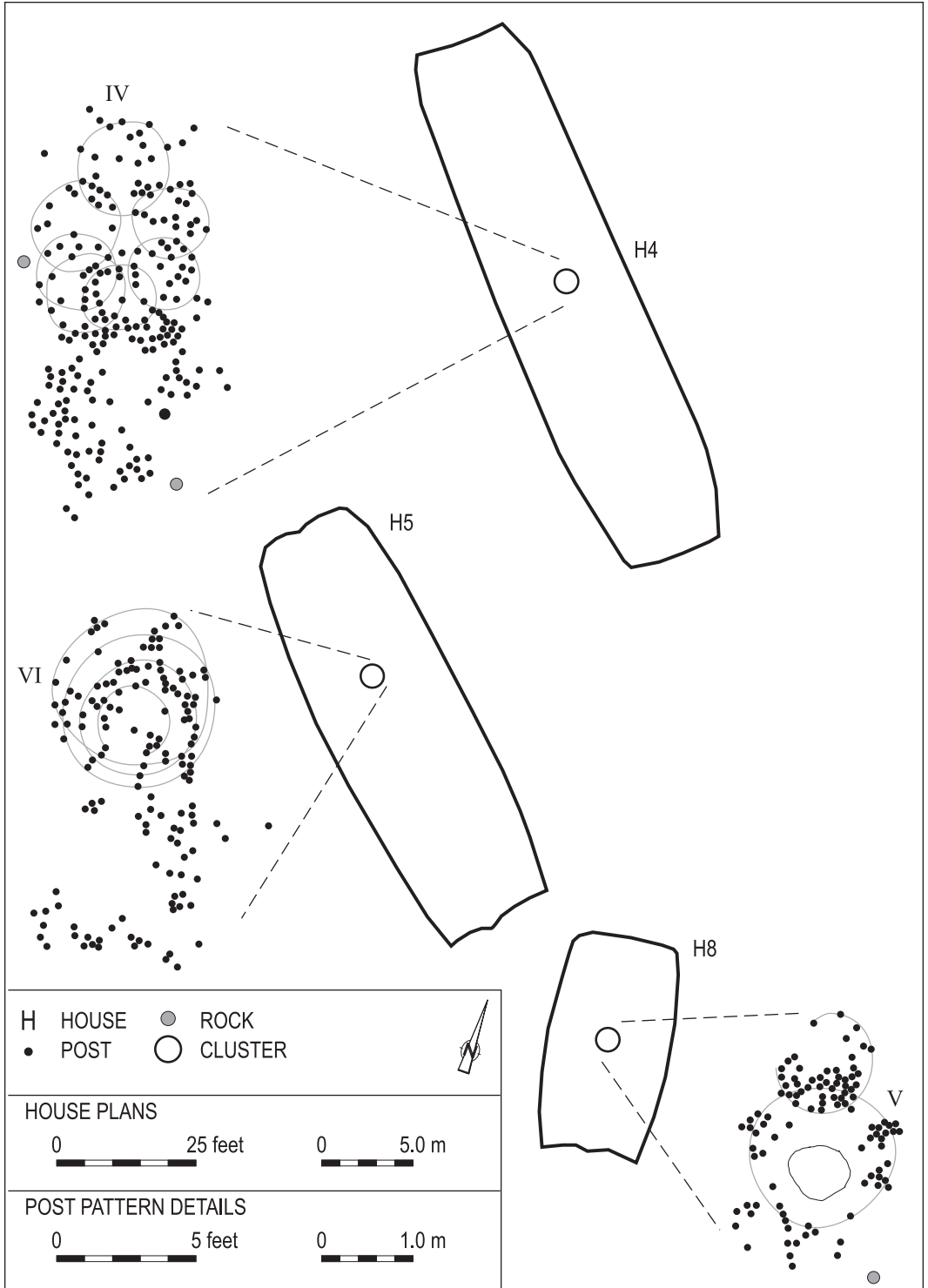


Figure 3. Post patterns, Cabiagué, Houses 4, 5, and 8.

five to seven posts. There is variation in the precise position any post would occupy, but a relatively high degree of stability in the general positioning of posts. This concentric arrangement of equal circles, with clustering of post stations, is Pattern V. Pattern VI (concentric irregular) visible in House 5, is somewhat different, in that, while the circles are reasonably concentric, the centres do move somewhat and are of different sizes (diameters range between about 2½ to 4½ feet), and the sequential posts show no simple tendency to cluster.

What can one say about these patterns? They probably do not exhaust the possibilities, since a number of clusters resisted first efforts to break them down. The patterns described are real, however, since they are recognizable and non-random. They are non-random because one is discrete and repeated (I), while the others fall into two groups (II, III, and IV, on the one hand, and V and VI, on the other) with a generic consistency within each group. Furthermore, with the single exception of Pattern II, all of the patterns can be readily spotted on other sites (see Table 1).

The patterns describe the spatial relationship of closely clustered circular structures to one another. I assume that the patterns grew through time, with structures going up and coming down in sequence. If individual structures are separate in time, then Patterns III (honeycomb) and V (concentric stable) are particularly remarkable, since they imply the operation of fine locational constraints and of a “memory.” With Pattern V, perhaps the central pit acts as a “memory” and structure guide. But it is difficult to account for the generation of distinct honeycomb patterns on four different widely separated sites. While we have not succeeded in “pulling apart” the post clusters in any detailed manner, the preceding observations permit at least three general statements:

- (a) Individual, circular post groups or structures are visible.
- (b) The circular structures fall into at least two size ranges, 2½ to 3 feet in diameter and 4½ to 5 feet in diameter.
- (c) Repeated, individual circular structures form clusters according to at least six locational patterns.

Table 1: *Association of Fire-Cracked Rock with Post Clusters at Cahiagué.*¹

	Pit		Floor
House 3	2/2		
House 4	2/3		4/4
House 5	2/4		
House 6	2/2		2/2
House 8	1/1		
Totals	9/12		6/6
Both Contexts		15/18	

¹ Figures are presented for a primary context, the house floor, and for a secondary context, pit fill. Presumably, pit fills derive from floor debris. In each expression, the figure on the left refers to the number of rock clusters found within five feet of a post cluster. The figure on the right refers to the total in each context, in each house.

Ethnohistory

Among the first-hand observers of Huron-Wendat life, Gabriel Sagard (Sagard 1939) consistently documents domestic activities in greatest detail. In one long passage which describes eight different ways of cooking, there is no reference to upright posts around the hearth. In the descriptions of drying and storing food on racks, there is no reference to upright posts around the hearth.

There is a reference to the infrequent use of a skin and fur “de-louser” which does use two sticks stood beside a fireplace. A robe would be set over these two sticks and lice driven out from the depths of the fur by the heat would be plucked and eaten (Sagard 1939:228). There is another reference to the practice of fattening dogs or young bears for important feasts without any danger from their teeth or claws “by shutting them up in the middle of their lodge in a little round enclosure made with stakes sunk in the ground, and there they give them the remains of their sagamite to eat” (Sagard 1939:220).

Each of these structures, “de-louser” and animal pen, is probably responsible for some of the small, clustered posts at Cahiagué and elsewhere. However, there is little in the ethnohistoric record to suggest that either structure was used often enough to generate all of the stains that are recorded in the floor plans of

excavated houses. At least both seem infrequent relative to another structure which Sagard describes:

When anyone wishes to have a sweat, which is the best and most ordinary remedy they use to keep health, and to prevent and forestall diseases, he summons several of his friends to sweat with him, for by himself he could not easily manage it. So they heat a number of stones red-hot in a great fire, then take them out and put them in a pile in the middle of the lodge, or wherever they wish to set up their sweat bath (for when on a journey in the wild they sometimes take it), then all around the pile they arrange sticks planted in the ground, as high as the waist or higher, and bent over at the top, in the shape of a circular table, with a space left between the stones and the sticks sufficient to accommodate the naked men who are to sweat, and who sit on the ground side by side squeezed closely together all round the pile of stones with their knees raised in front of their stomachs. When they are in position the whole sweat-bath is covered above and at the sides with large pieces of bark and a number of skins, so that no warmth nor air can get out of the bath. Then, to heat themselves still more and stimulate sweating one of them sings, and the rest shout and repeat continually, strongly and violently “Het, het, het”; and when they can stand no more heat, they let in a little air, taking off a skin from the top, and sometimes also drinking large potfuls of cold water, and then they have the covering put on again [Sagard 1939:197-198].

Several points arise from this reference: sweat baths can be in the “middle of the longhouse;” they tend to be round, small and temporary; they are used frequently; they tend to be used by groups of men, who come by invitation, to share in another’s hospitality; and their use is related to health. Each of these points can be further documented and elaborated.

The frequent use of sweat baths is directly confirmed by Lafitau (Fenton and Moore

1974:207), who says, “The sweat bath is their most universal remedy, and of it they make a great deal of use.” Indirect confirmation can be seen in the sheer number of references to sweat baths. They are described by Champlain (1970), by the Jesuits Brébeuf, Ragueneau, Lalemant twice, by Le Mercier four times (Thwaites 1896-1901), as well as by Sagard and Lafitau.

There are two modes of sweat bath use, one individual and the other communal. Of 11 references, 5 speak of one man alone in the sweat bath. Four times this is a medicine man, or *oqui*, and once it is the relative of a sick captain. Otherwise group participation is stressed. Three generalized statements speak of several men, 7 or 8 men, or simply men as the participants in sweat bathing. Three specific instances are described, and the participants number a few, 12 or 13, and 20. Even when only one man is sweating, there are other people involved, outside the sweat bath itself, active in passing in food, tobacco, and water or removing and replacing coverings (see Tooker 1964:93).

Sweat baths are consistently described as covered in removable bark or skins. They seem generally to be built for a particular sweat. Physical descriptions include the following alternative specifications: circular...waist high, six or seven feet high, and 4 or 5 poles in a ring and crossed, making a little arbour. Diameters are not specified, although the constant implication is that sweat baths are as small as possible, designed to accommodate the heating stones and the users, with no wasted space. These data suggest two size ranges, with tiny sweat baths for individual *oquis* and larger structures for group bathing.

The use of sweat baths is related to health; one sweats to prevent sickness or sweats to effect a cure. Precisely how sweat baths relate to health is difficult to understand. Perhaps it would help to remember that the Huron-Wendat appreciated the existence of three worlds or planes of existence, the world of the dead and spirits, the world of dreams, and the world of the living. These are inadequate descriptions, and perhaps “spiritual,” “subconscious,” and “conscious” would also contribute to an understanding. In some ways, the world of dreams, or the subconscious, is

intermediate between the other two. In other ways, though, all three worlds are vitally interlinked, for the state of any one directly effects the states of the other two. It is clear that at least two of these three planes of existence (dreams and waking life) meet and interact vitally at a point of mystical union: the sweat bath. An *oqui* sweats, alone or with others, hoping to see visions that will help interpret the sick person's needs as expressed in his dreams, because the satisfaction of deep psychological need has the power to cure. The relative of the captain mentioned above was sweating alone in order to enlist the aid of his "spirit" in the cure. Once, 20 men sweated with the sick man in order to bring that much more "human energy" to bear against the disease (Thwaites 1896-1901:14:65).

An *oqui* was described sweating in order that a vision would reveal the cause of an epidemic. Or, again, a medicine man was consulted about what course a war party should take. He entered a sweat bath, sweated and sang, and then yelled "Victory! I see the enemies coming toward us from the south. I see them take to flight. I see all of you making prisoners of them" (Thwaites 1896-1901:26:175-177). Based on this vision, the war party went south.

It is said that men may treat of secret affairs in the sweat bath. Or, if the occasion is informal, they will sing, each his song, singing about their dreams, or singing their war songs.

A partial summary of the above material can single out several points germane to archaeological identification. Sweat baths are round, temporary structures, often erected in the middle of longhouses. They may be built of "4 or 5 poles in a ring," around a pile of heated rocks. Structures in two size ranges are indicated—the smaller used by medicine men who sweat alone, and the larger by groups of men who come together in groups, by invitation.

Synthesis

Bringing together archaeological and ethnohistoric data, we find essential agreement upon the existence of round, temporary structures in the middle of longhouses. Sizes in the archaeological material group into two ranges, as do sizes in the

ethnohistoric data. These size ranges are relatively consistent with one another. There is ethnographic evidence that sweat baths were used frequently. There are a total of 1007 posts in the clusters of the five houses under study. If one conveniently assumes an average of 5 posts to a sweat bath (based on reconciling the archaeological estimate of 5–7 posts with the ethnographic estimate of 4–5 posts) one achieves the following estimate of sweat bath frequencies: House 3, 12 baths; House 4, 100 baths; House 5, 31 baths; House 6, 35 baths; House 8, 22 baths, for a total of 200 sweat baths in the 5 houses. This seems consistent with the idea of frequent use.

The ethnographic accounts describe men sweating around heated rocks. Archaeologically, one may inspect the distribution of fire-cracked rock. Much of it could well derive from the heating piles themselves. Some fire-cracked rock was recovered from house floors and is probably in good association, while the remaining rocks were recovered from pits, and so probably originated as floor debris near the pits. Table 2 shows that 15 of the 18 clusters of rock (83%) were recovered from places close enough to the post clusters rather than from hearths, that an association might be inferred. Thus, there is a broad association of fire-cracked rocks to post clusters, which is consistent with ethnographic accounts of sweat bath use.

There is enough consistency between the two sources of information that one can reasonably conclude that most of the posts in the post clusters were generated by sweat baths. Therefore we have recognized a specific artifact in a specific context (i.e., the sweat bath in the longhouse). This is a very interesting artifact. It is related to the bodily and spiritual well-being of individuals or groups of individuals, pursuing these goals through its very nature as a point of mystical interaction between at least two planes of existence: the plane of dreams and the plane of ordinary reality.

There are two modes of sweat bath use, the one marked by the solitary practice of the specialist, or *oqui*, the other depending upon the voluntary spiritual community of otherwise unrelated men sweating together. The archaeological discrimination of these two modes

is simply a matter of recognizing a small sweat bath as opposed to a large one. As group sweating relates to council, to hospitality, to group participation in curing, to war parties, to visions, to war songs, the practice clearly unites mechanical processes of social integration with a major personal commitment in the form of profound metaphysical belief. Again, the sweat bath is a point of mystical interaction combining social duty and religious belief.

The Prehistory of Sweat Baths

I freely admit that reconstructing the prehistory of sweat baths is speculative, simply because we may not be looking at a representative sample of houses. It is dangerous to work with small pictures of already tiny posts, and doubly so when there are not really very many of those pictures in print. The most serious problem with the Ontario sequence is the complete gap between the Bennett site houses (A.D. 1250) and the Copeland site houses (A.D. 1500). This is really a crucial time period, and I have tried to fill it with two fourteenth-century Onondaga sites, reasoning that the overall direction of development seems similar to that in Ontario although the precise dating of events could easily be different. Accepting those reservations, I think it is useful to try to reason out what we can learn from sweat baths already, to see if any new doorways to understanding are opened

by their study.

A first glance at Table 2 shows that sweat baths are present in longhouses after Miller. They are frequent after Bennett and often very frequent after Howlett Hill [a fourteenth century Onondaga site in eastern New York State]. The midline location is most common, at least in Ontario, throughout the sequence. Except at Howlett Hill and Fournier, it appears that sweat baths need not be built in all the houses of a village. The most interesting part of the table is the column that shows which patterns are present on the various sites.

The most useful patterns for immediate study are V and III.

Pattern V (concentric stable) is present in House 3 at Howlett Hill and House 8 at Cahiagué. Both of these are short houses; indeed they are the only short houses in the entire sample to contain sweat bath patterns. So far, they are the only houses of any sort to contain Pattern V. Earlier, I suggested that the central pit in the Cahiagué houses might serve as a “memory” helping to stabilize the centre and serving as a reference point for the location of posts. No such central pit exists at Howlett Hill. However, as both of these houses are small, one could imagine the ready availability of close reference points and constraints within each, so that successive sweat baths would be guided into closely similar positions.

Table 2: *Characteristics of Iroquoian Sweat Baths in Houses.*¹

Date	Site	Affiliation	Number of Houses	Frequency ²	Stability to mid-line	Pattern
1115	Miller	Pickering	1/7	infrequent	mid-line	I?
1250	Bennett	Pickering	2/7	frequent	mid-line	IV?
1300-1370	Furnace Brook	Onondaga-Oneida	3/7	frequent	wide	III
1380	Howlett Hill	Onondaga-Oneida	3/3	very frequent	wide	I,III,V
1500	Fournier	Northern Huron-Wendat	2/2	very frequent	mid-line	III
1500	Copeland	Northern Huron-Wendat	1/4	frequent	scattered	VI
1600	Sopher	Contact Huron-Wendat	1/1	infrequent	mid-line	?
1620	Cahiagué	Historic Huron-Wendat	5/9	very frequent	mid-line	I,II,III,IV,V,VI

¹ Editor’s Note: The dates and cultural affiliation referents of some of these sites have changed since the time of writing of this paper but they were left unchanged herein.

² Infrequent: a few sparse remains near one hearth; Frequent: somewhat denser remains at several hearths; Very frequent: dense remains at most hearths.

Pattern III (honeycomb) is present at Furnace Brook, Howlett Hill, and Fournier in a total of seven houses, as well as in House 6 at Cahiagué. Pattern III is the most common of all recognized sweat bath patterns. At Fournier and the earlier sites, the honeycomb effect is even more clearly defined than at Cahiagué, with individual sweat baths nestling tightly together. Since discrete patterns are so easily recognizable, so characteristic, and so common, it is likely that these patterns are genuinely discrete, real, and non-random. There is some reason for associating these specific patterns (III and V) with specific architectural and domestic contexts. Pattern V occurs only in short houses, where architectural constraints are readily visible. Pattern III occurs only in long houses, where some other factor must be involved.

The individual sweat baths which make up Pattern III tend to be small, with only a very few of them reaching a diameter of 4 feet and those only at the latest site, Cahiagué; prehistorically they are all 2½ to 3 feet in diameter. In contrast, the individual sweat baths making up Pattern V all exceed 4 feet in diameter. In terms of our earlier distinction, the Pattern III sweat baths seem to reflect the practice of individuals, primarily the *oqui*, or specialists, while the Pattern V sweat baths seem to reflect the communal practice of sweating in groups. This observation may be extended to recognize that Patterns III and IV are generally composed of small sweat baths, while Patterns II, V and VI tend to be made up of large sweat baths. Pattern I, the isolated sweat bath, may be large or small.

Concealed in Table 1, there is a very important moment in the prehistory of sweat baths. Before Howlett Hill, only the small structures of Patterns III and IV are present. After Howlett Hill, these are joined by the large structures of Patterns II, V, and VI. In other words, until Howlett Hill, sweat bathing was the exclusive domain of the solitary practitioner, presumably the medicine man, or *oqui*. Afterwards the communal form of sweat bathing was practised as well. Considering how spiritually powerful sweat baths are held to be in the historic period, and how useful socially, this sudden

extension of their use from the specialist to a community may imply a revolutionary moment in the evolution of Huron-Wendat society and of Huron-Wendat spirituality. For the individual and for the society there is a profound difference between believing that the direct experience of multiple realities is the domain only of specialists in isolation and believing that such experience is accessible to everyman in his groups. Soon, we will discuss this more fully.

Two interesting facts attend the introduction of group sweat bathing. First, the moment coincides with a dramatic increase in the overall frequency of sweat baths found on sites. Second, in the sequence as it stands, the earliest group sweat baths (Pattern V) occur in a short house at Howlett Hill, a site where Pattern III small baths dominate the two longer houses. Unless this is only a false impression (i.e., that communal bathing started in small houses) due to working on a small series of sites, then it is clear that the communal bathing was introduced in circumstances different from those under which most people lived. If the inhabitants of a small, single-family dwelling were at some sort of social disadvantage, then perhaps it was the socially integrating, hospitality aspect of sweat bathing that appealed to them, extending their associations successfully beyond their doorways.

In any case, we may say that communal sweat bathing was introduced at the end of the fourteenth century, so long as we have correctly interpreted the difference between large and small baths as a difference in the number of participants, with a strong likelihood that the solitary user would probably be an *oqui*. The ethnohistoric evidence reported earlier supports this conclusion.

We return to the question of how particular sweat bath patterns were generated, asking "How is it that Patterns III (honeycomb) and IV (overlapping circular) are the way they are, and why should they be different from Pattern V (concentric stable)?"

Pattern V is made up entirely of large baths and, appearing as it does only in small houses, most likely represents the repeated constructions of a single host in his own house in any given case. It is reasonable that a small house, with a small

space within which to build, provides enough points of reference close to hand that a combination of constraint habit and unconscious “feel” are sufficient factors to lead successive posts into roughly the same positions. House 8 at Cahiagué shows how clearly the pattern is formed in a small house. House 5 shows what happens when the same idea is tried in a longer house. A Pattern VI (concentric irregular) emerges, with the roughly concentric circles varying very little from side to side but varying much more in their location along the length of the house. It is possible to see a number of cases where the successive posts form lines pointing along the long axis of the house. An even more extreme example of restricted movement from side to side but uncontrolled movement along the length of a house is evident in the Pattern II (overlapping linear) example from House 6.

The forces operating to create Patterns III and IV are probably different. The patterns are generally made up of small sweat baths. If these were erected by medicine men and if, as we have seen, the arrangements are non-random, then it is possible to suggest that the choice of positions for successive sweat baths was somehow an important part of the *oqui*'s ritual performance. The performance would include not only how an *oqui* acts, but also precisely where he acts. A lot of ethnohistoric evidence agrees with the spirit of this interpretation, but I shall only describe some archaeological evidence which supports it indirectly. In House 4 at Cahiagué, where only small baths were erected, a neatly defined, clear-cut Pattern IV cluster was developed. However, in House 6, where both large and small baths are included in a cluster (where that pattern no longer simply reflects an *oqui*'s activities), the Pattern III cluster is poorly defined and diffuse. All of the Pattern III (honeycomb) clusters at Fournier and earlier sites, which include only small baths, are much tighter and more clearly defined, with individual sweat baths nestling neatly together. In House 8 at Cahiagué, a small bath has been built off to the side of a Pattern V cluster, as if a ritual specialist at one time began elaborating the original pattern.

So it is possible that when we are looking at

clusters made by *oquis*, the pattern may be related to the structure of the ritual performance. Whether the principle underlying successive sweat bath locations is one of complementarity or avoidance is unclear. When we are looking at clusters made up of communal sweat baths erected by non-specialists, the pattern is most strongly influenced by the space people are working within.

In summary, then, communal sweat bathing first appeared at the end of the fourteenth century. Before that time, the sweat bath was a structure used only by the solitary practitioner. After that time *oquis* continued to use sweat baths, but they were joined by various groups of people sweating communally. It is possible to see the difference between communal and individual sweat baths both in the size of the respective structures and in the manner of forming clusters of successive baths.

By the historic period, communal sweat bath use represents one aspect of an idea of spiritual community, in the sense that many men together can experience and work with multiple realities (conscious, subconscious, and spiritual). It is not only the specialist who can do so, and indeed there is evidence that what Christians would call the “worshipping community,” with all the powerful implications of that phrase, is to some degree present in Huron-Wendat society.

The question is, did the Huron-Wendat experience of “community” in this sense exist from time immemorial, or is the introduction of communal sweat bathing related to a critical time in the evolution of a specific, overt concept of “community”? There is reason to believe that before communal sweat bathing began, solitary individuals, perhaps specialists, experienced the sweat bath alone. Later, groups of people shared in those experiences. Is this movement unique to sweat bathing?

I think not. I think that the prehistory of ossuary burial shows a similar evolution occurring at roughly the same time. Ossuaries were another point at which the three planes of Huron-Wendat existence converged. Ossuaries depended upon the voluntary spiritual community of all of the living, blending the bones of their common dead, so that in their mystical union they would create unity among the living, unifying the village, the nation,

and their allies. Champlain describes ossuary practice among the Huron-Wendat, saying that every 8 or 10 years

they summon a general assembly at which, among other things, the delegates decide when and where the next festival of the dead will be held. Then they each return to their own district and uncover the bones of those who have died since the last festival. These are carefully cleaned and preserved, though they smell like newly-buried bodies. At the appointed time the relatives and friends of the dead bring the bones, together with necklaces, skins, tomahawks, pots and other valuables, and a quantity of food, to the chosen place. There they lay down their burdens and give themselves up to dancing and feasting for the ten days of the festival. Tribes come from all over the country to take part in the ceremonies. The dancing, the feasting, the general councils all serve to renew and strengthen old friendships. As a symbol of good will they mingle the bones of their relatives and friends one with another, saying that just as the bones of the dead are gathered in one place, so also the living will be united in friendship, as one people, as long as they live. The burial of the dead is the most solemn of all their festivals (Champlain 1970:96-97).

This is not the most complete description of ossuary burial given by French explorers and

missionaries; indeed, both Sagard (1939:211-214) and Brébeuf (Thwaites 1896-1901:10:279-303) go into much more detail. But Champlain captures the essence of ossuary practice, as an integrative and mystical device. He does not really evoke its urgency and paramount importance, not so clearly as Sagard does, for example. Sagard also relates its practice to the time of village movement, when people are going to a new place and when the community may be fragmented.

From Table 3 it is possible to trace the historic development of the Huron-Wendat ossuary pattern. At Miller, there are small secondary burial pits containing very few interments (at most 13) deposited in bundles. There are few grave goods and no other signs of ceremonialism. By the middle of the fifteenth century, there are large pits, containing many interments (as many as 512). Some of the bone is already being mixed together, while the presence of linings and more grave goods indicates an increase in ceremonialism. By the middle of the seventeenth century, the full pattern is known, with large pits; many interments; a predominance of bone mixing; many grave goods; and evidence of ceremonialism, including linings and scaffolding.

Obviously, the burial pits at Miller could not represent the kind of behaviour Champlain describes. The Cahiagué and Ossossané ossuaries reflect it exactly. We can see in the evolution of ossuaries that an idea has grown up, much the same idea that we traced through the development of sweat baths. The pattern at Miller suggests

Table 3: *Ossuary Trends Through Time.*¹

Sites & Age	Pit Size	Bundles vs "en masse" ²	# of Interments	Linings	Scaffolds?
1115 Miller	small pit	bundles	few interments	no lining	no scaffolding
1400 Middleport	small pit	mostly bundles, some "en masse"*	few interments	no lining	no scaffolding
1450 Tabor Hill • Fairty	big pit*	mostly bundles, some "en masse"	many interments*	linings*	no scaffolding
1600 Sopher	big pit	mostly bundles, some "en masse"	many interments	linings	scaffolding*
1620 Cahiagué • Ossossané	big pit	some bundles, mostly "en masse"*	many interments	linings	scaffolding

1: Adapted and modified from Noble, W.C., *Iroquois Archaeology and the Development of Iroquois Social Organization (1000-1650 A.D.)* Ph.D. Dissertation, The University of Calgary, Calgary, 1968; asterisks indicate first introduction or stabilization of components of historic ossuary pattern.

2: Editor's notes – commingled ("en masse") pattern since found at Moatfied site ca AD 1300; the dates of some of these sites have changed since the time of writing of this paper but they were left unchanged herein.

much less concrete awareness of the extensions of the “community”: there are few interments, each of these is discrete, and ceremonialism is at a minimum. In contrast, the historic pattern is marked by a large number of people acting as a community, with ceremonialism and donation of grave goods suggesting broad individual participation, and with the blending of bones suggesting that this community participation is in the mystical experience of multiple realities. Furthermore, this evolution to an idea of spiritual community in burial practice reached a critical moment between the end of the fourteenth century and the middle of the fifteenth century, the same period more or less that communal sweat bathing was introduced.

In the foregoing discussion, I have not tried to prove that all Huron-Wendat became more “spiritual” in the early fifteenth century than they ever had been before. Neither have I tried to prove that Huron-Wendat after that time walked around constantly seeing visions and hearing prophecies. Some Huron-Wendat certainly did, just as some people everywhere have.

What I have been saying is that the Huron-Wendat had a history before European contact, and that this history witnessed changes not only in their technology and economy, but also in their attitudes. One of these changes in attitude involved the evolution of an idea of “community,” a concept that had a spiritual, emotional, and behavioural meaning that differed from the Huron-Wendat’s own earlier ideas of how society worked. In other words, a Huron-Wendat living at Cahiagué probably understood the social world differently than Pickering Early Iroquoians living at the Miller site.

The communal sweat bath and the ossuary form of burial were powerful social integrative mechanisms. The historic Huron-Wendat had many such overt mechanisms, including a multiplicity of councils, feasts, dances, and ceremonies. Many of these latter institutions also had the profound spiritual component evident in sweat bath and ossuary ceremonialism. Many of them were conducted in the mystical, closed space of the shut-off longhouse. Many of them were associated with pipe smoking so that smoke might

rise to peoples’ brains and enable them to “see more clearly.”

The singular interest of sweat baths and ossuaries is that their evolution can be traced archaeologically. The significant developments in both can thus be correlated with other major archaeologically recognizable developments of the fourteenth and fifteenth centuries. As Wright, Ridley, Emerson, and Pendergast have shown, these two centuries mark a time when genuinely Huron-Wendat cultures began to crystallize out of a Middleport base in the separate areas of Simcoe, Prince Edward, and York counties, and when the Huron-Wendat migrations out of the southern counties toward historic Huronia began. It was a time when (as Wright suggested, and as the present author has traced in some detail) the Ontario Iroquoian peoples adopted an entire pipe complex from outside sources, integrated it rapidly within their own culture, and proceeded to elaborate it rapidly. It was a time when palisading developed rapidly, so that fortifications became more elaborate, more substantial, and presumably more effective.

Based upon the preceding discussion, I propose the following hypotheses for further testing:

- (a) During the fourteenth and fifteenth centuries, the Huron-Wendat developed two social integrative mechanisms, each with a profound mystical and spiritual component—the communal sweat bath and the ossuary. These were both related historically to a vast range of similar institutions, and to a complex of ceremonial paraphernalia including pipes, tobacco, and smoking.
- (b) The period of their evolution coincides with the elaboration of palisades (implying greater stresses and conflicts with other Iroquoians to the south) and with the development of a distinctive pattern of village movement and migration (implying the need for more powerful integrative mechanisms since there is a chance that people may become separated or that the integrity of the social group will in any event be disrupted).

(c) In order to solve the difficult integrative problems posed by warfare and migration, the Huron-Wendat joined a spiritual component to simple integrative mechanisms, thereby effectively redefining their operating concepts of community. These hypotheses can be tested both archaeologically and ethnohistorically.

References Cited

Champlain, Samuel de

1970 *Voyages to New France 1615 - 1618*, Translated by Michael Macklem, Oberon Press, Ottawa. Fenton, W.N., and E. Moore (editors)

1974 [1724] *Customs of the American Indians Compared with the Customs of Primitive Times*, by Joseph-François Lafitau. Champlain Society, Toronto.

Sagard, G.

1939 [1632] *The Long Journey to the Country of the Hurons*, edited by G.M. Wrong. Translated by H.H. Langton. Champlain Society, Toronto.

Thwaites, R.G. (editor)

1896-1901 *The Jesuit Relations and Allied Documents*. 73 vols. Burrows Brothers, Cleveland.

Tooker, E.

1964 *An Ethnography of the Huron Indians: 1615-1649*. Bureau of American Ethnology Bulletin 190. Smithsonian Institution, Washington, D.C.

Editor's Notes (Ronald Williamson): This paper has been published here because it has been photocopied and distributed countless times for use by now generations of students and scholars but there is no clear original document. It was written in 1972 as a Canadian Archaeological Association conference paper and is a seminal piece in our collective history. It represents an insightful analysis of individual and group sweat bathing and ossuary burial as integrative mechanisms during the period of initial coalescence of Ontario Iroquoian-speaking populations, which we now know to have happened at the turn of the fourteenth century. Tyyska wrote this decades before others were talking about "social integrative mechanisms." It also helped to stimulate the research of Robert I. MacDonald and his identification of the much larger semi-subterranean communal sweat lodges that also appear around the beginning of the fourteenth century and disappear by the late fifteenth century. I have changed Huron to Huron-Wendat because the Huron-Wendat Nation prefer this wording.

Les groupements de minuscules poteaux qui apparaissent régulièrement dans le milieu de longues maisons Huronnes-Wendat nécessitent des explications. Dans ce rapport, les dossiers archéologiques de leurs différences en taille et en structure à Cahiagué ainsi que les dossiers documentaires de petits poteaux au centre des structures de maison sont utilisés pour les identifier en tant que bains de sudation utilisés séquentiellement, érigés temporairement et ensuite démontés. Leur apparition, environ au même moment que les sarcophages collectifs, suggère qu'ils étaient des mécanismes sociaux intégratifs puissants situés historiquement dans un complexe d'équipement de cérémonie qui incluait des pipes, du tabac et l'usage du tabac. La période de leur évolution coïncide avec l'arrivée de plus grands villages palissadés résultant peut-être du stress et des conflits plus présents avec d'autres Iroquoiens et le besoin concomitant d'avoir plus de façons puissantes à intégrer le nombre croissant de gens vivant ensemble. La pratique de sudation était une institution importante à un moment lorsque les Hurons-Wendat redéfinissaient concrètement leur conception du fonctionnement communautaire.

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Profile

A.J. Clark: A Life in Art and Archaeology

Martin S. Cooper and George W.J. Duncan

A.J. Clark's interest in archaeology began when he was just a boy. The first entry in his catalogue of prehistoric artifacts, now held at the Canadian Museum of History, describes his initial encounter with an archaeological find:

*Indian stone locket—(Neutral)
This is perhaps the first object of an archaeological nature to come under my notice it having been found in the garden of my birthplace (I think by my brother Walter)*

before I was nine (9) years of age. This was on Lots 12 & 13 on the West side of Christina Street in the Fourth (4) or South Ward of Sarnia, Lambton County, Ontario. Other artifacts were found there, including a stone hoe, but this was the only piece preserved.

Arthur James Clark was born in Sarnia on November 16, 1876. He seemed to prefer to be known as A.J. rather than by his full name. Clark



Figure 1. Photograph of A.J. Clark in his studio with bust of Tecumseh.

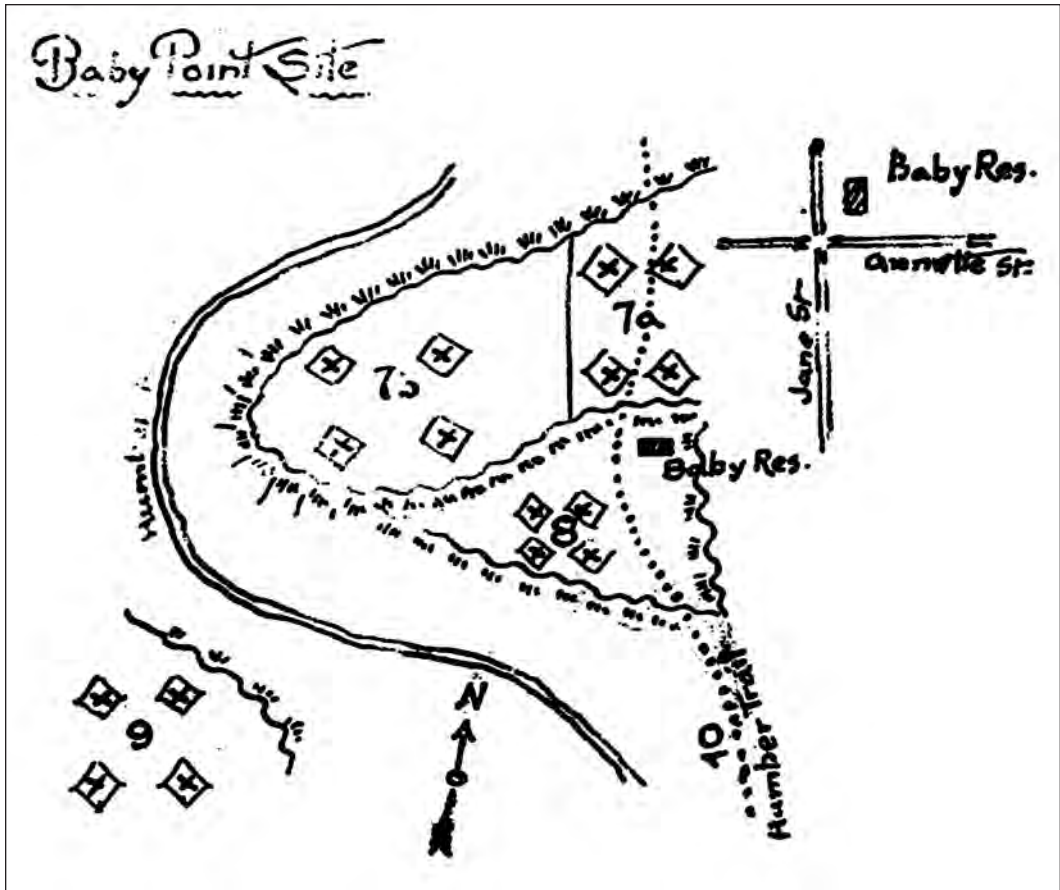


Figure 2. A.J. Clark's map of the Baby Point site.

moved to Toronto, where he worked as a commercial artist producing memorial plaques and sculptures in bronze. Some of his most noteworthy commissions include E. Pauline Johnson, Sir Edmund Walker, and Sir William Van Horne. Also worth mentioning is his bust of the Shawnee leader Tecumseh, which for many years was on display at the Toronto Reference Library (Figure 1). Clark exhibited some of his work from the period 1914–1924 at the Royal Canadian Academy of Arts and the Art Association of Montreal.

Clark began keeping notebooks of his archaeological explorations in about 1912. One well-known site he visited in the early years of his collecting was the late seventeenth-century Seneca village of Teiaiagon, located at the mouth of the Humber River, known as the Baby Point site. Item

44 in the A.J. Clark catalogue is an adapted metal gouge or scraper found there in 1916. The catalogue entry is accompanied by a detailed sketch map of the site (Figure 2). Many of the items in the first half of A.J. Clark's artifact catalogue were found by his brother Walter Clark in Nottawasaga Township, Simcoe County. The brothers shared an interest in archaeology that lasted well past the time of their childhood discoveries. Artifacts found by Walter were given to A.J. for his collection. In 1921, A.J. moved north of Toronto, to the Vaughan Township village of Maple. There, he was close to many archaeological sites known to local farmers from years of cultivating the land and turning up pottery sherds, stone tools, and sometimes even human bones. Many farmers had assembled collections of their own. Judging from Clark's

notes, most of the land owners were happy to assist in locating sites, and they often gave artifacts to him. His notes record details on site location, soil conditions, and artifacts collected, as well as comments about the weather and the scenery.

October 8th, 1921.

Lunch and nice walk home. Pretty autumn tints. Wind cool.

A.J. Clark moved to Richmond Hill in 1927, where he shared an old Victorian house at 98 Richmond Street with his older sister, Annie, who acted as his housekeeper. Both were unmarried. Interestingly, this house was later occupied by professors Frank and Helen Hogg, both internationally acclaimed astronomers.

A.J. Clark travelled around the Richmond Hill area in search of archaeological sites, making detailed notes and location maps and collecting artifacts. Since he didn't have a car, he conducted his exploration of the countryside on foot or by bicycle. He befriended Father Edward Kelly of St. Mary's Roman Catholic Church, who shared his interest in archaeology and was his companion on many trips into the field. Kelly had access to a car, which enabled Clark to extend his explorations "by motor" to more distant parts of York County. They collected in Markham, Vaughan, King, and Whitchurch townships between 1928 and 1931.

In addition to engaging in archaeological pursuits, Clark was also an active member of the Ontario Historical Society. In 1926, he was elected to the OHS council, and from 1931 to 1934 he served as the society's first vice-president. During his membership, Clark wrote a series of articles on Ontario history that were published in several volumes of the Ontario Historical Society's journal, at that time titled *Papers and Records*.

After A.J. Clark's death in 1934, his notebooks and collection of 962 artifacts were donated to the National Museum of Canada (now the Canadian Museum of History). His maps and diagrams are works of art, with decorative flourishes and beautiful hand lettering. They capture some of the romance that Clark must have felt about his study of the past.

At the time of his passing, *The Liberal* newspaper said of A.J. Clark:

He was ... deeply interested in archaeological research and possessed a rare and valuable collection of Indian relics which he highly prized and were admired by collectors from all parts of the world.

A.J. Clark's legacy to Ontario archaeology were indeed his detailed maps and artistically drawn artifacts. The former have provided precise landmarks that have enabled the relocation of the sites many decades later. Many of the sites that A.J. Clark visited and sketched were accurately registered under the Borden site designation system in the early 1970s by Victor Konrad (1973) and his students. A rapid increase in development took place in York Region during the 1980s. This activity unfortunately preceded the requirement for pre-development archaeological assessments. Prior to 1985, there was no legal protection for archaeological sites, other than a provision under the Ontario Heritage Act that required a developer to stop work on a project for a limited period of time but that did not provide funding for the salvage excavation of the site. Fortunately, the sites that A.J. Clark documented were accurately depicted, leading to their early identification in the development process.

By the late 1980s, changes to provincial legislation and the implementation of archaeological management plans for Vaughan (MPP 1987) and Richmond Hill (ASI 1988) outlined the known archaeological resources, including the sites documented by A.J. Clark. Over time, as development encroached and threatened many of A.J. Clark's sites, salvage excavations were conducted to recover settlement pattern and artifactual data. Some of the sites have been partially excavated and protected, while a precious few remain intact. The sites documented by A.J. Clark and subsequently excavated are outlined below.

The Boyle-Atkinson Site (AlGu-1)

The Boyle-Atkinson site, originally documented by David Boyle in 1907, was visited by A.J. Clarke numerous times between 1928 and 1931 because it was located close to his home in Richmond Hill (Figure 3).

Dec. 13th, 1927.

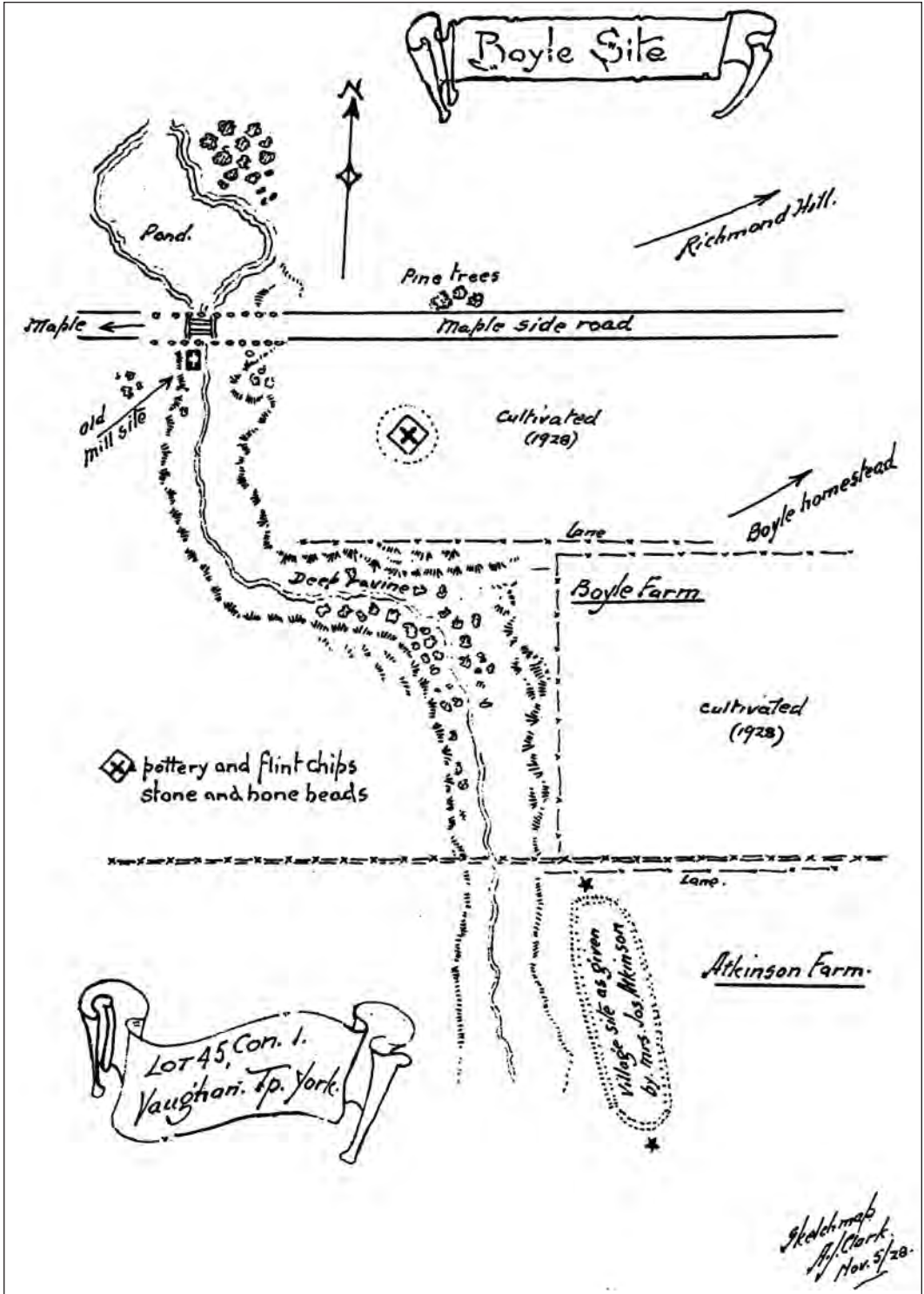


Figure 3. A.J. Clark's map of the Boyle-Atkinson site.

Learned from Mr. Joseph Atkinson owner of farm just south of old Boyle homestead (cor. Yonge St. & Maple Side Road) that the site referred to by the late David Boyle was evidently on the ravine extending south from the old Boyle Mill site and pond and into the Atkinson farm. Had found many skinning stones etc.

Boyle-Atkinson was a late Iroquoian, ancestral Wendat village dating to approximately A.D. 1450–1500, situated on the upper reaches of the Don River, in what is now Richmond Hill. This site was unfortunately under development before the enactment of the provision in the *Planning Act* (1984) that permitted municipalities to request archaeological assessments prior to land development. The site was partially salvage excavated by Mayer, Pihl, Poulton and Associates (MPP) under a limited budget and timeline. Eleven complete and partial longhouses were excavated (MPP 1987).

The Keffer Site (AkGv-14)

The Keffer site was visited by Clark in 1925, and he produced several very good sketch maps of this late fifteenth-century ancestral Wendat village (Figure 4). In 1985, the Museum of Indian Archaeology salvage excavated the site, which contained 18 house structures surrounded by a palisade (Finlayson et al. 1987). The southern portion of the Keffer site, illustrated by Clark, was not excavated by the museum and appears to have been destroyed as this area is now developed, but it is unknown whether this happened before or after the 1985 excavations. The location of an associated ossuary, which was investigated by David Boyle in 1907, is clearly indicated on Clark's sketch map.

The Jarrett-Lahmer Site (AlGv-18)

The nearby Jarrett-Lahmer site, located between two tributaries of the West Don River, was mapped in detail by A.J. Clark in 1924. He may have learned of it from Roland B. Orr, director of the Provincial Museum (now the Royal Ontario Museum), who visited the site in 1911 (Orr 1911). Clark visited the site numerous times between 1923 and 1929 (Figure 5). Jarrett-

Lahmer was investigated as part of the Vaughan master plan, and portions of the site were excavated by D.R. Poulton and Associates (DPA) in 1996 (DRPA 1996). In 1999, Archaeological Services Inc. (ASI) conducted salvage excavations on a western slope midden of the site (ASI 2005). ASI recovered more than 19,000 artifacts, a portion of a palisade, and a number of disturbed burials. This 1 ha, ancestral Wendat village was occupied during the second half of the fifteenth century. The main part of the site has been preserved and is currently owned by the City of Vaughan.

The McNair Site (AlGu-8)

The McNair site is a 1 ha village occupied during the middle of the fifteenth century AD, situated atop a broad knoll, around which flow two lower-order watercourses, namely, McNair Creek, to the east, and a small tributary of the Don River (the east branch), to the west and north. A.J. Clark visited the site in 1927 and recorded the fact that it extended from Lot 24, then owned by the Stephenson family, northward into Lot 25. In 1929, Clark returned to excavate along the fence line between the two lots in an area where Aubrey Nicol, a collector from Richmond Hill, had previously excavated in deep ashy deposits. At that time, cultivation in both fields had obliterated traces of the site, although in 1931, Clark and Nicol found, and excavated artifacts from, a dark stain in the south field. Clark's total collection from the site numbered 22 specimens.

The McNair site was completely salvage excavated in 2003–04 by ASI. The recovered settlement data includes 8 longhouses, 10 discrete exterior activity areas and 2 middens (ASI 2012).

The Mill Street Site (AlGu-77)

The Mill Street site is located just southwest of the McNair site, straddling the intersection of Mill and Bathurst streets. Clark made several visits to the site and recovered a number of artifacts, including pottery sherds, a ground stone axe or adze, and a bone bead. At the time of Clark's visit to the site, it was divided into three parts. The detailed sketch map prepared by Clark clearly outlines the extent of the site (Figure 6).

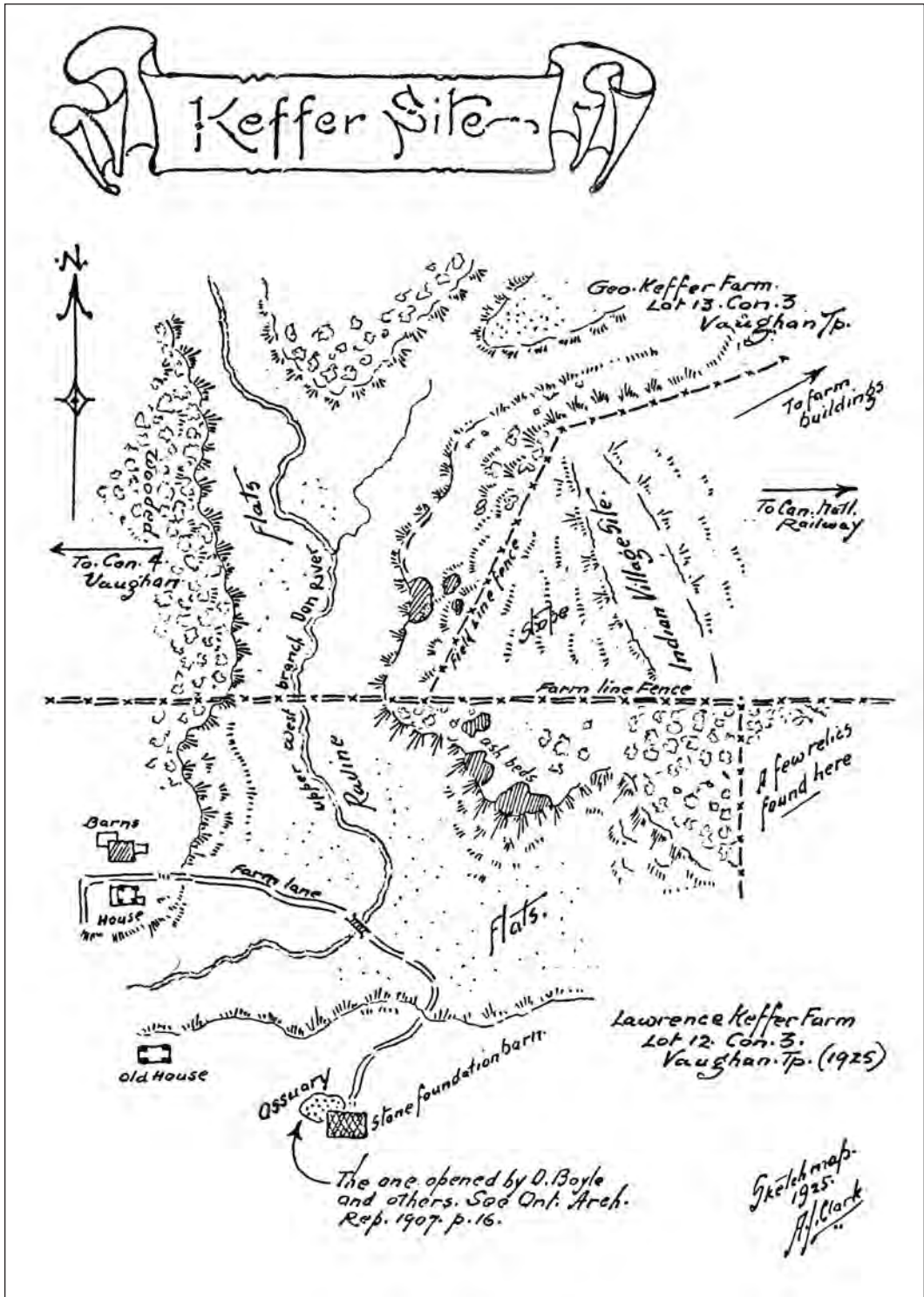


Figure 4. A.J. Clark's map of the Keffer site.

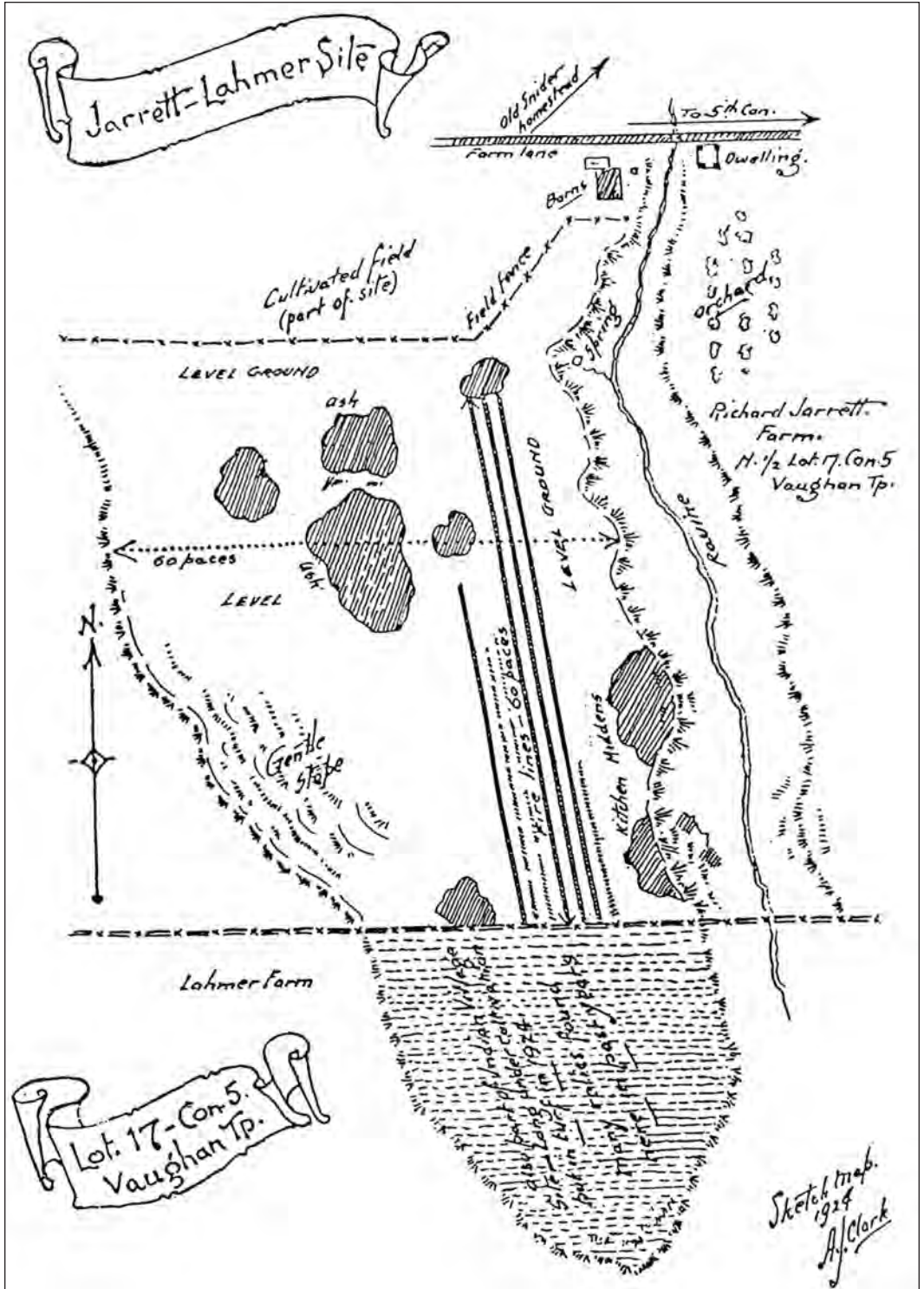


Figure 5. A.J. Clark's map of the Jarrett-Lahmer site.

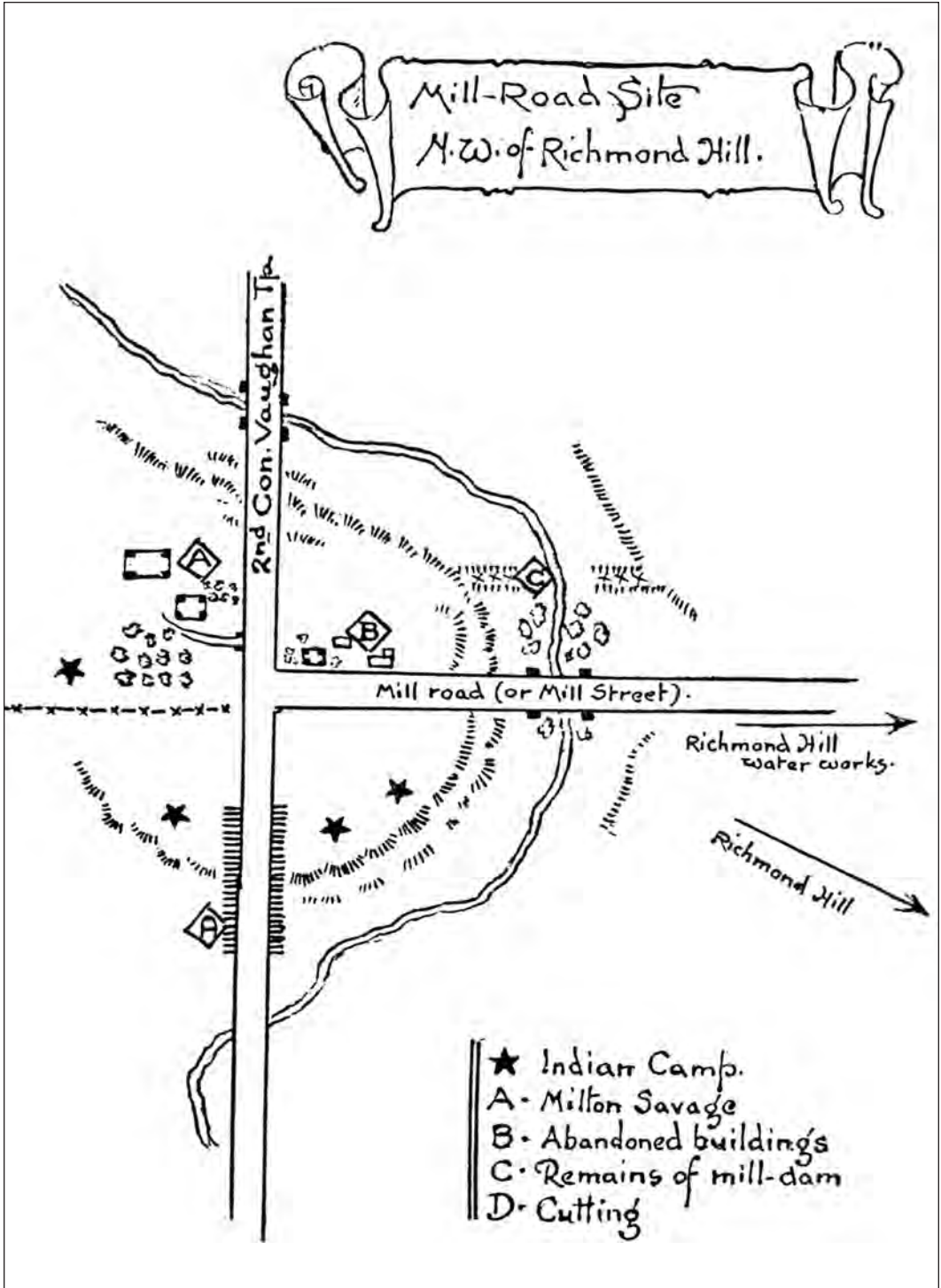


Figure 6. A.J. Clark's map of the Mill Street site.

The Mill Street site was severely impacted by urban development, including the construction and widening of Bathurst and Mill streets, as well as residential development on the east side of Bathurst Street. These activities took place prior to the existence of provincial regulations relating to archaeology. A small, undisturbed portion of the Mill Street site remained in 2003 when ASI conducted an archaeological assessment of the Block 12 Secondary Plan area in the City of Vaughan. While only 69 artifacts were recovered, portions of two longhouses and an outside activity area were recorded (ASI 2006).

The Murphy-Goulding Site (AlGu-3)

The Murphy-Goulding site was situated on a tributary of the Rouge River, near Gamble Road and Yonge Street in Richmond Hill. A.J. Clark documented it in 1929 and visited regularly until 1931. It was relocated in 1988 during the preparation of an Archaeological master plan for the Town of Richmond Hill (ASI 1988). ASI conducted Stage 4 salvage excavations of the portion of the site located on the north half of Lot 55 in 1994 (ASI 1998). A total of four longhouses were excavated. It was determined from ceramic seriation that the site dated to circa AD 1400–1450. Several years after ASI completed the Murphy-Goulding site work, it discovered the Orion site, a previously undocumented site north of Murphy Goulding and Gamble Road, on the same Don River tributary. This site was subjected to complete salvage excavation. Based on the similarities in house styles and artifact assemblages between the two sites it is suspected that Murphy-Goulding and Orion represent the northern and southern extent of a large, 3 ha village (ASI 2008).

In 1987, while conducting field work for the Richmond Hill Archaeological Master Plan near Elgin Mills and Bathurst streets, ASI discovered an undisturbed ancestral Wendat village within the upper Don River drainage (ASI 1988). This village, named the McGaw site, appears to be shown on a regional map of archaeological sites prepared by A.J. Clark. It is indicated on the map as a possible site, and it is likely that A.J. Clark did not visit the site. As part of the subdivision agreement for the surrounding lands, the McGaw

site has been preserved within a woodlot, and an archaeological interpretive centre was established near the site as part of a new community centre. When it came time to name the interpretive centre, A.J. Clark's name was put forward as the obvious choice, given his commitment to documenting and understanding the archaeology of the region.

References Cited

- ASI (Archaeological Services Inc.)
- 1988 Report on Phase 1 of the Archaeological Master Plan of Archaeological Resources for the Town of Richmond Hill, Ontario. Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto.
 - 1998 Final Report on Archaeological Salvage Excavation of the Murphy-Goulding Site (AlGu 3), Town of Richmond Hill, Regional Municipality of York, Ontario. Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto.
 - 2005 The 1999 Stage 2–4 Assessment of Part of the Jarrett-Lahmer Site (AlGv 18), Lot 17, Concession 5 (WYS), former Township of Vaughan, City of Vaughan, Regional Municipality of York, Ontario. Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto
 - 2006 Stage 4 Archaeological Excavation of the Mill Street Site (AlGu 77). Block 12, OPA 400 Draft Plan of Subdivision 19T 99V08, Part of Lot 23, Concession 2, City of Vaughan, Regional Municipality of York, Ontario. Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto
 - 2008 The Stage 4 Salvage Excavation of the Orion Site (AlGu 45), Lot 56, Concession 1, W.Y.S., Town of Richmond Hill, Regional Municipality of York, Ontario. Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto
 - 2012 The Archaeology of the McNair Site (AlGu 8): A Report on the Stage 3–4 Mitigative Excavation of the McNair Site (AlGu 8), Block 12, OPA 400 Draft Plan of Subdivision 19T 89124 (Major Bob Farms Inc.) and Draft Plan of Subdivision 19T 99V 08 (Andridge Homes Limited Lands) Part of Lots 24 and 25, Concession 2 in the City of

- Vaughan, Regional Municipality of York, Ontario. Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto
- Boyle, David
 1907 *Archaeological Report, 1906*. Being Part of an Appendix to the Report of the Minister of Education, Ontario, Warwick Bros. and Rutter, Toronto.
- DPA (D.R. Poulton and Associates Inc.)
 1996 The 1996 Stage 3 Archaeological Assessment of the Jarrett-Lahmer Site (AlGv 18), Draft Plan 19T 95079, City of Vaughan, Ontario. Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto.
- Finlayson, W.D., D.G. Smith, and B. Wheeler
 1987 *What Columbus Missed!* Museum of Indian Archaeology, London, Ontario.
- Konrad, Victor A.
 1973 *The Archaeological Resources of the Metropolitan Planning Area: Inventory and Prospect*. Department of Geography Discussion Paper 10. York University, Toronto.
- MPP (Mayer, Pihl, Poulton and Associates Inc.)
 1987 The Archaeological Master Plan Study of the Town of Vaughan. 4 vols. Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto.
- Orr, Roland B.
 1911 *Archaeological Report, 1908–11*. Being an Appendix to the Report of the Minister of Education, Ontario. Warwick Bros. and Rutter, Toronto.
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Book Review

Caribou Hunting in the Upper Great Lakes: Archaeological, Ethnographic, and Paleoenvironmental Perspectives

(edited by Elizabeth Sonnenburg, Ashley K. Lemke, and John M. O'Shea)

Caribou Hunting in the Upper Great Lakes: Archaeological, Ethnographic, and Paleoenvironmental Perspectives, edited by Elizabeth Sonnenburg, Ashley K. Lemke, and John M. O'Shea. 194 pages, 154 illustrations including 16 colour plates, 26 tables, bibliographic references. 2015. Memoir 57. Museum of Anthropology, University of Michigan, Ann Arbor. \$37.00 US (softcover) ISBN 978 0 915703 85 2.

Archaeologists working in the Arctic and Sub-arctic have the archaeological implications of caribou hunting more or less internalized into their subconscious. Part of this awareness is the effect of caribou hunting on settlement patterns. Even more visible to the mind's eye are caribou trails and various structures and landscape modifications (of stone or wood) used to ensure greater caribou hunting success. The archetypal inuksuit (stone abstracts of human figures to frighten caribou along a route) is perhaps best known to those not so focused on the North. But there are a range of other hunting enhancements, such as drive fences and hunting blinds. When these are made of stone, they would be archaeologically visible and, in fact, stand out visually on unforested landscapes. (Similar stone drive enhancements and hunting blinds are

familiar to Plains archaeologists in relation to bison hunting.) These stone structures could survive millennia. Larger, and sometimes more complex, caribou drive structures made of wood in the forested Sub-arctic, of course, were effective but not long-lived archaeologically (see Spiess 1979:111-121 for a brief review).

The discovery of stone caribou drive fence remnants, stone hunting blinds, and related archaeology in Michigan, on a land form that extends into Ontario, and their geological, paleoenvironmental, and archaeological recording and investigation, is the subject of this useful book. The archaeology is underwater, on a now-submerged land form that was sub-aerial during the Paleo-Indian and Early Archaic periods. Hence the ability to see stone caribou drive fences in an otherwise normally well-wooded part of the country. Kudos to John M. O'Shea and his colleagues for first recognizing the potential of high-resolution bathymetry and sonar in investigating the possibility, and then following through with the underwater archaeology necessary to prove the fact. This book is a *tour de force* presentation of how to tackle a "new" and unique archaeological issue (underwater Paleoindian archaeology) and do it right.

Many of us have been thinking about the potential of these techniques to solve Paleoindian,

Archaic, and Peopling of the Americas issues, but focusing our hopes on the continental shelves. It was a surprise to this reviewer to see such results from the Great Lakes despite the fact the Great Lakes states and provinces have an excellent record of underwater archaeology given their unprecedented nature. Also, the finding of stone caribou hunting structures implies a landscape with few trees at the time of construction (or else trees and wood would have been used). I will return to this point. This reviewer has been “keeping an eye open” for stone caribou drive structures in 30 years of working on Paleo-Indian sites around New England and the maritime provinces of Canada. We presume our colleagues (Chris Ellis and Peter Storck, among others) working on Paleo-Indian sites in southern Ontario have been doing the same. Despite the fact that early Paleo-Indian sites in these regions were caribou-hunting related (proven by various bits of calcined bone), and despite the fact that caribou drives must have been used to provide enough food for aggregations at some sites (e.g. Bull Brook), stone drive fences and hunting blinds are not there on the landscape. The reason is that the environment of the times in southern Ontario, central Maine, and further south contained enough trees to use wood to enhance hunting success. In future intensive geo-archaeological studies of the now-drowned Maine coast, landscape exposed during Paleo-Indian, Late Paleo-Indian, and Early Archaic times (e.g., Kelley et al. 2010), I am certainly going to apply the lessons learned from this book and look for rock alignments at appropriate resolutions.

Enough about the broader archaeological implications of *Caribou Hunting in the Upper Great Lakes*. Let us turn to an overview of the book, which is an edited compilation of articles focusing on various relevant aspects. References for all chapters are compiled into one bibliography. Greyscale graphics are large and clear throughout, and there is a section of 16 colour plates bound into the end of the book that reproduce some of the key graphics. As with all multi-authored collections of reports, the quality of the writing varies. The introductory and concluding chapters (1, 13, and 14, by various

combinations of the volume editors) are, thankfully, clear and concise and do their jobs (that is, introducing and summarizing) effectively. Read these first.

Late glacial and early Holocene water level changes in the Great Lakes, and in the Huron basin in particular, are complex, with a low water level (or low stand) reconstructed generally about 10,000 radiocarbon years B.P. (RCYBP) (Figure 3.1 in the book). These lower water levels exposed a bedrock-controlled ridge, now named the Alpena-Amberley Ridge (AAR), running between towns in Michigan (Thunder Bay) and Ontario at lower water levels. What is now Lake Huron was split into three bodies of water. The work reported in this book focused on three survey areas on the AAR, with the eastern edge of the easternmost survey area abutting the international boundary. This area (Area 1) yielded clear stone hunting structures, meaning that the Ontario portion of the AAR might contain similar structures. Moreover, understanding the Paleo-Indian and Early Archaic archaeological record and tool stone (lithic) materials used on the AAR sites requires information from Ontario, which is well summarized in several chapters.

Following the introduction are three chapters on the paleoenvironment. Barnett (Chapter 2) discusses the potential for archaeological sites in Ontario to be deeply buried, with summary information on glacial re-advances and lake level changes. The paleoenvironmental context of the Alpena-Amberley Ridge is provided in more detail in Chapter 3 (McCarthy et al.), with a focus on the Early Holocene (10,000 to 8,000 cal B.P.). (Reader beware: uncalibrated radiocarbon ages and calibrated ages appear throughout the book, both in the text and on graphics.) We find in Chapter 3 that lake levels fell after 10,000 RCYBP. Regional, pollen-based vegetation reconstructions (for the larger region, not the AAR, as we shall see) began with forest parkland (forest/tundra mix) and boreal forest after about 10,100 RCYBP (11,000 cal B.P.). The AAR was probably still exposed by low lake levels maintained by dry climate (Lake Stanley) as late as 7900 RCYBP (8400 cal B.P.). The authors reconstruct an open boreal woodland on the AAR as late as 8200 cal B.P.

This focus on the circa 9000 B.P. environment in reconstructing the caribou hunting use of the AAR is problematic to this reviewer. We have similar environments across much of New England during early and middle fluted point Paleo-Indian occupation, during the Younger Dryas cold before 10,100 RCYBP/11,000 cal B.P., and we have no stone drive fences. My instinct is that the AAR caribou hunting was done by the last of the fluted point-using Paleo-Indians or Late Paleo-Indians in a relatively treeless environment, not during the Early Archaic.

Chapter 4 (Fogarty et al.) is the text and graphic presentation of a caribou behaviour model of the AAR, using various assumptions about caribou “flocking” (sic) behaviour and least-effort path choice, terrain models, learning between generations, and so forth. The authors also model food (forage) availability, and whether enough food was available for caribou to survive a migration across the AAR. Forage availability and quantity is not a relevant consideration to caribou moving purposefully across a 125 km long land form during a spring or fall migration. It would only be relevant if the AAR was used to escape insects during summer. Frankly, this reviewer did not comprehend the model construction, questions asked, or results from Chapter 4.

Chapter 5 (Julig and Beaton, on Late Paleo-Indian/Early Archaic background and new information from Sheguiandah) and Chapter 6 (Fox, Deller, and Ellis, on chert sources used around the southern Huron basin) provide background information necessary for understanding the archaeological cultural materials recovered from the AAR. Different chert sources are preferred at different times, for various reasons. Holcombe terminal fluted point occupations heavily used Bayport chert, for example (p. 67).

Lemke (Chapter 7) provides an overview of large-game communal hunting using structures and landscape modification (built environment) that is broadly comparative, rather than specifically focused on caribou. The following chapter (Chapter 8, by Stewart) reviews specific caribou hunting strategies and rock structures

from the Canadian Arctic and Sub-arctic. The range and forms of rock structures identified here ethnographically that are associated with caribou “drift fence” hunting is quite persuasive when compared with the forms of the rock structures on the AAR. Moderately comprehensive as Chapter 8 is, I wish to point out the availability of other comparative information, particularly the placement of rock structures relative to habitually used caribou paths in various archaeological studies from the Canadian Arctic and Sub-arctic.

O’Shea (Chapter 9, on methods) tells us about the predictive modelling used to pick survey areas on the AAR, based on topography, and the subsequent use of side-scan and multibeam sonar for finer detail, draped over digital elevation models of the topography. Follow-up survey was by video provided by remotely operated vehicle (ROV) and SCUBA dives. High-definition video provided by the ROV is described as the workhorse of this phase of the survey. Once a landscape feature of interest was confirmed, a stationary scanning sonar device was deployed to the bottom to create a detailed, local map. Chapter 10 (O’Shea) describes and assesses the constructed rock features that were discovered, including hunting blinds, linear stone features (drive lines), and an upright stone feature (inuksuit). One linear stone feature is more than 300 m long, complexed with cairns and blinds. Many stone features are complexed in groups associated with topographic settings that “make sense” when interpreted as caribou hunting features.

Sampling and SCUBA-based excavation produced lithic artifacts associated spatially with these features: 17 flakes and 1 end scraper (Chapter 11, Lemke). All are chert, and a few pieces could be identified as Bayport chert. We note that a fragment of cervid (deer family, including caribou) tooth was also recovered from inside the Dragon hunting blind feature in Area 1 of the AAR survey (Lemke 2015).

Paleoenvironmental reconstruction of the AAR (Chapter 12, Sonnenburg) is based on sediment grab samples, lithic samples, and seven pieces of wood that were recovered. The samples were scanned for charcoal, seeds, testate amoebae,

and pollen. The AAR environment is reconstructed from this evidence as more sub-arctic in character, including marshes, sphagnum bogs, forested swamps (spruce and tamarack wood), and areas of bedrock and shallow soil with no trees.

The stone structures on the AAR, and the associated chert tools and fragments and cervid tooth fragment, are evidence of intercept hunting of seasonally migrating bands of caribou moving along predictable or constrained routes. The number and complexity of such structures indicate repeated reuse and therefore a substantial caribou herd size and longevity over decades. Use of rock (rather than wood) for the structures, and the inferred caribou herd size and necessary migration corridor length (one end of the AAR to the other at least), indicate an environment with tundra/parkland/woodland segments conducive to maintenance of a long- or medium-distance migrating herd (>200 km), not a localized "woodland" caribou behaviour. We suspect, from

our vantage point, that this phenomenon occurred early in the regression of Lake Huron water levels, before substantial woodland growth on at least one end of the AAR. Therefore, the focus should be on Paleo-Indian-age rather than Archaic-age use of these features.

References Cited

- Kelley, Joseph T., Daniel F. Belknap, and Stefan Claesson
 2010 Drowned Coastal Deposits with Associated Archeological Remains from a Sea-Level "Slowstand": Northwestern Gulf of Maine, USA. *Geology* 38(8):695-698.
- Lemke, Ashley K.
 2015 Great Lakes *Rangifer* and Paleoindians: Archeological and Paleontological Caribou Remains from Michigan. *PaleoAmerica* 1(3):276-283.
- Spiess, Arthur E.
 1979 *Reindeer and Caribou Hunters: An Archaeological Study*. Academic Press, New York.

Book Review

Rethinking Colonial Pasts Through Archaeology

(edited by Neal Ferris, Rodney Harrison, and Michael V. Wilcox)

Rethinking Colonial Pasts Through Archaeology, edited by Neal Ferris, Rodney Harrison, and Michael V. Wilcox. 552 pages, 52 illustrations. 2014. Oxford University Press, New York. \$210.00 US (hardcover). ISBN 978 0 19 969669 7

The European colonization of Canada began almost 500 years ago, changing the historical trajectory of Indigenous peoples. Disease, warfare, trade, and culture change have been common topics of interest for historians and archaeologists who study the colonial past of Indigenous peoples. Prior to the past decade, in Ontario and other parts of northeastern North America, with few exceptions archaeologists restricted their research focus to the first contact of Europeans with Indigenous peoples in the sixteenth and seventeenth centuries. Under the false assumptions of assimilation theory and ideas about the essentialism of culture, which characterized Indigenous peoples of colonial times as having lost their culture and existing as shattered remnants of their pre-contact ancestors, until the early 1990s most archaeologists believed that Indigenous people in eastern North America had essentially become Europeanized by the eighteenth century and were not worthy of archaeological study, except by historical archaeologists who studied European material culture. However, since the early 2000s, as a result of post-colonial thinking, a revisionist movement in archaeology and history has emerged whose

advocates are re-examining the Indigenous colonial past as a historical continuum of change and continuity, from earliest European contact to the twentieth century. The most recent theoretical treatment of the archaeology of Indigenous peoples in colonial times is *Rethinking Colonial Pasts Through Archaeology*. This book challenges archaeologists and historians to fill in the gap between the pre-contact and post-contact histories of Indigenous peoples and to recognize that archaeology of the colonial past will help to decolonize the traditional history of Indigenous–European relations and can assist Indigenous peoples in their struggle for rights to land and resources. From a strong theoretical foundation, the book presents a number of case studies, ranging widely in time (1500–1900 CE) and space (Europe [Ireland], North America, the Caribbean, Africa, and Australia), which examine the response of Indigenous societies to European colonization. The overwhelming message from the various authors is that the colonial past of Indigenous peoples clearly shows persistence and continuity of core cultural values and use of the land. The book will become a standard reference work for archaeologists and historians whose research deals with Indigenous–European relations over the past 500 years.

Rethinking Colonial Pasts Through Archaeology is lengthy and contains an introduction and 23 chapters, organized in four main parts (Part I Ambiguous Definitions and Discordances; Part II

Colonizing and Decolonizing Spaces, Places, Things, and Identities; Part III Displacement, Hybridity, and Colonizing the Colonial; Part IV Contested Pasts and Contemporary Implications) and a commentary and afterword. The rationale for the partitioning of the book is provided in the introduction, and the grouping of case studies that share similar themes and topics does impose welcome organization on the book.

As stated in the introduction by Neal Ferris, Rodney Harrison and Matt Beaudoin, the book's goal is to provide "a synthetic overview of the common theoretical trends emerging from current innovative and revisionist research undertaken of the archaeology of the colonized arising from the European expansionism of the last half-millennium" (p. 18). Overall, the editors and authors of the book aim to revise the history of the Indigenous colonial past through a reorientation to the data from an Indigenous-centric vs. Eurocentric perspective, to engage in the "archaeology of daily lived experiences" by studying the practices of "daily quotidian life" using material culture, to emphasize that Indigenous cultures persist today because their ancestors embraced adaptive change to maintain cultural core values, and to remind archaeologists that their reconstructions of the colonial past are influenced by colonial beliefs and will be used in legal cases regarding the rights of contemporary Indigenous peoples.

The chapters in Part I set the theoretical context for the book. In Chapter 1, Rodney Harrison challenges the binary opposition of "colonized" and "colonizer," recommending that Indigenous people and Europeans, at least in Australia, should be viewed as having "shared histories." Stephen Silliman, in Chapter 2, introduces survivance and residence as theoretical concepts that emphasize the persistence of Indigenous culture and occupancy of the land through adaptation. Chapter 3, by Jeff Oliver, reiterates Silliman's message, stating that on the Northwest Coast of North America, Indigenous peoples adopted Christianity and agriculture to maintain pre-contact status hierarchies, changing to maintain key cultural values. Kurt Jordan proposes, in Chapter 4, to distinguish periods of

Indigenous–European interaction as cultural entanglement (when Indigenous people had equal or more power than Europeans) and colonialism (when Indigenous people had less power than Europeans).

In Part II, several case studies are presented that address the various strategies that Indigenous peoples adopted in the face of European colonialism, using material culture and land (i.e., contested space and place) in new and innovative ways to maintain their identity. Chapter 5, by Dores Cruz, discusses the role of landscape features, such as trees, that were used as symbols by Indigenous people of Mozambique to link them to the land in the face of incursion by Nguni and Portuguese colonists. Michael Wilcox, in Chapter 6, reinterprets the "abandonment" of the southwestern USA by Pueblo peoples as a strategy to avoid the Spanish conquistadors, questioning former interpretations of demographic collapse or surrender of the land. In Chapter 7, Jun Sunseri employs a "homescape analysis" to argue that in eighteenth-century New Mexico mixed-race peoples on the frontier used pre-contact Indigenous irrigation farming practice, despite colonial directives to implement Spanish agricultural practices. Mark Tveskov and Amy Cohen make a good case in Chapter 8 for the role of frontier U.S. army forts in nineteenth-century Oregon as cultural crossroads where soldiers, pioneers, gold miners, and Native Americans interacted in complex ways, forming "shared histories." Chapter 9, by Charles Cobb and Stephanie Sapp, offers another example of life on the frontier, this time in eighteenth-century South Carolina, in which Native Americans were permitted access to the fort in violation of colonial orders, reinforcing the research of the previous two chapters. Chapter 10 deals with an Australian case study in which Jane Lydon challenges the belief that Aboriginal Australians at mission stations were assimilated. Her archaeological work has revealed that mission Aboriginals still engaged in hunting and gathering, in mobility, and in working stone and glass, and they maintained their Indigenous spirituality. Rob Mann, in Chapter 12, makes a convincing case that domestic pottery manufacture was terminated in

eighteenth-century Native American communities for reasons other than technological superiority of European metal containers and acculturation.

The chapters in Part III extend the coverage of the book beyond the usual use and understanding of the term Indigenous to Irish, Metis, and diasporic African communities and their relationships with colonial European people and states. Chapter 13, by Audrey Horning, reveals that the relationship of Irish people with English colonists in the sixteenth and seventeenth centuries was not one of marginalization, and therefore was not comparable to the experience of Native Americans with English colonists in the seventeenth century. Chapter 14, by Matt Beaudoin, questions the binary opposition of Indigenous vs. settler using evidence from a nineteenth-century Metis household in Labrador. The archaeology of a Metis household revealed that the marriage of Indigenous women and settlers created a new hybrid situation in which the rules of everyday life were renegotiated. In Chapter 15, James Delle advocates a “bottom-up approach” to examining the colonized vs. colonizer situation in eighteenth- and nineteenth-century Jamaica. His research indicates that African slaves generally had far more agency than expected to negotiate their daily life circumstances with plantation owners. Chapter 16 examines the interaction of African slaves with Indigenous Caribbean peoples in eighteenth- and nineteenth-century Dominica. Mark Hauser and Stephan Lenik report that local domestic pottery in colonial times emerged as something new from Indigenous and African potters.

Part IV contains a fascinating set of chapters that discuss the importance of the archaeological reconstructions of the history of colonial times to contemporary Indigenous peoples. In Chapter 17, Neal Ferris argues that the archaeology of Iroquoian peoples in Ontario has acted to solidify them in an unchanging ethnographic present. He urges Ontario archaeologists to revise their interpretations of Iroquoian colonial history in light of recent research that indicates Iroquoians have been in a state of constant change in an effort to maintain cultural values over the past 500 years, adapting to pressures from Europeans and other

Indigenous peoples. He also urges archaeologists to challenge the political interpretation and misuse of archaeological research in state relations with contemporary Iroquoian communities. Chapter 18, by Andrew Martindale, should be required reading by all archaeologists. After examining the Aboriginal title cases from the B.C. courts, he concludes that in the courts, archaeologists as expert witnesses in title cases are expected to demonstrate that Aboriginal culture is normative and has remained the same from pre-contact to contemporary times (i.e., cultural essentialism). Martindale argues that Aboriginal culture is not normative, but that many archaeologists operate as if it were and that they focus on change in culture traits rather than continuity and stability in culture, playing into the hands of the courts. He is telling archaeologists that the interpretation of their research by the courts and politicians can act to deny the rights of Aboriginal peoples; archaeology is a political act and archaeologists must be aware of this fact. Chapter 19 (Paul Lane) and Chapter 20 (Peter Schmidt) both deal with the archaeology of colonial Africa. Lane outlines the problems with applying “Indigenous archaeology” to colonial pasts of Africa because all Africans consider themselves indigenous. Peter Schmidt cautions scholars of African archaeology and history to be aware that written and published versions of oral history eclipse actual oral histories and can marginalize the oral histories of less privileged groups in Africa, perpetuating the myths of written oral histories promoted by previous colonial governments or contemporary governments of Africa representing privileged groups.

The final three chapters of the book appear in the section titled “Commentary and Afterword.” The commentaries are not discussions of the various chapters but, rather, stand-alone papers on the archaeology of colonialism. Peter van Dommelen, in Chapter 21, advocates for the “subaltern voice” in colonial history and archaeology and praises the book for building theory on colonialism. Chris Gosden remarks, in Chapter 22, that the book’s strong point is the historical particularism of each case of colonialism and that colonized and colonizer cannot be

considered a unified set of people. Gosden critiques the book for ignoring spiritual beliefs and its influence over material culture in colonial settings. In Chapter 23, the final one of the book, Ann Stahl comments that the book is important because it advocates new vantage points for investigating the colonial past through archaeology: the impact of the colonial frontier on the colonial home and a long temporal view of colonialism from pre-contact to contemporary times.

Rethinking Colonial Pasts Through Archaeology does achieve its stated goal—to present a synthesis of theoretical perspectives on the revisionist archaeology of colonialism, using case studies from a variety of temporal and geographical contexts. Technically, the book is well produced and appropriately illustrated with photographs and maps.

However, there are some shortcomings with the book. First of all, the editors and most of the authors have an explicit goal to decolonize the archaeology and history of Indigenous peoples, by placing them at the centre, rather than the colonizers and their written documents. While the book is targeted at archaeologists, it is curious that not one Indigenous scholar contributed a chapter. The voices of Indigenous scholars should be included in a book that is essentially about the decolonization of the archaeology and history of the colonial past. Another shortcoming of the book to North American (and Ontario) archaeologists will be its global coverage—it features only nine case studies from North America. While Indigenous people had diverse responses to colonialism, Indigenous relationships with Europeans in North America have far more in common than Indigenous relationships between Africans and Europeans. A shorter book with a tighter geographical focus would be more

useful to archaeologists working in North America. Lastly, the entire book has a common message: that the archaeology of the Indigenous colonial past is best viewed through the lens of post-colonialism, whereby Indigenous people exercised agency in daily lived experience, and that Indigenous identity has been maintained through changed continuities, resulting in survival and persistence. The reader is left with the impression that all or most Indigenous peoples have managed to survive as relatively intact entities, enduring 500 years of European assault on their ancestors, lands, and culture. Curiously, there are no case studies of Indigenous peoples who completely disappeared from disease and violence, forced relocation, and destruction of their environment. Also, there is little discussion of the loss of Indigenous languages, oral histories, and cultural knowledge and beliefs, perhaps because the latter are so difficult to see in the archaeological record.

The book's main value is the theoretical and methodological course that it sets for archaeologists studying the shared Indigenous–European past: Indigenous-centred archaeological histories, archaeology of the everyday, and self-reflective archaeology explicitly linking reconstructions of the colonial past to their possible uses in the present.

Rethinking Colonial Pasts Through Archaeology will appeal to academic archaeologists who wish to incorporate more theoretical rigour into their investigations of the history of Indigenous peoples over the past 500 years. It should be read by any graduate student engaged in the archaeology of Indigenous peoples in colonial times. This being said, at a hefty price tag of over \$200.00 US, the book will tend to reside on the shelves of university libraries, not in the average archaeologist's personal library.