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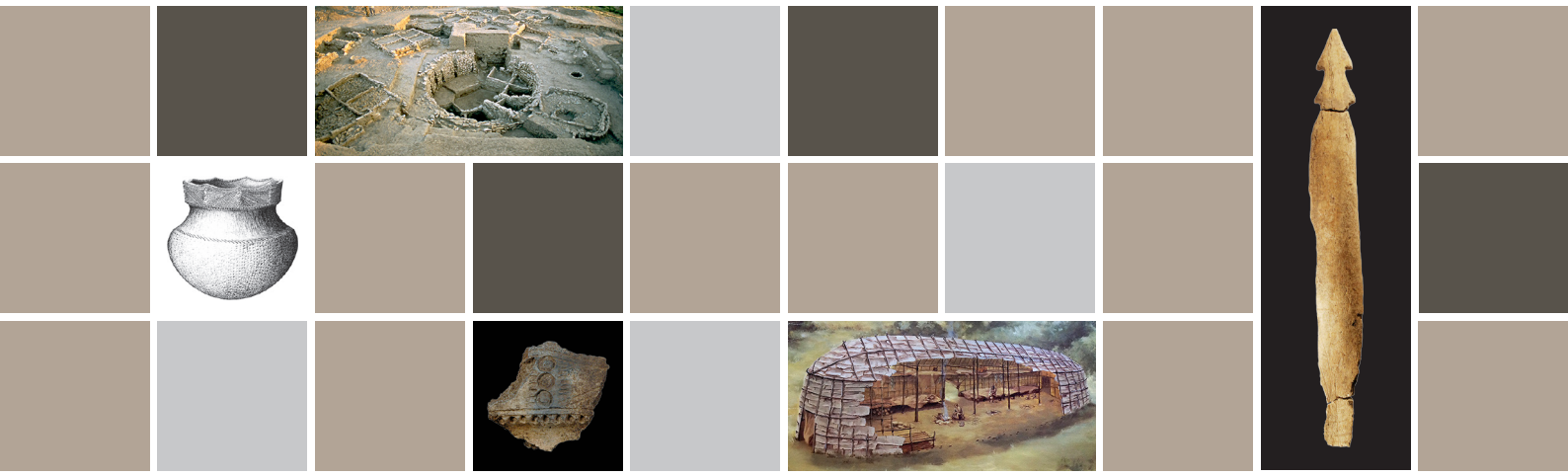
HOUSEHOLD ARCHAEOLOGY

A Transatlantic Comparative Approach



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THE HOUSEHOLD AMONG IROQUOIAN SEAL HUNTERS OF THE PROVINCE OF CANADA DURING THE LATE WOODLAND PERIOD (1000-1535 CE)

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THE HOUSEHOLD AMONG IROQUOIAN SEAL HUNTERS OF THE PROVINCE OF CANADA DURING THE LATE WOODLAND PERIOD (1000-1535 CE)

Michel PLOURDE

Abstract

During the Late Woodland Period (AD 1000-1600), St. Lawrence Iroquoians developed a seasonal transhumance between the present day Quebec City area ("province de Canada") and the mouth of the Saguenay River, located on the margin of the St. Lawrence estuary, to hunt seals. The archaeological data highlights two types of settlements: a first type used in spring by small groups of male hunters targeting harp seals, and a second type occupied in summertime by nuclear families, when gray and common seals feed in the area. On the one hand, we find differences between the dimensions and types of spring and summer camps. On the other hand, we note that the shape of houses revealed by archaeological excavations in the Tadoussac area differ from those found in the semi-permanent settlements located in the Quebec City area and thus reflect short-term occupations related to intense seal hunting periods.

Keywords

Archaeology, Quebec, Canada, Late Woodland, Iroquoians, seal hunting, settlement pattern, household.

Introduction

Iroquoian groups occupied the entire St. Lawrence Valley lowlands at the Contact period. Those Iroquoians who occupied its eastern portion, which was named "Province de Canada"[1] by Jacques Cartier, adapted their annual cycle to the marine resources of the St. Lawrence Estuary (Fenton, 1940; Hoffman, 1961; Chapdelaine, 1993a), with seals featuring prominently in the diet (Plourde, 2012). This article deals with the shapes of the houses these Iroquoians built 200 km downstream from Quebec City, as compared to the ones they built in semi-permanent, horticultural villages along with hunting and fishing camps during the Late Woodland period (1000-1535 CE). The Tadoussac area is characterized by abundant marine species and specific environmental conditions that theoretically allow its use throughout the year.

1 - Context

The aboriginal people encountered by Jacques Cartier in September 1535 in the St. Lawrence Estuary, at the mouth of the Saguenay River, were St. Lawrence Iroquoians, an autonomous population that was linguistically distinct from other groups living in southern Quebec (Chapdelaine,

1. The Province de Canada would extend between Portneuf and Ile-aux-Coudres (Chapdelaine, 1989: 24), but its eastern limit could have been the Montmagny archipelago, located 30 km upstream (Tremblay, 1995a: 297).

1989: 13). These St. Lawrence Iroquoians were spread throughout the St. Lawrence Valley, from Kingston, Ontario, in the southwest, to Ile-aux-Coudres in the northeast, and formed distinct village clusters (Chapdelaine, 2015: 53) (figure 1). The issue of ethnic identity, which is inseparable from that of their origin, lends itself to many interpretations. These Iroquoians were sometimes identified as Huron, Mohawk, Algonquin, Oneida or Onondaga (Trigger, 1985: 202). There is now a consensus that the Iroquoian groups encountered along the St. Lawrence River by Jacques Cartier in the sixteenth century were St. Lawrence Iroquoians (Trigger, 1985: 202; Chapdelaine, 1989: 12-13; Wright, 2004: 1235). Ethnolinguistic studies have revealed that their spoken language was distinct and not derived from that of other groups linked to the larger Iroquoian family, such as the Hurons or the Mohawks (Trigger, 1966; Lounsbury, 1978: 334). The oral tradition of the Huron-Wendat of the Quebec City region in turn raises the possibility of biological links between some St. Lawrence Iroquoian refugees and Hurons who welcomed them to their villages in Ontario, at the end of the sixteenth century (Sioui, 1989; Wright, 2004: 1280 and see Tremblay, 1999).

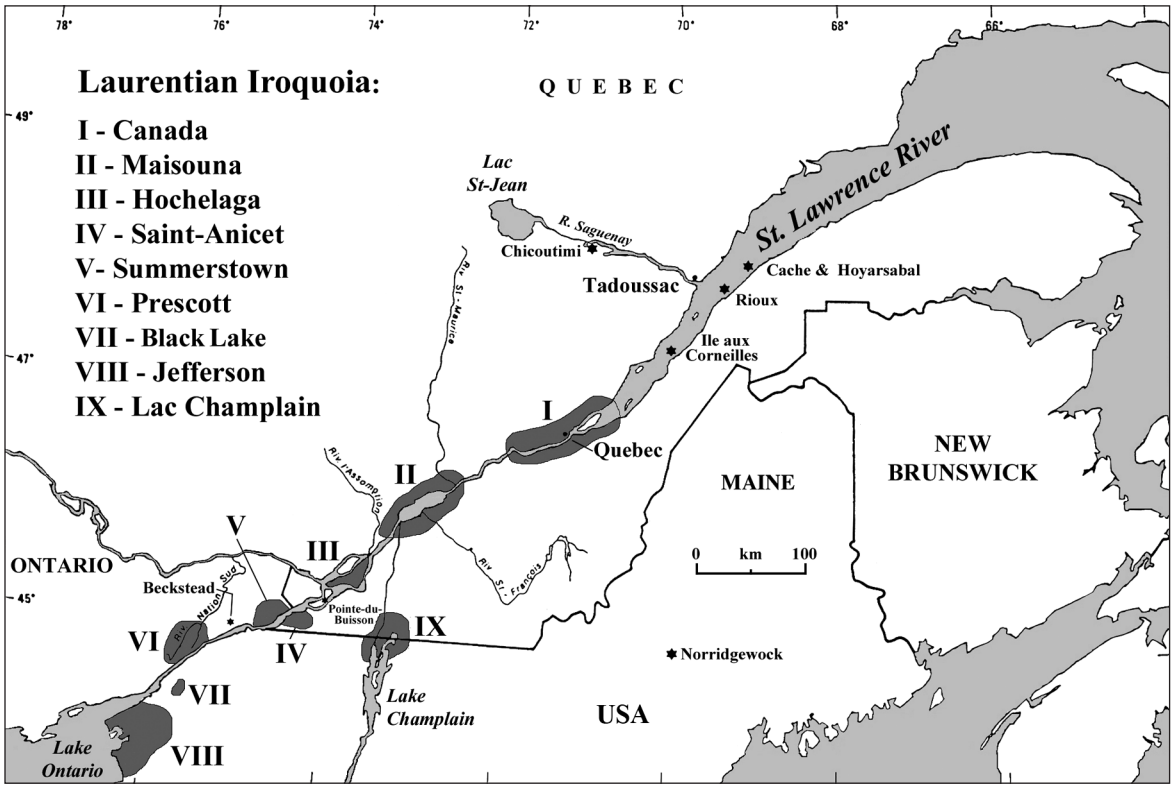

Figure 1 - Spatial divisions (village clusters) of Pre-Contact Laurentian Iroquoia (Chapdelaine, 2015: 53).

Iroquoian groups living in the Quebec City area in the first half of the sixteenth century were somewhat sedentary and were distributed into seven non-palisaded villages all located on the north bank of the river (Hoffman, 1961: 209; Chapdelaine, 1989: 24). Its capital, Stadacone, would be within the current boundaries of present day Quebec City and its location is still debated (Ferland, 1882; Wintemberg, 1936; Clermont, Chapdelaine, 1983; Plourde, 2008). Cartier also mentioned four villages located downstream from Stadacone and two upstream (Bideaux, 1986: 166).

Based on estimates generated from excavations at the Iroquoian villages of Mandeville (Chapdelaine, 1989) and Masson (Benmouyal, 1990), and studies on the population density of seventeenth century Huron villages, the Iroquoian population of the Province de Canada can be assessed to between 2 000 and 3 000 people. Its capital, Stadacone, would have counted 800 individuals while the other villages would each have housed 200 to 250 people (Chapdelaine, 1995: 178; Chapdelaine, 1998: 82). Their longhouses, whose average size could reach 25 to 30 m long by 6 m wide, welcomed eight to ten nuclear families or forty people in all. According to Tremblay (2006: 27): "The floor was dotted with pits and holes of different shapes and purposes, from storage to sanitation, and a central aisle about three meters wide ran down the center, with a line of hearths. [...] A hearth was shared by two families, living across from each other. Each such pair of family spaces, including the central hearth, formed a compartment. [...] The compartments were generally separated by dividing walls, giving each family unit some privacy".

Dependency of these groups on cultigens was less than that of the Iroquoian groups of the current Montreal area, a fact that might be explained by the position of the Quebec City region at the northern limit for maize cultivation (Hoffman, 1961: 202). As such, Cartier indirectly emphasizes the importance of hunting and fishing at the expense of agriculture among eastern Iroquoians. Speaking about the Iroquoians from the province of Hochelaga (Montreal), he states that: "Tout cedit peuple ne s'adonne que à labouraige et pescherye pour vivre car des biens de ce monde ne font compte pour ce qu'ilz n'en ont congnoissance et aussi qu'ilz ne bougent de leur pays et ne sont ambulataires comme ceulx de Canada et du Saguenay [...]" (Bideaux, 1986: 153). Chapdelaine reaches the same conclusion about the north shore of the St. Lawrence, downstream from Quebec City where the village of Ajoaste is possibly located: «The absence of villages in the Cap Tourmente and Côte de Beaupré region implies that the Iroquoians of the Quebec City region must have rearranged their adaptive system. They would have been less dependent on agriculture, lived in fewer villages that were concentrated around Quebec City and to the west, and they had a true transhumant economy which distinguished them from other Iroquoians.» (Chapdelaine, 1998: 87).

The success of their horticulture was not guaranteed, and we can consider that Iroquoians who hunted seals at the mouth of the Saguenay River integrated food production very late in their history compared to their upstream neighbours. The former would have perhaps cultivated the land and developed a village lifestyle starting only in the second half of the fifteenth century[2], while this process started in the seventh century among groups living west of Lake St. François (see Chapdelaine, 1993b: 166). And yet maize was already consumed in the St. Lawrence Valley as early as the Middle Woodland period (500 BCE) as evidenced by phytolith analyses of charred layers on domestic pottery (Gates St-Pierre, Thompson, 2015). In the region of the mouth of the Saguenay River, only two maize kernels have been discovered to date (Plourde, 1995: 16), and the chemical analysis of charred layers on the inside of pottery do not show the chemical signature of maize (Plourde, 2003: 297). Maize does not seem to have been important in the seal hunters' diet. To sum up, the explanations for a late adoption of maize by eastern Iroquoians can be multiple and cumulative: The Quebec City area did not encourage this practice because of its harsh climate; the seal was a very profitable resource despite the energy required to get to the estuary and the risks encountered; Iroquoians of the Province de Canada could have sought to differentiate themselves from their western neighbours by maintaining a lifestyle centered on mobility.

2. No Iroquoian horticultural site has yet been discovered in the limits currently set for the Province de Canada. Masson site, located in Deschambault, just west of it is the only witness to a horticultural lifestyle amongst Eastern Iroquoians and its occupation is dated between 1450-1520 CE (Benmouyal, 1990: 228, 230).

We have proposed elsewhere (Plourde, 2012) that movements by St. Lawrence Iroquoians in the mouth of the Saguenay River area were of two types and were always motivated by seal hunting (figure 2). The first type corresponds to small groups of male hunters active in April of each year when Harp seal herds come upriver (see Rioux, Tremblay, 1999: 197). The second type involves a group of men, women and children who could reach the estuary in springtime, but whose presence was more likely in the middle of summer, during periods of whelping and molting for Gray and Common seals.

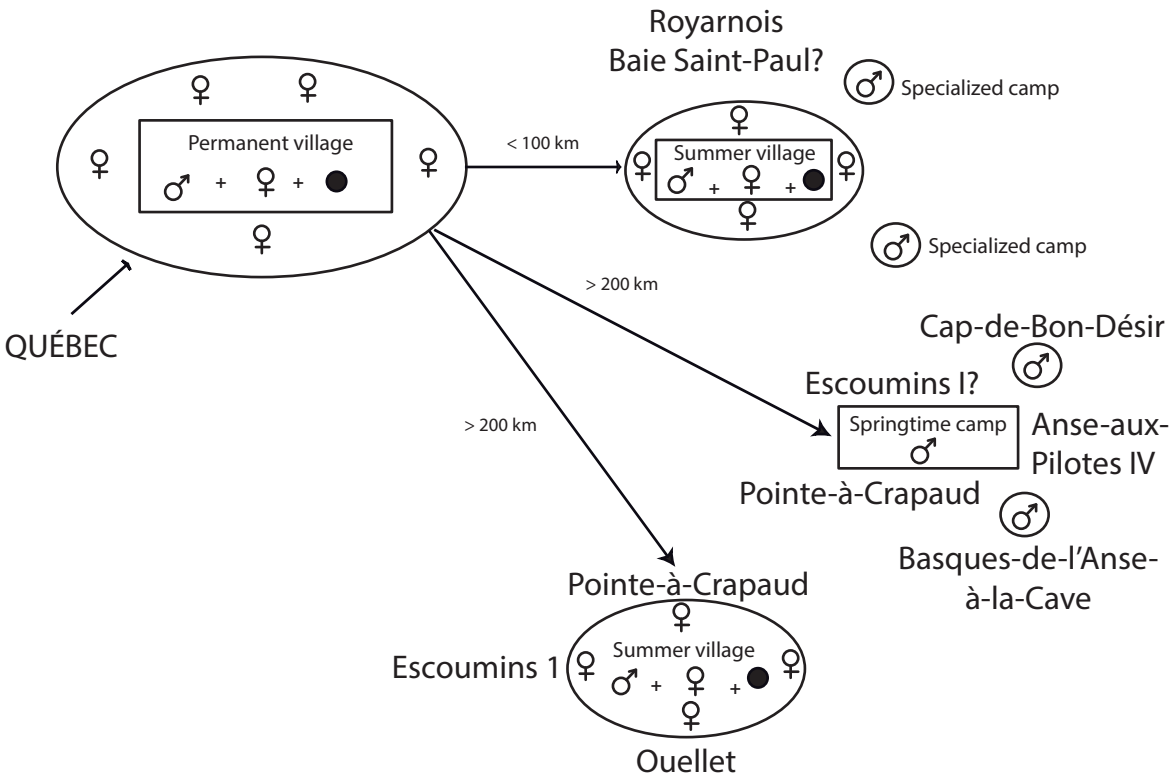

Figure 2 - Province de Canada Iroquoian transhumance model (adapted from Chapdelaine, 1993a: 28).

2 - Structuration of inhabited spaces on sites located in the St. Lawrence Estuary

Five archaeological sites have been considered in this study and they are distributed between the right bank of the Saguenay River and the Escoumins River, spreading over a 35 km long coastline. The sites are Ouellet (Daek-6), Cap-de-Bon-Désir (109G), Basques-de-l'Anse-à-la-Cave (DbEi-5), Pointe-à-Crapaud (DbEi -2) and Escoumins I (DcEi-1) (figure 3). Substantial excavations ranging between 50 m^2 and 270 m^2 were carried out on three of these sites (DaEk-6, 109G and DbEi-2). Systematic test pitting on two other sites (DbEi-5 and DcEi-1) revealed comparable occupations to those found on the excavated sites. The anatomical seal remains generally account for over 95 % of bone remains on these sites dated between 1000 and 1535 CE by radiocarbon and ceramic typology (figure 4, tables 1-2).

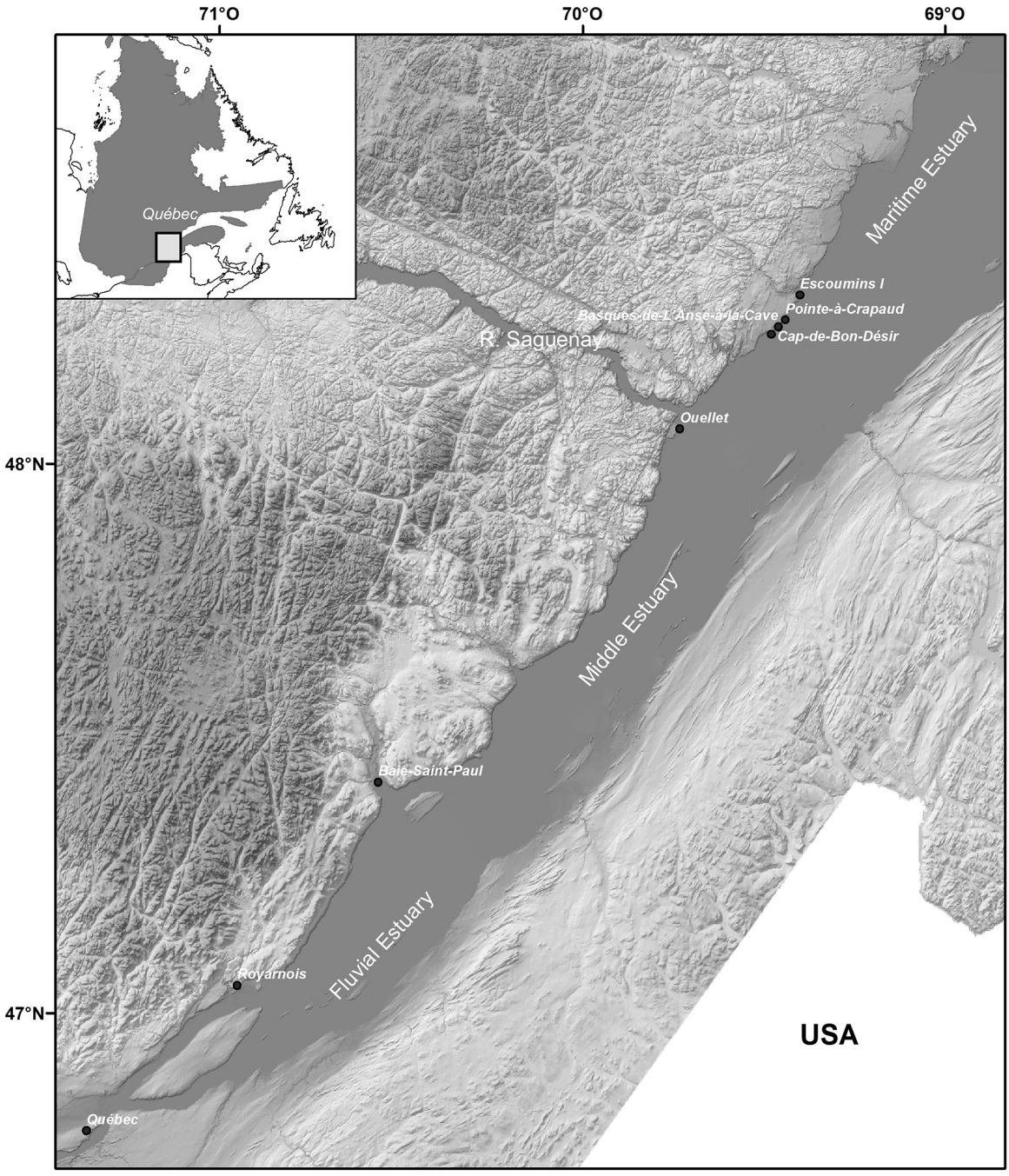

Figure 3 - Location of archaeological sites mentioned in this text.

Figure 4 - Ceramic types of the late Late Woodland period (1350-1535) at the Pointe-à-Crapaud site (photographs: M. Plourde ; CAD: J. Beardsell).

	Ouellet	Cap-de-Bon-Désir			Basques-de-l'Anse-à-La-Cave	Pointe-à-Crapaud	Escoumins I
		109G23-24	109G25-31	109G28			
Altitude MSL (m)	6	9	19	29	9	6	6
Distance from shore (m)	0-20	80	120	210	25	10-15	15-20
Topography	Flat	Irregular	Irregular	Irregular	Irregular	Flat	Flat
Drainage	Very good	Poor	Intermediate	Intermediate	Poor	Very good	Very good
Areas excavated (m^2)	270	17.5	28	9.25	11.5	> 150	20
Hearths	17	13	15	1	2	18	Some detected
Zones of bone refuse	12	4	4	0	0	22	Some detected
Pits	1	0	0	1	0	16	Some detected
Faunal remains	4663	27584	45194	4320	2318	19153	4980
Proportion of marine mammal bones (mainly seal)	94.51	96.92			98.7	90.63	89.74
Postholes	8	0	0	0	Unknown	0	Unknown
Clams	12	122	619	0	192	3650	546
Pots	46	16	10	5	6	46	10
Pipes	0	2	4	1	1	5	0
Clay wasters	12	0	0	0	0	18	2
Lithic tools	185	57	240	9	33	361	57
Lithic debitage	12912	2455	5814	137	224	13205	1179
Bone tools	0	3	0	0	3	50	9

Table 1 - Characteristics of the archaeological sites used in this study.

Site	Lab. Number	Excavation unit	Context	^{14}C date (BP)	CAL CE (CalPal)
Ouellet	BETA 18130	X-55	Bone refuse	890±90	1129±82
	BETA 18131	Z-90	Wood charcoal concentration	260±80	1661±135
	BETA 18132	2A-74	Wood charcoal concentration	880±70	1134±75
	BETA 22792	2A-68	Wood charcoal concentration	420±60	1516±77
	BETA 22793	2E-63	Wood charcoal concentration	700±70	1307±61
Anse-aux-Pilotes IV	RL-1823	7	Unknown	630±100	1336±59
Cap-de-Bon-Désir / 109G23-24	BETA 128348	109G23K42	Hearth	570±100	1366±62
Cap-de-Bon-Désir / 109G25	BETA 128349	109G25C23	Stone platform hearth	420±100	1515±92
	BETA 128350	109G25E17	White clam midden	470±80	1470±90
	BETA 137814	109G25P44	Hearth	370±60	1536±70
Basques-de-l'Anse-à-La-Cave	BETA 70244	4N5	Hearth	1040±70	997±88
Pointe-à-Crapaud	BETA 79062	6N 3E Q NW	White clam and bone refuse	910±60	1117±66
	BETA 79063	9S 1E Q NE	Pit	450±80	1496±87
	BETA 79064	9S 10E Q SE	Pit	740±70	1265±55

Table 2 - Radiocarbon dates.

3 - Types of environments

Seal hunters chose two types of environments. The first is characterized by rocky outcrops or uneven and poorly drained surfaces covered by moraine. Nearby, a mudflat reached at low tide allows a smooth docking and eases carrying prey inland to be butchered. Very well drained sandy plateaus facing sandy beaches characterize the second type of environment used by the seal hunters.

Despite the fact that the sites studied here are all made up of multiple and mixed components, which is far different from the semi-permanent dwellings presented elsewhere in this volume, some constants can be identified. It is postulated that the camps established on rocky outcrops or morainic deposits, which are generally located at a distance of more than 20 m from the shore (probably chosen for protection from cold winds), would be linked exclusively to spring occupations, while snow cover was present. The Cap-de-Bon-Désir (including three separate areas located at different altitudes) and Basques-de-l'Anse-à-la-Cave sites are two of these sites. They possess a rugged terrain and some poorly drained spots that would have been inhospitable during the warm season. The simultaneous presence of the Harp seal remains in hearths (females arrive with their pups at the end of winter) and sea urchin tests, molluscs offering maximum flesh in February and March, support an occupation of the area in April. White clam (*mya arenaria*) consumption, which is clearly observed in all of the components at these sites, is also synonymous with a cold season occupancy, as these can become toxic from May to August when a toxin produced by zooplankton dinoflagellates of the genus Gonyaulax infects the shell (Hawkins, 1985: 5).

Hearths were lit without building stone circles or platforms, suggesting the installation of camps while the ground was frozen. The absence on these four sites of clay wasters that reveal on-site ceramic production could also support an occupation outside the warm season, since this requires a malleable clay source and ambient conditions enabling open air drying of pottery before final cooking (Arnold, 1985). It therefore appears unlikely that longhouses were built in this type of environment. However, some uncertainty remains since excavated areas on these sites remain fairly limited as they were performed in contexts closer to sampling than open area excavations.

The camps established on the sandy plateaus of the Pointe-à-Crapaud and Escoumins 1 sites would have been occupied in spring as evidenced by the consumption of clams, sea urchins and by the presence of Harp seals among the faunal remains. But these sites were also occupied during summer and fall, based on the presence of waste pits and food caches excavated in the sand, stone platform hearths, and clay wasters. While test pits excavated on the Escoumins 1 site did not allow for an overall view that is essential for longhouse detection, an open area excavation (15 × 12 m) on Pointe-à-Crapaud has revealed 18 hearths, 18 small bone refuse zones, 16 pits, and 13 small, white clam heaps, but no postmolds (figure 5). All these features result from occupations spread over 500 years, as suggested by ceramic typology and radiocarbon dating[3].

The spatial analysis of the horizontal distribution of hearths 2 to 3 m distant from one another, as is the case for the well-known Lanoraie longhouse for example (Clermont *et al*,. 1983. 132), and that of sherds assumed to come from the same vessels, failed to reveal any alignment of combustion zones. Pits and small clam and / or bone concentrations were identified in the vicinity (within 2 m) of the combustion zones, but no firm associations can be confirmed. We believe that the pits were dug directly within the house floors, but it is unlikely that concentrations of clams and bones, which represent small garbage dumps, would be found inside living and sleeping areas.

3. Three radiocarbon dates from wood charcoal taken in the centre of three different hearths, one of which contained fragments of an early Late Woodland pot, another one with a unique middle Late Woodland pot sherd, and a third revealing a single late Late Woodland pot, gave inconsistent results.

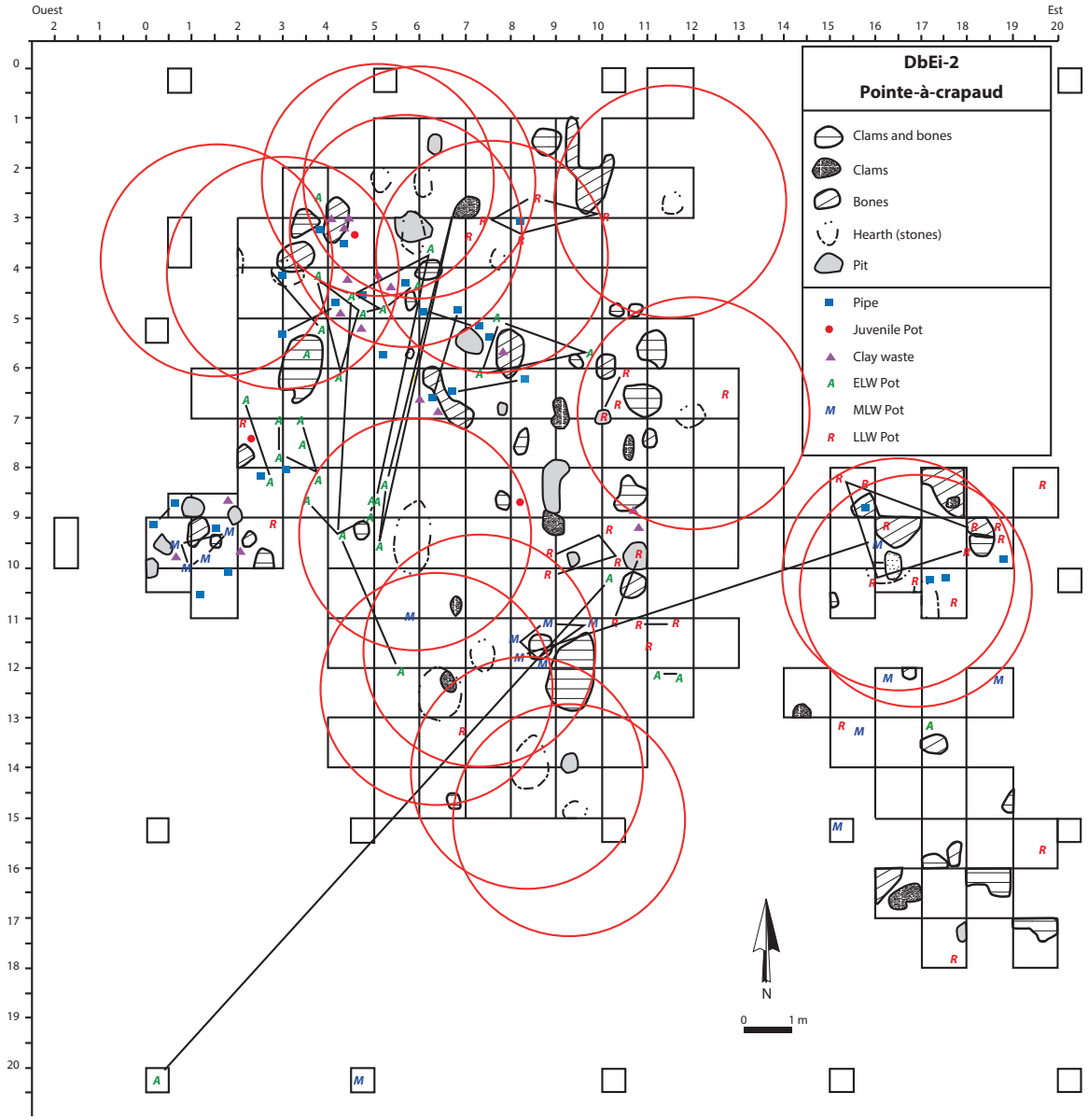

Figure 5 - Pointe-à-Crapaud site: horizontal distribution of household structures, of ceramic vase units by period (SSA=early Late Woodland; SSM=middle Late Woodland; SSR=late Late Woodland), and hypothetical limits of single hearth house (5 m diameter).

We also question the nature of concentrations of charred bones mixed with a brown matrix composed of broken and non-calcined animal bones. Could this be another type of hearth in which were rejected culinary waste, avoiding the hastle of outside disposal? This possibility remains uncertain since these features contain few or no heated rocks.

The Ouellet site, occupied mainly during the middle Late Woodland period (1250-1350), extended over a well-drained sandy plateau and faced one of the widest foreshores of the St. Lawrence Estuary providing an endless supply of soft-shell clams covering more than 3 sq. km. However, no specimens were found in the archaeological layer despite exceptional organic preservation (fragments of leather and many non-calcined bones were discovered there). The lack of white clams and sea urchin tests, the presence of a dozen clay wasters revealing ceramic production, and a high proportion of Gray and Common seal bones (which are present in the area in the warm

season) support summer and fall occupations. Excavation of a 30 m long and 10 m wide area revealed 17 hearths (defined by a concentration of stones and / or a significant concentration of wood charcoal), 12 small concentrations of culinary waste, and only one pit. Eight non-aligned postmolds of a 6 cm average diameter can be interpreted as scaffold or small structure posts rather than wooden poles used to construct a tent (figure 6). Compared to the distribution of the hearths, the horizontal distribution of potsherds from the same vessels revealed no logical patterns. Their random distribution is however notable and could be explained by the presence of children who might have used them as toys. A clay waster bearing tooth marks of a 5 or 6-year-old child has also been discovered on the site, strongly suggesting a family dwelling. The culinary refuse zones are relatively large (2-3 m diameter) compared to those observed on the Pointe-à-Crapaud site, which could be interpreted as the effect of longer occupations (several weeks to months) and a higher population density. Culinary waste found amongst two hearths zones may reveal waste inside a single house or a multiple occupancy given that the stylistic ceramic signatures span over a 500-year period, between 1000 and 1535 CE.

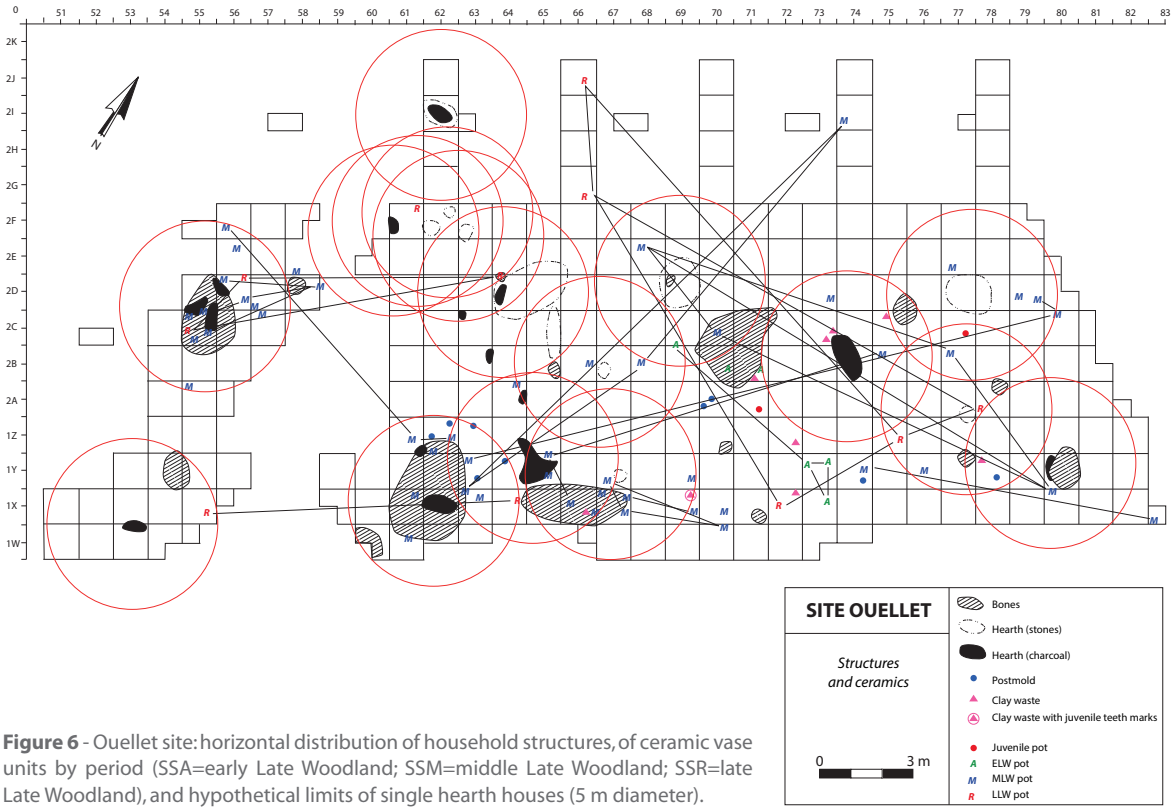

Figure 6 - Ouellet site: horizontal distribution of household structures, of ceramic vase units by period (SSA=early Late Woodland; SSM=middle Late Woodland; SSR=late Late Woodland), and hypothetical limits of single hearth houses (5 m diameter).

4 - Characterization of household structures

Our analysis of the size and configuration of presumed household structures reveals clear differences with in the dimensions and layout of longhouses from village settings (table 3). In general, the structures found in the St. Lawrence Estuary are smaller than those observed in the villages upstream from Quebec City. Hearths on estuary sites are characterized by a platform made out of small granite stones (stone mean diameter of 10 cm), by wood charcoal, and sometimes by a reddened

sand matrix occupying an average area of 0.81 sq. m. (0.13 sq. m. minimum and maximum value of 4.91 sq. m.). Their shape is rounded in 55 % of cases, otherwise it is slightly oval. Culinary waste zones, which typically contain both white clams and non-calcined and charred bones cover an average area of 0.52 sq. m. (0.13 sq. m. minimum value and a maximum value of 2.0 sq. m.). Their shape is rounded in 74 % of cases, otherwise it is oval. The average diameter of the opening of the pits is 0.42 m, their shape is circular in 86 % of cases, and their average depth is 0.16 m. Postmolds show an average diameter of 6 cm.

Structures / Site	Estuary	Masson	Lanoraie	Mandeville
Mean area covered by hearths	0.81 m^2	Unknown	1.77 m^2	1.26 m^2
Mean area covered by culinary waste	0.52 m^2	None	None	None
Mean aperture of house pits	0.42 m	0.40 m	0.41 m	0.40 m
Mean depth of house pits	0.16 m	0.51 m	0.29 m	0.34 m
Mean diameter of postmolds	6.0 cm	9.4 cm	8.9 cm	12.0 cm

Table 3 - Feature morphometry on St. Lawrence Estuary sites and on three villages upstream from Quebec City.

On the Masson site (Benmouyal, 1990: 65, 73), ploughing has unfortunately destroyed all traces of house structures, and it is therefore impossible to reconstruct their dimensions. The average diameter of the longest axis of the aperture of pits is 0.40 m and their average depth is 0.51 m. Postmolds have an average diameter of 9.4 cm. On the Lanoraie site (Clermont *et al.*, 1983. 33), hearths cover an average area of 1.77 sq. m., they have an oval form and contain little or few stones. Culinary waste has been deliberately placed in pits having an average diameter of the major axis of the aperture measured at 0.41 m and an average depth of 0.29 m. The average diameter of postmolds is 8.92 cm. On the Mandeville site (Chapdelaine, 1989: 55, 58, 59), hearths comprised in house No. 1 each cover an average area of 1.26 sq. m. and are elongated, the average diameter of the pits aperture varies between 0.36 m and 0.43 m, and the average depth is 0.34 m. The average diameter of postmolds is between 9.66 cm and 15.0 cm depending on whether it is associated with the external or the internal structure one of the longhouse.

Although we cannot reject the possibility that longhouses were set up in the mouth of the Saguenay River region, we believe that the typical floor of seal hunters' houses was most likely that of a conical tent with a circular base and in the center of which was built a stone platform hearth. As a comparison, it is interesting to know that among seal hunters of the Atlantic states of New England (located more than 400 km to the southeast), the maximum diameter of the house floors built in the Woodland period is estimated at 4 m (Hrynick, 2009: 98), creating a space of about 14 sq. m. Based on hundreds of dwellings with a single and central hearth discovered inland within the Cree territory of James Bay (located more than 700 km to the northwest), the average diameter of circular tents is estimated at 5 m (CÉRANE, 1995: 321), generating an approximate living space of 20 sq. m. Therefore, two families could occupy each a space of about 10 sq. m. One might conservatively suggest that the diameter of an Iroquoian dwelling built in the St. Lawrence Estuary could be around 5 m and could have welcomed two families.

The frame of the tents was probably made of black spruce, a dominant species in the area (Blouin, Berger, 2003: 2.7). Dead trees, still standing, although dry, were still strong and bark free and were an ideal raw material. A few axe blows would suffice to remove the knots. Seal or moose skins were probably used to cover houses, but birch bark also lent itself to this function since that

tree grows not far inland (Blouin, Berger, 2003: 2.7). At sites occupied during springtime, non-calcined or charred bone remains, white clam shells and sea urchin tests were probably thrown outside the house. Temperatures were cold enough and stays were short so that odors and vermin would not bother occupants. On sites occupied during summertime, food leftovers were probably thrown in small pits, or outside of residential areas (these areas have not been subject to archaeological excavations).

Whether men moved into the estuary in the spring, or whole families travelled there during the summer, St. Lawrence Iroquoians always used the same type of houses, namely the conical tent. This is an easy to erect structure that can be disassembled quickly, as evidenced by their use by the nomads of the tundra and boreal Eurasia and North America since at least 5000 years (Brasser, 1982: 309). We believe that the Iroquoians of the Province de Canada practiced a form of transhumance involving a small number of people at a time and we believe that these trips were not accomplished by the entire village communities of the Quebec City area. If the 800 inhabitants of Stadacone and the 200 or 250 people in each of the six other villages had come regularly to the mouth of the Saguenay area, their sites would be much larger and richer than those on which excavations were carried out. Moreover, this can be corroborated by the fact that the archaeological surveys conducted in the region have shown the absence of such sites and also the scarcity of large spaces, other than those that we know of and have tested, to accommodate such groups.

5 - Discussion

Although drawn from archaeological sites where mingled / mixed occupations spread over the period from 1000 to 1535 CE, data from the excavations at the mouth of the Saguenay River suggest that eastern Iroquoians did not build longhouses in their seal hunting areas. Although we can only count on Jacques Cartier's descriptions, and archaeological sites upstream from the Quebec City area outside of the Province de Canada to establish intracultural comparisons, we find that in the Woodland Period (1000-1535 CE), seal hunters' hearths were almost twice as small as those used in the longhouses of semi-sedentary villages and were built on rounded stone platform deposited directly on the floor and not disposed of in shallow pits. Culinary waste zones disposed of above ground were common in the mouth of the Saguenay River region, and especially on springtime sites where snow covered the ground. These culinary waste zones were absent from villages located between Montreal and Quebec City. The average diameter of pits was about the same, but the ones dug in the sandy soils of the St. Lawrence Estuary were half as deep as those of the villages. While only discovered on one site, postmolds on estuary sites are twice as small as those of longhouses and do not correspond to the wooden poles of a tent, but rather to stakes for interior facilities like scaffolds for drying meat and hides.

Irregular and poorly drained surfaces used in springtime did not lend themselves to the use of longhouses and stays were not long enough (probably a few weeks at the most). In addition, because the Iroquoian longhouse acts as mirror of kinship organization where families were related through sisters and mothers (Clermont *et al.*, 1983: 131; Chapdelaine, 1989: 123; Warrick, 2000: 425; Tremblay, 2006: 27), it was probably not well suited for social units composed entirely of men going on hunting ventures. At sites where children, and by extension families, were present (clay wasters with juvenile teeth marks, juvenile ceramic pots and ceramic production probably done by women), the environmental conditions were theoretically favourable for the construction of a longhouse, providing a flat, sandy, well-drained and wide living space. However, the size of the groups and the length of stays may not have justified the time and energy required to build such large and semi-permanent homes. And in the case of Ouellet site, which stands on a very windy

spot, such features would have been maladaptive or simply dangerous. Iroquoians of the Province de Canada therefore adjusted their "households" in terms of the local environment: longhouses in horticultural villages up to the present day Quebec City, and conical tents in the St. Lawrence Estuary to maximize time spent on seal hunting. Eastern Iroquoians would have therefore perpetuated, from 1000 to 1535 CE, a form of "horizontal" transhumance between the Quebec City region and the mouth of the Saguenay River, a settlement pattern that finds few parallels in northeastern America.

Finally, we must consider as a late phenomenon the transition of eastern Iroquoians towards a village lifestyle, dating perhaps to the second half of the 15th century, only 100 years before Jacques Cartier's journey up the St. Lawrence River in 1535. Therefore, the longhouse was part of the landscape of the Quebec City area for only a few decades before their builders deserted the St. Lawrence Valley, around 1580. And when present in the estuary, the architectural signature of these Iroquoian groups would have been the conical tent.

Ironically, it seems that the only historically documented longhouse in the region of the mouth of the Saguenay River is related to a non-Iroquoian group. While celebrating an alliance at Pointe Saint-Mathieu on May 27th, 1603, Gravé Du Pont and Samuel de Champlain accompanied by representatives of three Aboriginal nations (Montagnais or Innu, Algonquin, and Etchemin, probably the Maliseet) that provided military assistance in the conflict with the Iroquois Five Nations met in a longhouse with a floor that had eight to ten aligned hearths : "ils auoient huict ou dix chaudieres, pleines de viandes, au milieu de ladicte cabanne, & estoient esloignees les vnes des autres quelque six pas, & chacune a son feu" (Biggar, 1924: 101). Here we can recognize the description of a longhouse whose length could easily have reached 30 to 35 m (six steps corresponding approximately to 4m). It must be said however that this event, which brought together nearly 100 people (Girard, Kurtness, 2001: 13), was likely an exceptional situation.

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