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Preface

This issue commemorates the 75th Anniversary of the New York State Archaeological Association. Because the Iroquois have been such an integral part of NYSAA research over the years, it seemed appropriate to publish the papers of the Symposium on the Iroquoian Speaking Peoples of the Northeast held during the 73rd Annual Meeting in Norwich on Saturday April 15, 1989.

The papers were organized by Dr. Richard E. Hosbach of the Chenango Chapter in an attempt to address the status of Iroquois research in the Northeast from the point of view of both Canadians and Americans. Consequently, broad views of contemporary Iroquois archaeological research were openly discussed among NYSAA members at the meeting. Although not all papers were submitted for publication, the Editor would like to thank all of those individuals who were able to provide The Bulletin with manuscripts formalizing their thoughts on this important occasion.

The following topics provided an informative series of presentations on the Iroquois by a distinguished panel speaking from a number of different vantage points and moderated by Dr. Robert Funk, State Archaeologist:

Mohawk	Dr. Dean R. Snow
Oneida	Dr. Peter P. Pratt
Onondaga	Dr. James W. Bradley
Cayuga	Dr. Mary Ann Niemczycki
Seneca	Dr. Martha L. Sempowski
	Dr. Lorraine P. Saunders
St. Lawrence Iroquois	Dr. James W. Pendergast
Jefferson County Iroquois	Marjorie K. Pratt
Hurons and Neutrals	Dr. William D. Finlayson
Erie	Dr. William E. Engelbrecht
Susquehannock	Richard McCracken

Charles F. Hayes III
Editor

Erie

William Engelbrecht, Houghton Chapter, Buffalo State College

Following a brief survey of historic references to the Erie, the distribution of late prehistoric and protohistoric populations along the southeast shone of Lake Erie will he examined. Ceramic patterning within and between village sites is discussed along with the postulated sequence of village movements. Anomalies in the pattern of village movement and in ceramic patterning suggest directions, for future research.

Information on the Erie

The Erie were defeated and dispersed by their enemies between 1654 and 1656. They do not survive as a group today, and we have no eyewitness accounts of the Erie in their home land prior to their dispersal. Captain Henry Fleet describes meeting seven Hereckeenes in 1632 (Fleet 1876:30-31) and Roy Wright (1974:58, 85) identifies these as Erie. Fleet describes these Hereckeenes as lusty, as strangely attired in red fringe, and as having a haughty manner. Fleet further states that they:

> with their own beaver, and what they get of those that do adjoin them, do drive a trade in Cannida at the plantation, which is fifteen days journey from this place. These people delight not in toys, but in useful commodities [Fleet 1876:312].

Additional information on the Erie prior to their dispersal comes from the French in Canada. One of these Frenchmen, Gendron, wrote in 1644-1645:

> This Lake called Erie, was formerly inhabited on its Southern shores by certain tribes whom we call the Nation of the Cat; they have been compelled to retire far inland to escape their enemies who are farther West [White 1961:40].

The French Jesuits refer to the Erie by their Huron name of Eriehronon (various spellings) or as La Nation du Chat. Roy Wright (1974:63-64) translates the former as "people (hrono?) at the place of (ke) the cherry (eri?)." Nation du Chat is usually translated as "the Cat Nation," but as Roy Wright (1974:69-77) and others have suggested, "Raccoon Nation" is probably more likely. The term "chat sauvauge" was used in Quebec for raccoons, and Sagard states that "chat sauvage" was what the Huron called "tiron" which is cognate with the Wyandot "raccoon" (Wright 1974:76-77).

While "Raccoon Nation" may sound more prosaic than "Cat Nation," it should be remembered that the male raccoon is unusual in possessing a bony element in his penis, a fact with which the Iroquois were well aware since the raccoon *os penis* occurs without other associated skeletal parts on Iroquois sites. Eleven were found in the grave of an adult male on the Adams Site cemetery (Wray, et al. 1987:286). Its presence is usually assumed to reflect a concern with virility as it does in areas of the rural South today (Lydia Fish, personal communication).

The Erie are believed to have lived south of the lake which bears their name today. An important map (Figure 1) for locating native groups in the Northeast prior to 1650 which only recently came to the attention of scholars is that of Nouvelle France (Nouvelle France) located at the Ministry of Defense, Taunton, England. Heidenreich (1988) suggests it was drafted in 1641 by Jean Bourdon. The Eriehronon are placed south of Lake Erie on this map (see Figure 1) as they are on the better known and later maps of Nicholas Sanson (1650, 1656, 1657). Sanson places the Erie between the eastern end of Lake Erie and Lake Chautauqua on all his maps. Later maps with the location of the Erie exist, but they were made after the Erie were defeated and dispersed (Bernou c. 1680, Du Creux 1660, Franquelin 1684). These maps have sometimes been used to claim a wider geographical distribution for the Erie than western New York. Both Griffin (1944:192) and Morgan (1952:88) considered Whittlesey Focus material in Ohio to be Erie, but Brose (1976:47, 1988:6) cautions against the assumptions that both Whittlesey Focus material and the Erie are to be found along the entire south shore of Lake Eric. He feels that Whittlesey Focus material in Ohio is probably distinct from the Erie.

This paper follows Marian White's location of the Erie south of the lake in New York and Pennsylvania. A listing of references to the Erie in the *Jesuit Relations* and other sources along with a discussion of cartographic evidence may be found in Marian White's doctoral dissertation (1961), in her 1971 article in *Ethnohistory*, and in her article on the Erie for the *Handbook of North American Indians*, Vol. 15 (1978).

The names of two Erie villages appear in the Jesuit Relations: Rigué (JR 42:186) and Gentaienton (JR 61:195). This latter reference occurs in 1679, some 23 years after the defeat and dispersal of the Erie. The name Gentuetchronnons appears in a list of 1656 (JR 42:197), and Steckley (1985: 12) translates this as "people who bear or carry a field." White argues that the terms Rigueronnons and Gentaguetchronnons refer to tribes and that Erie "probably referred to a group of tribes, possibly an alliance" (White 1978:412). They are cred-

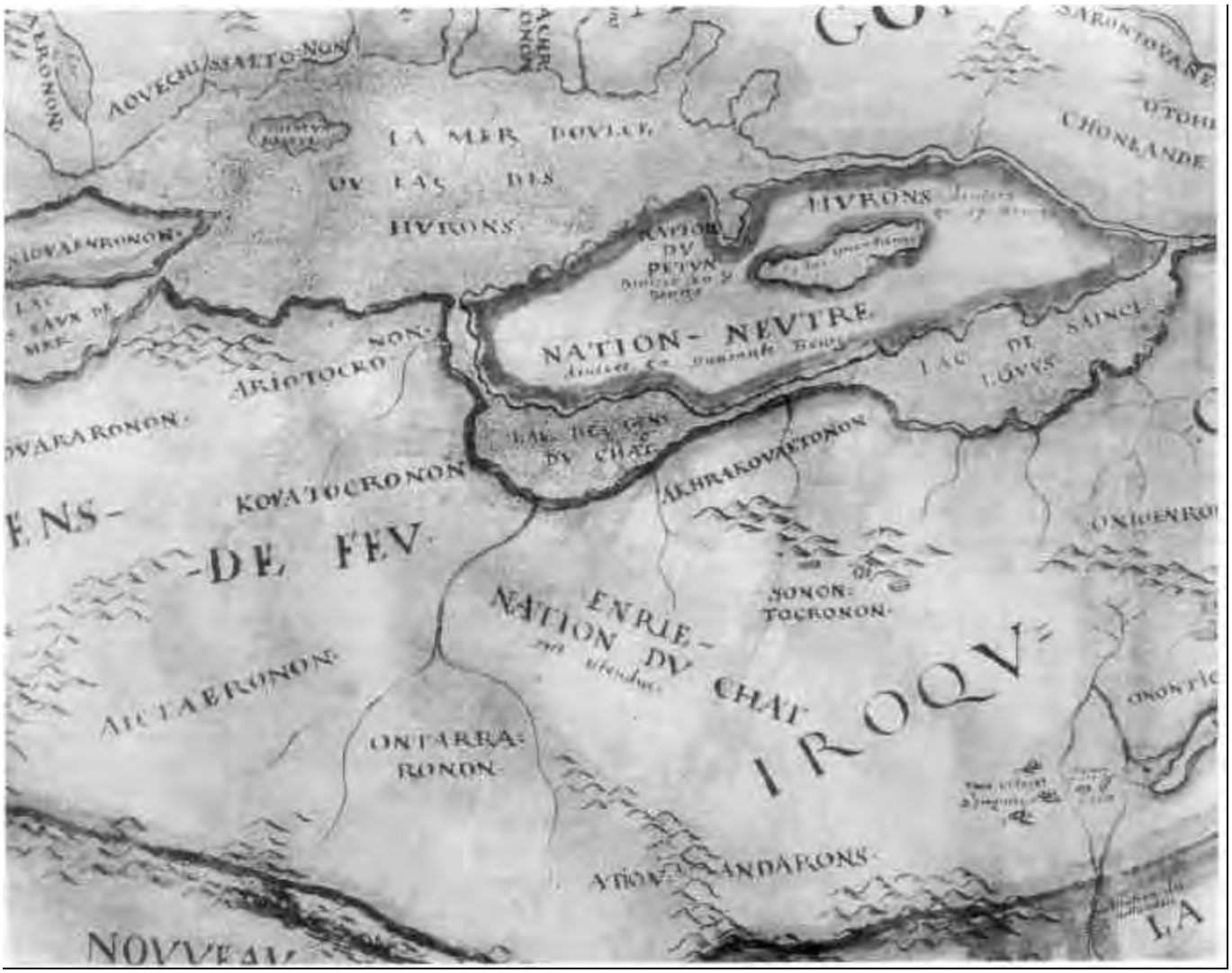

Figure l. Portion of the Nouvelle France map of 1641.

ited with two or three thousand warriors (JR 42:179) which supports the notion that the Erie were made up of several villages. One possible Erie group was the Ehressaronon (Heidenreich 1988:101) which appears in Le Jeune's list of native groups (JR 18:227-239) in a position to suggest they might be Erie. Nothing more is known of them.

The Eastern End of Lake Erie

Western New York consists of two physiographic provinces: the lake plains and the Allegheny Plateau. In general, the plateau is less favorable for horticulture except along the major river valleys since it has generally lower temperatures, shorter growing seasons, and soils with lower productivity. During the Late Woodland period, there appears to have been a movement of population off of the Allegheny Plateau and onto the lake plains (Hunt 1989). Most of the major late prehistoric Iroquois sites are located on the lower elevations of the lake plains. In addition to providing more favorable growing conditions, the lake plains contained a variety of other resources including beaver. Competition for beaver in the seventeenth century by neighboring groups may have led to the departure of the Wenro in 1638 and the dispersal of the Erie some 18 years later (White 1971).

There are at least 235 Late Woodland archaeological sites in western New York (Hunt 1989). To determine which of these might have been Erie, Marian White (1961, 1971) first considered Iroquoian sites with historic material and then eliminated those which were probably either Neutral or Wenro. Possible ancestral Erie sites may then be identified by using seriation to discover continuities between prehistoric and contact period sites. However, if the term Erie refers to an alliance and we do not know the time depth for that alliance, the application of the term Erie to prehistoric sites becomes increasingly

problematic as one goes further back in time. Also, some sites cannot be clearly related to contact period ones. This is the case with the Chautauqua Phase sites in southwestern New York (Schock 1976) and Iroquois sites dating from the thirteenth to the fifteenth century in the Allegheny Valley of New York and Pennsylvania. These latter have been referred to as Allegheny Valley Erie. While these sites may in fact be "proto-Erie." a discussion of these sites is beyond the scope of this paper.

In historic times the Neutral Confederacy was centered around Hamilton, Ontario, though for a time some Neutral sites may have been located east of the Niagara River in New York (White 1972). The historic Van Son cemetery on Grand Island (now destroyed) has been identified as a Neutral site (White 1968). Martin Cooper, a graduate student at the University of Toronto, has been investigating the Neutral occupation along the north shore of Lake Erie just west of Buffalo. With the assistance of James and Susan Pengelly of Port Colbourne, Cooper has discovered or relocated a number of Iroquois village sites. Working out the sequence of village movement in this area should prove helpful in determining whether this group crossed the Niagara River into western New York.

The name Akhrakvacronon appears on the Nouvelle France map of 1641 east of the Niagara River and is translated from Huron by Steckly (1985:13) as "people of the east." This is the same general location as that to which the name Kakouagoga, "nation detruite," refers on the 1680 map attributed to Bernou and to which "Rakouegega" refers on the Franquelin map of 1684 (Heidenreich 1988:99-100). Steckly argues that these all relate to the same group and that Kakouagoga and Rakouegega is the Seneca or Cayuga name for the Akhrakvacronon. The Cayuga term for sun is "kahkwa," while Akhrakvaeronon, translated from Huron as "Easterners," is derived from the Huron word for sun (Steckley 1985:13). Little is known about the Akhrakvacronon except that they were defeated by the Iroquois in 1652. Heidenreich (1988:100) feels it likely that these were a Neutral group. The name Akhrakvaeronon does not appear on any of the Sanson maps and the location of Akhrakvaeronon sites is uncertain. The Iroquois sites immediately south of Buffalo (discussed in this paper as Erie) are possible candidates, but the absence of "Akhrakvaeronon" from the Sanson maps and the imperfections of seventeenth-century maps of North America prevent a conclusive acceptance of this hypothesis.

The Wenro (Oneronon, Ouenroronons) were said to have been associated with the Neutral, living on the boundary of the Neutral toward the Iroquois (JR 17:25-27). Another reference places them beyond the Erie (JR 21:231). This reference has led to suggestions that the Wenro were located in southern New York or Pennsylvania. However this seems too far away from the Neutral, unless the sites immediately south of Buffalo are Neutral as well. White (1961, 1971, 1978a, 1978b) argues for a location in Niagara or Orleans Counties (south of Lake

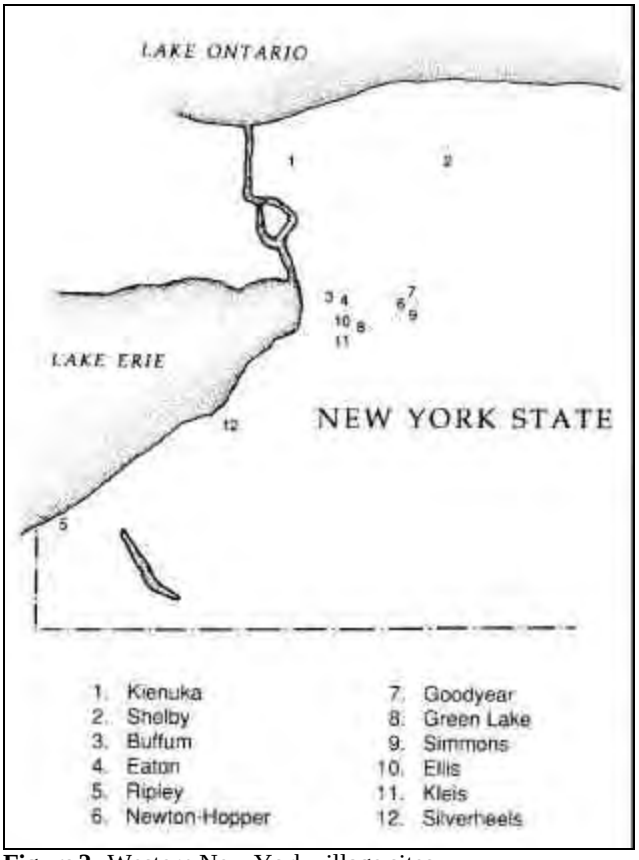

Figure 2. Western New York village sites.

Ontario). The Wenro were forced out of their traditional territory in 1638 when the **Jesuit Relations** state they joined the Huron Confederacy. White (1977) suggested that the Shelby Site in Orleans County was Wenro. The Kienuka and Fort Peace Sites represent possible earlier village locations (White 1976:131), but a village site that would fit the date of a 1638 abandonment has yet to be found in that area.

Sites

Sites south of Buffalo dated to the first half of the seventeenth century include the Kleis, Ellis, and Bead Hill Sites. While these are usually interpreted as Erie villages, as noted above they may have been Akhrakvaeronon, a possible Neutral group. These are the latest of a number of sixteenth- and seventeenth-century village sites which Marian White felt represented the successive movement of two contemporaneous communities through space, generally in a southerly direction. From the fact that both communities tended to move in the same general direction, we can infer socio-political connectedness (Allen 1988). Certainly frequent communication and contact between pairs of villages would have oc-

Figure 3. Clay pipe, Eaton Site. Buffalo State College collection.

Figure 4. Stone pipe bowl, Eaton Site. Buffalo State College collection.

curred. The two communities were generally 8 to l0 mi (13 to 16 km) apart. Contemp oraneous Seneca, Onondaga, and Mohawk communities were apparently separated by distances of the same general magnitude, suggesting that this distance was not random, but rather reflects some as yet unspecified requirement of the inhabitants of these sites.

In 1980, an archaeological survey of the proposed right of way of a sewer along Smokes Creek in Orchard Park revealed the R. Haas II Site (U.B. 1601). At that time the potential significance of the site was not realized, Current (spring 1989) preliminary investigation of this site by Erie Hansen, Hansen & Associates, for a developer suggests that it may be a large seventeenth-century Iroquois village. More work is needed before the temporal and cultural relationship of this site to others in the area can be established. Geographically, it is close to a number of the later sites in the western village sequence.

The eastern village sequence is represented by the sites of Goodyear, Newton-Hopper, Simmons, and Bead Hill. Goodyear, Newton-Hopper, and Simmons are located within one and a half miles of each other in defensible locations along terraces of Buffalo Creek (see also Figures 3-7). Bead Hill is located to the south on a gently sloping knoll and has been partly destroyed by road construction, a diner, and trailer park.

The western village sequence is represented by the following sites (Figure 2) from early to late: Buffum, Eaton, Green Lake, Ellis, and Kleis (see also Figures 3-7). Buffum in south Buffalo is believed to be the earliest on the basis of ceramic seriation and the apparent absence of historic material in association with the village component. Buffum is also the only one of these sites reported to have had an earthring and an ossuary, traits which disappear in the Niagara Frontier by contact times. At present, the Ellis and Kleis Sites are believed to be the latest locations of this community, and they contain abundant historic material (White 1967). They are the largest sites and the most heterogeneous ceramically. They have also yielded many fine end scrapers, which may reflect the involvement of the inhabitants in processing pelts for the fur trade.

The Kleis and Bead Hill Sites appear to be the final locations of the western and eastern communities respectively. Gendron states that the Erie were forced to move inland in order to escape their enemies to the west. White has noted that the abandonment of the Kleis and Bead Hill Sites may reflect the move referred to by Gendron in his letter of 1644-45. It is also possible that it reflects the defeat and dispersal of the Erie between 1654 and 1656 or that of the Akhrakvaeronon in 1652. Unlike most of the earlier locations of these two communities, the sites are not on easily defensible terrain. White (1967:3) notes that a similar change from defensible to non-defensible positions occurs in the Seneca area between 1630 and 1650 (Wray and Schoff 1953:57). The reason for this change is not apparent.

Some 25 mi (41 km) to the south along the Cattaraugus Creek, the Silverheels (Engelbrecht n.d.) and Highbanks Sites have historic trade material along with Iroquois material, and there is a series of prehistoric villages along the Cattaraugus as well (Double Wall Fort, Burning Springs). Schock (1976) suggests that these constitute at least one village movement. Most of these sites lie on or near the Cattaraugus Indian Reservation, and little work has been done on them since the early years of this century. The only other Iroquoian site in southwestern New York with historic material on it is the Ripley Site, near the Pennsylvania state line (Parker 1907). The scarcity of trade material on this site suggests that it dates early in the contact period.

Twenty miles (33 km) to the southwest in Erie, Pennsylvania, is the 28th Street Site. Carpenter, ct al. (1949:6) note

Figure 5. Pipes from Erie ,sites, private collection, a. Simmons Site (Parker 1922: Pl. 146 illustrates a similar pipe from Belvedere, Allegany County, New York), b. Elk Site, c. Goodyear Site (bird?), d. Newton-Hopper Site (Ohio pipestone).

"striking parallels" between the ceramics from the 28th Street Site and Ripley. The 28th Street Site has more historic material than Ripley and may date to the 1630-1645 period (Carpenter, et al. 1949). Local tradition says that this was the location of Rigue, but this cannot be substantiated. Neither Ripley nor the 28th Street Site appears to be closely related to other sites in their immediate vicinity. In northeastern Ohio, the Fairport Harbor Site (Whittlesey Focus) also yielded contact period material (Morgan and Ellis 1943). The material from the latest component is similar to that of the South Park Site (Brose 1976:39-40), and the material from these sites appears to be distinct from that of the 28th Street Site.

The Problem of Erie Origins

Recently, Niemczycki (1984) has outlined a process of village consolidation resulting in the formation of the historically known Seneca and Cayuga tribes. Earlier, Tuck (1971) described a similar process of village fusion and alliance for the Onondaga. It seems likely that a similar process of village consolidation occurred for the Erie, but the details remain to be worked out. The probable antecedents of the Buffum Site, the earliest large site in the western village sequence, and those of Goodyear, the earliest large site in the known eastern sequence, are unclear. While we can discuss possible antecedent sites,

Figure 6. Bone artifacts from the Goodyear Site, private collection. a. Comb (15.3 cm high) b, effigy (probably part of comb), c. antler effigy, d. comb similar to one from the Shenks Ferry Site (Jennings 1978:364).

Applying the term Erie or "proto-Erie" to them is problematic, since the time depth for the existence of the Erie is unknown.

Not far from Buffum are the Hart Farm Site and the Farthing Site, both largely destroyed. Iroquoian material is reported from these sites, but little remains. The proximity of these sites to Buffum suggests that they might be ancestral. There appear to have been other sites in the area as well, now destroyed by the City of Buffalo.

The Nursery Site and the Harris Hill or Brunea Site appear to be small Iroquois villages, dating to around the fifteenth century and located approximately 10 mi (17 km) north of the Newton-Hopper and Goodyear Sites. Along with the Webster Site, they appear at present to be the most likely candidates for ancestral villages for the eastern sequence.

In 1851, E.G. Squier described five sites in the vicinity of Clarence, New York, some 5 to 6 mi (8 to 10 km) to the northeast of the above sites. Four of these were earthworks, all were small, between 0.5 and 1.5 acres (0.2 and 0.6 ha), and closely spaced (White 1976:124-127). One of these sites, Henry Long, was excavated by a field school from SUNY/Buffalo under the direction of Marian White. The occupation area was approximately 190 ft by 150 ft (60 by 46 m) and contained a single longhouse 65 ft by 20 ft (20 by 6 m). Material was generally scarce, though a corn-filled pit was found inside the structure. White estimated that the site was occupied around A.D. 1300.

Until recently, the Henry Long Site was the only one of Squier's five Clarence area sites which had been relocated (White 1963). However, survey by Ecology and Environment in 1982 and again in 1983 for proposed wastewater treatment facilities revealed the Christiansen Site, tentatively identified as a Middle Ontario Iroquois, Middleport Phase site (Rosenzweig 1983). This may be one of Squier's Clarence sites. A number of ossuaries have been found in the Clarence area, and these are probably associated with the above sites. White (1976:124-127) considered the inhabitants of these sites to be ancestral Erie.

Approximately 32 mi (52 km) northeast of Buffalo around Oakfield, New York, Vanderlaan (1962, 1965) has described the Ganshaw, Woeller, Oakfield and NOK Sites, the first three being earthworks between 3 and 7 acres (1 and 3 ha) in size. Wright (1966:40) sees material from Oakfield as similar to Uren substage material in Ontario, and White (1976:121-124) estimates that this series of sites was occupied between A.D. 1175 and 1325. White suggests that these sites are ancestral to later Erie sites to the southwest. A systematic study of all these sites and the associated material needs to be undertaken.

Ceramic Analysis

In earlier studies the author analyzed ceramic vessels from a number of western New York Iroquois sites. Figure 2 illustrates the location of these sites. An examination of Coefficients of Agreement based on ceramic attributes reveals a surprising pattern (see Table 1). The Ripley Site (Engelbrecht

Figure 7. Bone artifacts from the Simmons Site, private collection. a. comb effigy (horn broken off), similar to one from the Washington Bon, Village Site (Kent 1984:178) (see also Beauchamp 1902: Pl. 16, No. 176), b. comb effigy similar to figure from the Washington Boro Village Site, Lancaster County, Pennsylvania, c. A.D. 1600 (Cadzow 1936:120)(Kent 1984:178), c. comb.

n.d.) shows a great similarity to the village sites just south of Buffalo, especially the Newton-Hopper Site (see Table 1). Newton-Hopper and Ripley are separated by approximately 68 mi (109 km), a distance which would normally place Iroquoian sites in different tribal areas. The coefficient of 182 is unusually high even for sites which are close geographically and temporally. Ripley ceramics are also quite similar to those from Goodyear, an observation also made by MacNeish (1952:22), White (1961:128), and Wright (1966:22).

Such a high coefficient between sites that distant suggests a movement of population. While the direction of this postulated movement is not certain. The most likely would seem to be a movement from Newton-Hopper to Ripley. On the other hand, there is Gendron's puzzling statement that the Erie moved inland to avoid their enemies to the west. If he were referring to an event that had occurred 40 or 50 years earlier, it would fit a move from Ripley, which is along the lake, to Newton-Hopper or even Simmons, a later site in the eastern sequence. All the eastern village sites are inland and northeast of Ripley.

Another possibility is that Ripley was a seasonally occupied site of the population in the Niagara Frontier. Ripley is on a bluff overlooking Lake Erie, and while summers are pleasant there, winter inhabitants must deal with strong winds off the lake. Lynne Sullivan of the New York State Museum, along with Philip and Sarah Neusius of Indiana University, Pennsylvania, and Lee Hunt, a graduate student at SUNY/Buffalo, have begun long-term investigations at the Ripley Site and survey of the surrounding area. Their work should shed light on the question of possible villages antecendent to Ripley and possibly the question of seasonality. Interestingly, in a recent study, analysis of trace elements found on potsherd encrustations from Ripley fit a profile of trace elements in the soil from areas to the north and cast rather than from the immediate area (Fie, et al. 1990).

When Marian White referred to the Erie as probably an alliance of tribes, she was thinking of both the Ripley Site and the 28th Street Site in Erie, Pennsylvania, as representing separate tribal groups, each with an in situ development. If Ripley represents a movement of people either to or from the Newton -Hopper or closely related sites, we can no longer think of a separate in situ development of an Erie group in southwestern New York. Further, if the 28th Street Site in Erie, Pennsylvania, should prove to be a later location of the Ripley population, the idea of widespread Erie in situ development is dealt another blow. It seems likely, however, that there were alliances between at least four large contemporaneous villages in the early seventeenth century: the eastern and western communities immediately south of Buffalo, the Cattaraugus community, and the Ripley-28th Street community. There were probably strong ties between the pair of villages south of Buffalo. The nature of their ties with the Cattaraugus and Ripley-28th Street communities remains uncertain.

In addition to coefficients of agreement, coefficients of ceramic homogeneity were calculated for sites in the Niagara Frontier. Table 2 reveals that the earliest site, Kienuka, and the latest sites. Ellis, Kleis, and Silverheels, appear to have the most heterogeneous ceramics. The heterogeneity of these later sites appears due in part to the presence of Seneca style pottery.

Table 1. Coefficients of Agreement Between Sites in Western New York.

	Kienuka	Shelby	Buffum	Eaton	Ripley	Newton-Hopper	Goodyear	Green Lake	Simmons	Ellis	Kleis	Silverheels
Kienuka		171	171	172	171	174	170	169	168	162	157	164
Shelby			177	173	167	176	165	171	165	167	161	162
Buffum				180	172	178	180	180	171	164	159	160
Eaton					171	179	179	180	173	166	161	155
Ripley						182	176	174	171	172	168	163
Newton-Hopper							179	179	174	171	165	163
Goodyear								186	172	167	162	155
Green Lake									173	171	168	161
Simmons										168	160	161
Ellis											184	168
Kleis												164
Silverheels												

Coefficients of agreement between these sites and Seneca sites reflect these similarities (Table 3). Parker (1922:549) identified the Silverheels Site as Seneca because of the presence of Seneca style pottery, and both Guthe (1958:50-52) and Schock (1974:193) felt Silverheels was multi-component due largely to the presence of such pottery. While ceramic diversity may in fact reflect separate occupations, this view would require multiple Iroquois components for the Ellis and Kleis Sites as well. This seems unlikely. The view adopted here is that the Iroquois components on these sites contain some Seneca-style pottery.

The presence of "exotic" Seneca- and Cayuga-style pottery is not a phenomenon restricted to western New York. William Noble of MacMaster University, Hamilton, Ontario, has encountered such pottery on the Thorold Site, a Neutral contact period site in Ontario's Niagara Frontier (personal communication). Ridley (1973) stated that 91% of the 66 ceramic vessels from the Edwards Site in Huronia consisted of Seneca and Cayuga types.

The explanation for this distribution of Seneca and Cayuga style pottery is not clear. Ridley felt the Edwards Site was a Wenro village, reflecting the Wenro removal to Huronia in 1638. Using this explanation, the presence of Seneca and Cayuga style pottery on other sites in Ontario and western New York could reflect undocumented aspects of the Wenro diaspora. Unfortunately, we do not know how closely seventeenth century Wenro pottery resembled that of the Seneca and Cayuga.

An alternative explanation is that, except for the Edwards Site, the presence of some Seneca style pottery on seventeenth century sites in western New York and adjacent Ontario is related to the fur trade. Ellis, Kleis, and Silverheels all have abundant trade material. Some material may have been obtained directly from Europeans, or from the Susquehannock,

Table 2. Coefficients of Ceramic Homogeneity.*

Western NY Sites	Homogeneity
Kienuka	.68
Shelby	.72
Buffum	.73
Eaton	.78
Ripley	.77
Newton-Hopper	.78
Goodyear.	.79
Green Lake	.78
Simmons	.72
Ellis	.68
Kleis	.69
Silverheels	.60

*The higher the coefficient, the more homogeneous the assemblage

but most was probably obtained from the adjacent Seneca since they were closer than the Erie and Neutral to sources along the East Coast. Engelbrecht (1984) discusses alternative explanations for the presence of Seneca style pottery on western New York sites, the most likely stressing the probable importance of trade relationships between these two groups. While Iroquois men are generally accorded the role of long-distance trader, the traditional Iroquois female role of bearer of burdens is often overlooked. There is ample ethnohistoric documentation of women carrying trade goods or baggage over long, distances (Engelbrecht 1987:16-17). While it seems unlikely that pots moved between tribal areas, at least some seventeenth-century potters must have.

Table 3. Coefficients of Agreement Between Seneca and Niagara Frontier Sites

	Kienuka	Shelby	Buffum	Eaton	Newton-Hopper	Ripley	Goodyear	Green Lake	Ellis	Kleis	Silverheels	
Farrell	165	153	157	151	152	146	157	153	152	141	134	146
Footer	152	157	154	147	150	147	150	158	154	149	143	150
Belcher	146	146	152	143	143	134	147	142	144	132	126	144
Richmond Mills	148	147	156	144	144	137	148	146	148	140	139	156
Adams	145	144	149	138	144	143	143	145	145	149	146	160
Cameron	145	141	147	141	139	137	144	142	145	146	154	152
Dutch Hollow	143	145	149	143	142	141	147	148	149	152	159	157
Factory Hollow	141	133	145	140	138	136	144	144	143	146	152	146
Cornish	143	134	145	143	142	143	148	149	146	152	159	148
Warren	147	139	146	140	141	143	145	148	145	151	155	159
Powerhouse	145	145	150	146	145	145	149	147	153	154	160	158

Summary

Cartographic evidence suggests a location for the Erie, or Raccoon Nation, along the southeastern shore of Lake Erie during the mid-seventeenth century. Scattered Iroquois sites with sixteenth- and early seventeenth-century material are to be found on or near the lake plain from an area just south of Buffalo into northwest Pennsylvania. It seems likely that these are Erie sites, though there is a possibility that some are Akhrakvaeronon (Kahkwa) or even Wenro. The location of ancestral populations for these sixteenth- and seventeenth-century communities remains to be firmly demonstrated.

A study of ceramic similarity between many of these sixteenth- and seventeenth-century sites reveals strong similarities between Ripley and the sites southeast of Buffalo, especially Newton-Hopper and Goodyear, suggesting a close relationship. Reasons for such ceramic similarity remain unclear, but a movement of population from Newton-Hopper to Ripley, a distance of 68 mi (109 km), is a possibility. The ceramic analysis also revealed the presence of Seneca-style pottery on sites with the most trade material (Ellis, Kleis, Silverheels). The interpretation of this is also uncertain, but it may reflect the involvement of Iroquois women in trading activities.

Acknowledgments

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The Seneca Site Sequence and Chronology: The Baby or the Bathwater?

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This paper addresses the current debate over the reliability of the Seneca site sequence and chronology. This local chronological formulation for Seneca Iroquois sites in western New York was initially hypothesized by Wray and Schoff in 1953 and modified in 1973, 1984, and 1987 by Wray, et al. Over the years, it has become recognized as a classic by virtue of its extensive use as a comparative baseline for neighboring Iroquoian groups in the Northeast. Although the occupation dates were always offered as approximations, in recent sears, questions have been raised regarding its validity and dependability. Thus, documentation and possible refinement of the Seneca sequence and chronology have become the central focus of a multi-disciplinary research effort currently under-way at the Rochester Muse nm and Science Center. Presented here are a brief history of the controversy over the sequence, including the preliminary hypothesis and its theoretical foundations; the nature of the arguments being raised against it, and the strategy employed in testing it. That is followed by a presentation of two alternate hypotheses concerning the sequential positions and dating of four of the earliest Seneca sites – Adams, Culbertson, Tram, and Cameron.

Introduction

Since it was first proposed by Wray and Schoff in 1953, later modified by Wray (1973, 1984) and reported in detail in Wray, et al. (1987), the sequence and chronology of historic Seneca Iroquois sites has been widely used as a comparative chronology far beyond its regional domain (White 1967 and Engelbrecht 1971, 1984 [Niagara Frontier]; Niemczycki 1984 [Cayuga]; Tuck 1971, Bradley 1987 [Onondaga]; Pratt 1976 [Oneida]; Snow 1985 [Mohawk]; Kent 1984 [Susquehannock]; among many others). However, in recent years, it has come under criticism from some quarters, resulting in considerable debate regarding its validity and usefulness as a temporal framework for the early historic period in the Northeast. The purpose of this paper is to review the original rationale for the Wray and Schoff formulation, to weigh the strength of the criticism being raised against it, and to describe some of the initial results of our own efforts in its testing and refinement.

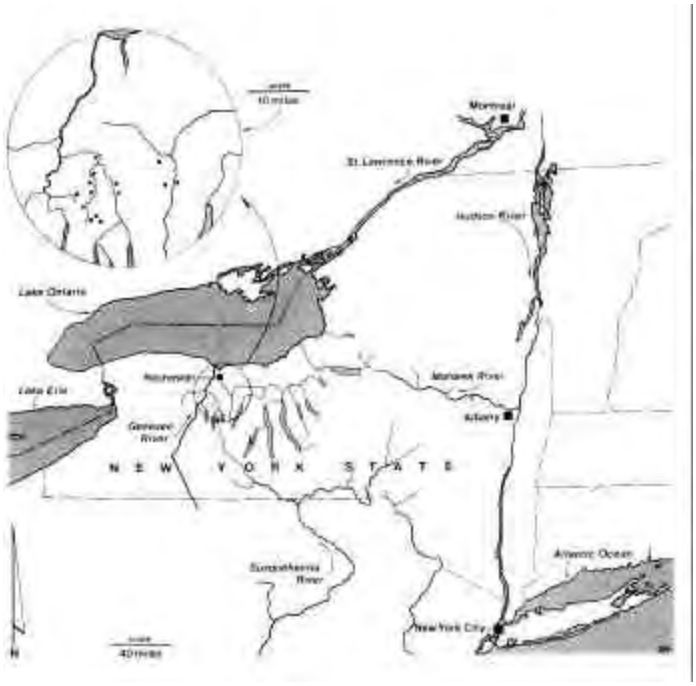

Figure 1. Map of New York State showing Seneca region (c. A.D. 1540-1687). Drawn by Patricia L. Miller.

Basis for the Seneca Site Sequence and Chronology

Building on the tentative formulations of Frederick Houghton (1912, 1922). Charles F. Wray and Harry L. Schoff in 1953 set forth a preliminary hypothesis regarding the sequential order and dating of historic Seneca sites (Wray and Schoff 1953). Subsequent fieldwork and the discovery of additional sites by Charles Wray and Donald Cameron led to modifications (Wray 1973, 1984; Wray, et al. 1987). As presently conceived, the Seneca sequence consists of 14 major village sites and an equal number of small or undifferentiated habitation sites located in a relatively restricted area of western New York, about 20 mi (32 km) south of present day Rochester (Figure 1). The early historic period is divided into two parallel series of sites, corresponding to seven pairs of roughly contemporary large villages, which were serially abandoned and relocated approximately every 15-20 years (Figure 2). As formulated by Wray and Schoff, no pair was completely contemporary;

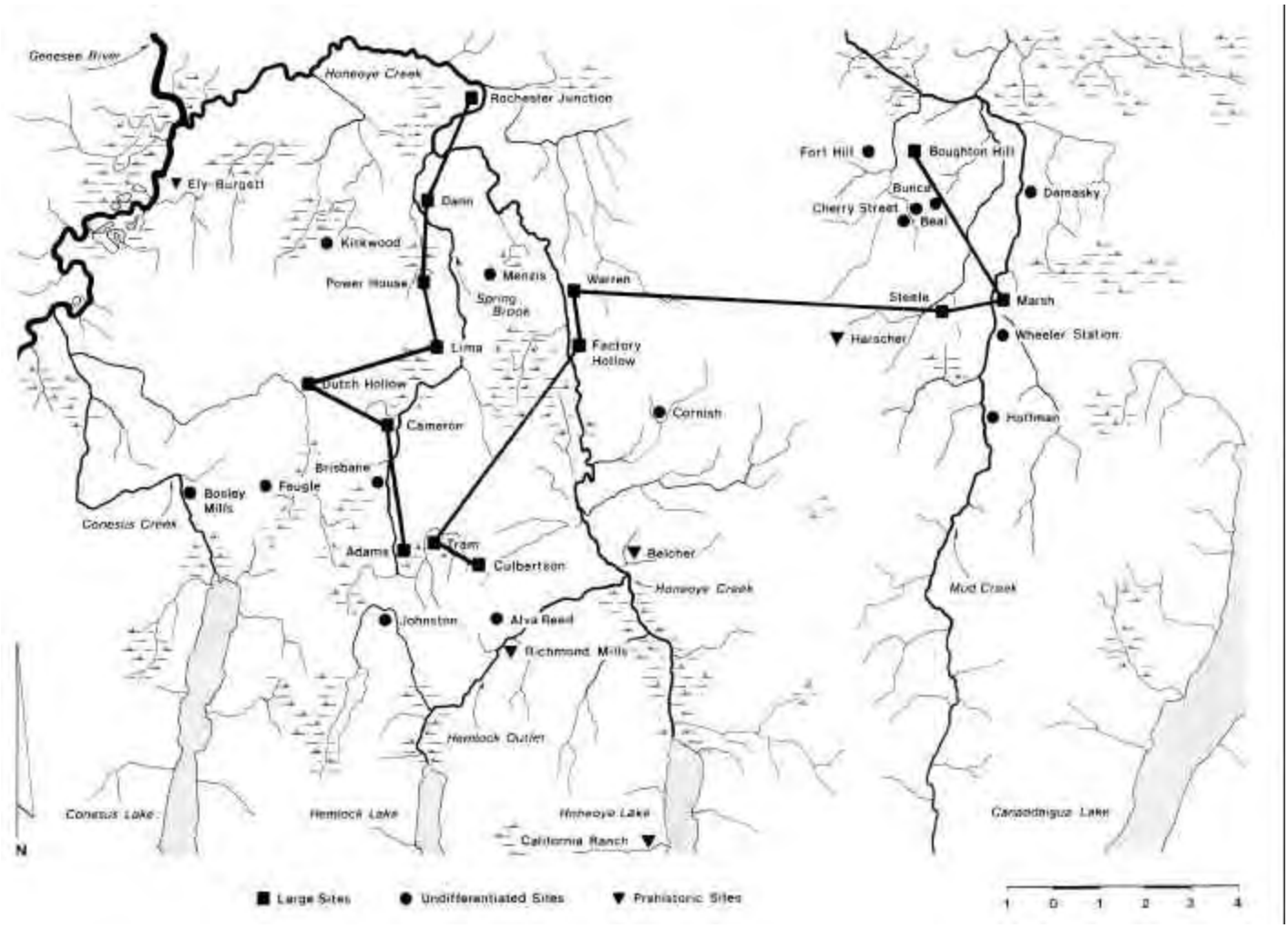

Figure 2. Map of Seneca region (c. A.D. 15-10-1687). Based on Seneca site Sequence map drawn by Charles F. Wray (1973). Redrawn by Patricia L. Miller.

rather, they appear to have been abandoned and rebuilt in staggered fashion, such that there would have been a brief overlap between a village occupation in one series and the successor to the companion village in the opposite series.

Descriptions of the Seneca settlement pattern recorded by European observers for the late seventeenth century furnished the model for this reconstruction of the pattern of Seneca village movements (JR 44:21; JR 49:259; JR 54:79; JR 57:27; Coyne 1903:25; O'Callaghan 1853:3:251-252). Further, historic accounts of the French and Huron attack on two identifiable Seneca villages provided a firm terminal date of A.D. 1687, at which time the Seneca were forced out of the re-ion to take refuge with the Cayuga to the east, and eventually to settle in the vicinities of Seneca and Canandaigua Lakes (O'Callaghan 1855:9:364-368; Olds 1930:38, 40-42). This information provided Wray and Schoff with a temporal baseline from which to regress in time, identifying and dating earlier village sites in the two branches of the sequence. Making the assumption that European-made goods would have become progressively more available to the Seneca throughout the early Historic Period, Wray and Schoff inferred that sites with proportionately smaller quantities of such goods represented relatively earlier occupations, and those with larger and more varied European assemblages represented later (more recent) occupations. This assumption, along with a corresponding, decline through time in quantities of native-made goods, allowed Wray and Schoff to trace out two parallel, northward-moving series of village sites.

Assigning occupation dates to the sites was a more formidable task. It was generally assumed by early twentieth-century archaeologists that the first signs of European contact (as indicated by the presence of manufactured goods) would have occurred in this area by about the middle of the sixteenth century. This implied a span of about 140 years from initial contact until the French attack in A.D. 1687. Thus, occupation periods of approximately 20 years were inferred for each pair of major sites (Figure 3). What is critical is that Wray and Schoff proposed this chronological framework as a prelimi-

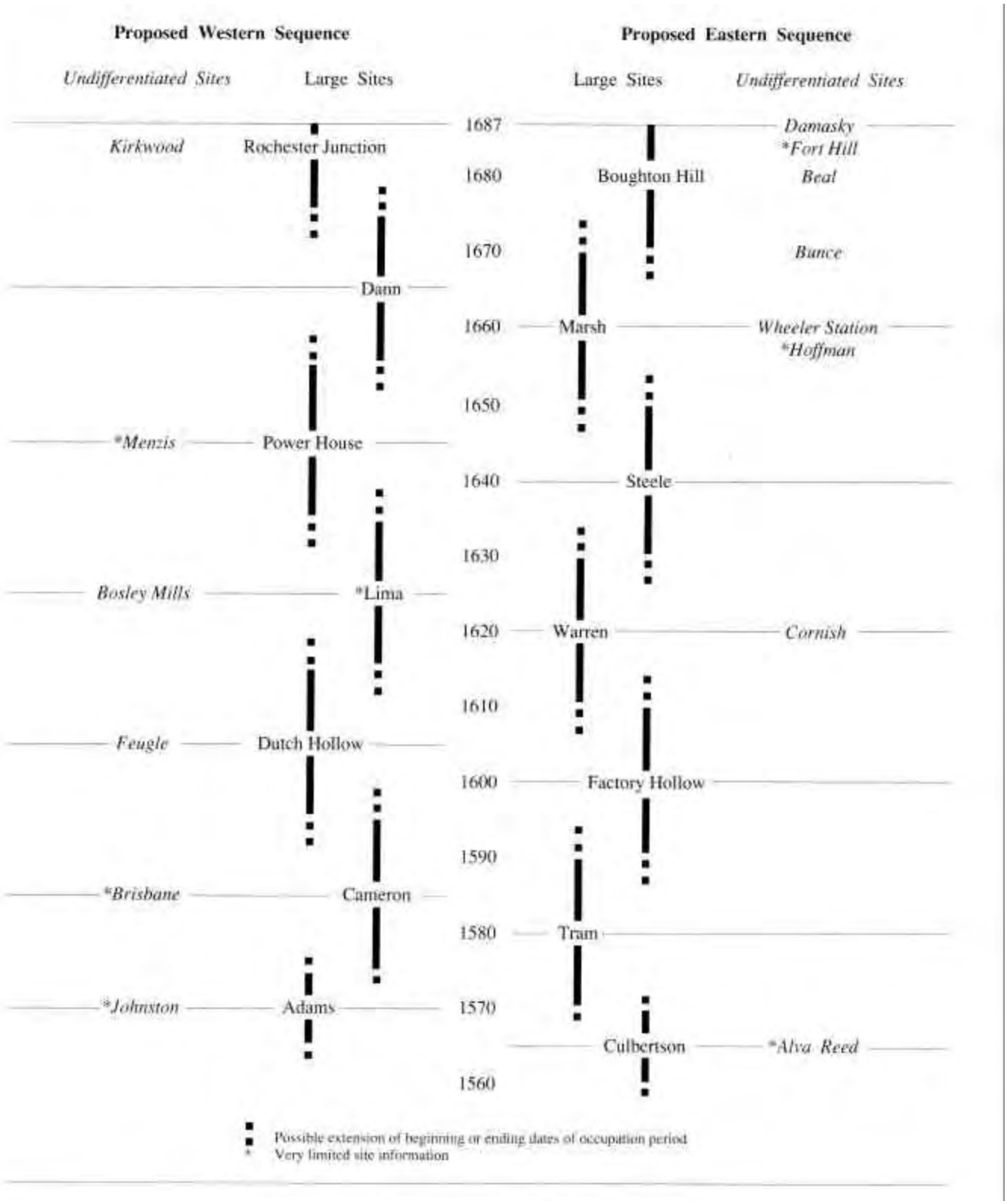

Figure 3. Chronology of eastern and western Seneca site sequences (c. AD. 1560-1687) based on Wray' and Schoff (1953), Wray (1973), and revisions by Charles F. Wray (Wray 1983, 1984; Wray et al. 1987).

nary hypothesis in which occupation dates were conceived as *working approximations*, not as absolute and immutable beginning and ending dates for each site. Because of the enormous body of archaeological information relating to most of these sites, it was always recognized by Charles Wray that thorough testing of the hypothesis would require years of meticulous and detailed research.

Criticism of the Seneca Site Sequence and Chronology

The strategy of research that attempts to define the early historic chronologies of other Iroquoian groups in New York and Pennsylvania has often involved correlations with the dates hypothesized for Seneca sites, and there has been an unfortunate tendency to view the Seneca dates as more concrete than originally intended. As a result of this misconception, in the early 1980s, several Canadian colleagues began to raise serious questions concerning the validity of the Seneca chronology (Fitzgerald 1982, 1983; Kenyon and Fitzgerald 1986; Kenyon and Fox 1982; Kenyon and Kenyon 1983). On the basis of hypothesized correlations between certain archaeological assemblages and episodes of trading activities with specific European groups. Ian Kenyon, William Fitzgerald, and others proposed a series of dates for Ontario Iroquois sites that were as much as 30 to 40 years later than those being cited for the Seneca sites with comparable assemblages, suggesting contemporaneity. Of crucial interest to them was the noteworthy divergence between Ontario and New York glass bead assemblages which Fitzgerald said occurred in A.D. 1633 (Fitzgerald 1983) and the Kenyons have dated to A. D. 1615-1625 (Kenyon and Kenyon 1983:68). All feel that this point of divergence is represented in New York sites by the appearance of the so-called "polychrome beads" (as for example at the Dutch Hollow and Factory Hollow Sites), while Ontario sites, presumed to be contemporary, exhibit a quite different array of bead forms. This posed a clear conflict between the New York and Ontario chronologies, in that the Wray and Schoff dates for the Seneca Dutch Hollow and Factory Hollow Sites were up to 40 years earlier than Fitzgerald and Kenyon were proposing.

In a subsequent joint publication in 1986, Kenyon and Fitzgerald significantly revised their earlier interpretations of the events relating to the differences between New York and Ontario glass bead assemblages. They suggested that the divergence was attributable to the onset of Dutch trade among Iroquoian groups in New York and Pennsylvania, while French goods continued to be plied in Ontario. Readjusting their proposed dates to fit with the historically documented inception of-Dutch trade in New York sometime between A.D. 1609-1614, they concluded that the divergence should be dated considerably earlier than Fitzgerald had originally proposed (Kenyon and Fitzgerald 1986:29). This brought their suggested dates to within 10 to 20 years of those currently being tendered for the Seneca sites. Nevertheless, in spite of this major reassessment of the proposed temporal discrepancy, and the fact that the validity of the actual sequence of Seneca sites had never been questioned, a generalized air of suspicion had been cast over the entire Wray and Schoff framework. Consequently, there has been an increasing tendency to view it and related New York and Pennsylvania chronologies as tenuous and Undependable.

Current Research Strategy

Some of the controversy promises to be resolved by a long-term, interdisciplinary research effort that has been undertaken at the Rochester Museum and Science Center, utilizing the voluminous archaeological and documentary resources of that institution. The objective of the project is to treat the Seneca site sequence and chronology in accordance with its original intent-as a testable hypothesis. A wide range of archaeological data is used to test the sequential and temporal relationships among sites and to clarify the dating of the sites as finely as possible. Artifactual, osteological, and mortuary dates underlie the detailed comparisons between sites and pairs of sites. The evidence considered includes the relative quantities of European goods as opposed to native made artifacts: continuities and discontinuities in the frequencies of specific styles of both European and native-made objects: the presence of potentially dateable artifacts: continuities and discontinuities in Various types of mortuary practices: and skeletal data used in estimating the biological relationships between populations and evaluating relevant pathology. Since the sequence by definition represents the serial movements of each of two contemporary village populations, it is assumed that contemporaneity between two villages Should be detectable in *similarities* embodied in the various lines of evidence, and that consecutive Occupations should be indicated by less equivalent, but nevertheless, clear continuities in the data. On the other hand, *dissimilarities* or *discontinuities* in the evidence from any two sites are thought to indicate lack of contemporaneity or consecutiveness in time.

Thus, because of its essentially comparative nature, this type of study cannot be confined to one site or even one pair of sites. Conclusions will only be reached as evidence from each site and pair of sites is compared to that from subsequent sites in the hypothesized sequence. It is expected that as more sites are added, and this multi-dimensional comparative database builds, alternate hypotheses will he formulated and conclusions reached that will force reappraisals of the dating of earlier sites in the sequence.

Initial Results

Thus far, existing archaeological information from the first four Sites in the Seneca Series -the Adam, Culbertson, Tram, and Cameron Sites - has been thoroughly investigated

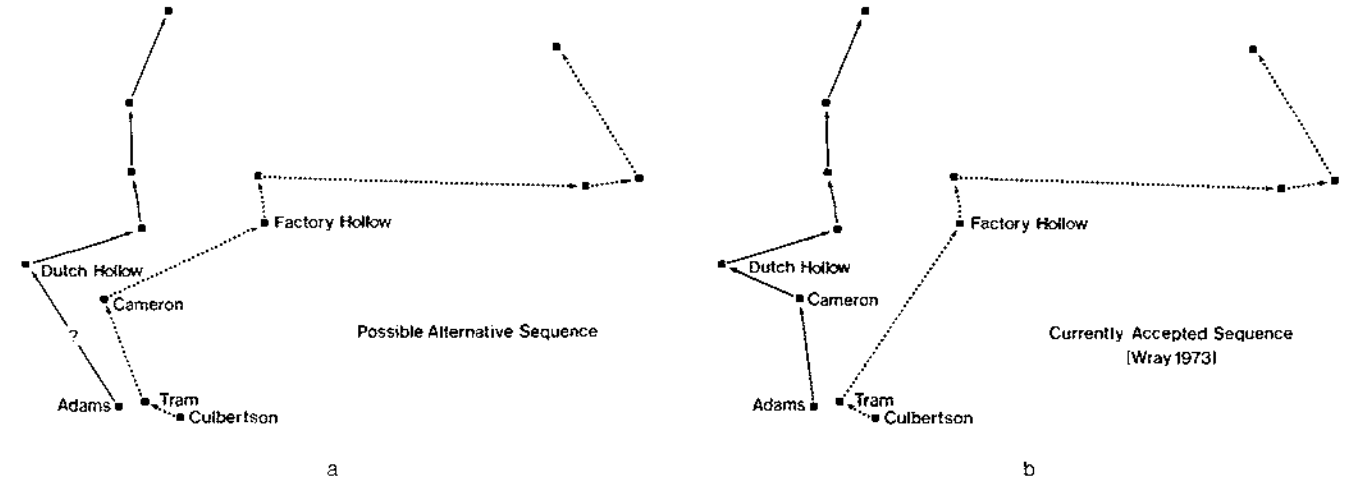

Figure 4. Diagrams of the Seneca site sequence, proposed alternatives: a. original sequence as reported in 1953 by Wray and Schoff and revised by Wray (1973, 1984); b. alternative sequence suggested by genetic data.

in the manner proposed above. While it is of course impossible to provide a comprehensive review of the evidence considered in evaluating the relative chronological position of each of these sites as reported in Volumes I and II of the Charles F. Wray Series in Seneca Archaeology (Wray, et al. 1987, 1991), suffice it to say that our analysis of data from the Adams and Culbertson Sites supports the contemporaneity of those two early villages, as well as a probable 10-year occupation. They are currently hypothesized as the two earliest identifiable Seneca sites at which there is substantial evidence of European manufactured goods, and as such, the first two sites in the eastern and western branches of the historic Seneca site sequence (Figure 4a).

Our study of the Tram and Cameron Sites, currently hypothesized by Wray (1973) and Wray, et al. (1957) as contemporary villages that were the immediate successors of the Adams and Culbertson Sites in the western and eastern branches of the sequence, respectively, has now been completed. Overall, data comparisons indicate a general level of similarity, that both were occupied within the same broad time span. However, several lines of evidence from completely different directions have led us to consider a possible alternative interpretation regarding the relative position and timing of the two sites. Our findings indicate that the Cameron Site appears to have been occupied somewhat later than the Tram Site, and may have even succeeded the Tram Site in the eastern series, rather than Adams in the western (Figure 4b). Obviously, such a scenario would carry additional implications, such as the likelihood that there may be at least one missing site in the western series. Also, the occupation of the Cameron Site would overlap slightly with that of the Dutch Hollow Site of the western branch rather than with the eastern Factory Hollow Site.

Osteological Evidence

Lorraine Saunders' doctoral dissertation (1986) involved an analysis of genetically transmitted discrete skeletal traits in terms of their reflection of biological relatedness among the Seneca and their predecessors. Although there were several stated goals, all fundamentally involved tracing biological affinities (degree of biological relatedness) *between* the populations that constituted the historic Seneca tribal group. The use of the term "between," rather than "among," is intentional, and emphasizes the basic premise-namely, that *there are only two populations involved*. The two branches of the Seneca, eastern and western, each appear to have had somewhat different origins (Wray, et al. 1987). It is assumed that the specific sites in each of the two branches represent the sequence of relocations from an original pair of villages. In terms of people, this gives us the opportunity to see genetic changes through time as well, since the cemetery of each successive site is assumed to be limited to the people who died during that specific period. With that assumption in mind, it was hypothesized that the study could result in an indication of the short-term biological evolution of each of the two populations.

The statistic used in the biological comparisons was devised in 1977 by Rebecca Lane and is called the *Standard Effective Divergence (SED).* This statistic was designed specifically for the treatment of small population samples and/or comparisons in which the samples differ markedly in size. The SED coefficient is of the type known as a ranking statistic. meaning that, for a particular study. each comparison of a pair of groups is represented by a single coefficient, and a series of these coefficients can be ranked in order, from those which show a very strong biological affinity (little if any difference indicated) to those showing a relatively weak affinity (differ-

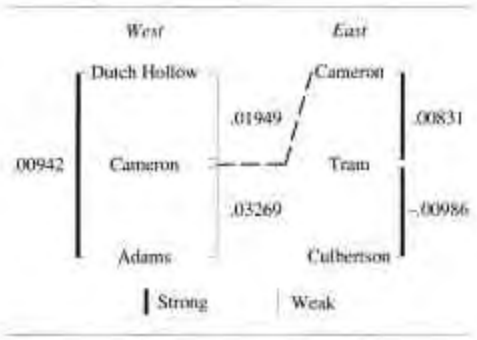

Figure 5. The coefficient of biological affinity (SED) for the *west* sequence branch of the Seneca if aliened as originally reported (Wray and Schoff 1953) and the *east* sequence branch if the Cameron Site is shifted to that series (the "possible alternative sequence"). The SEDs show the expected close relationship between parental and descendant population, in the latter case.

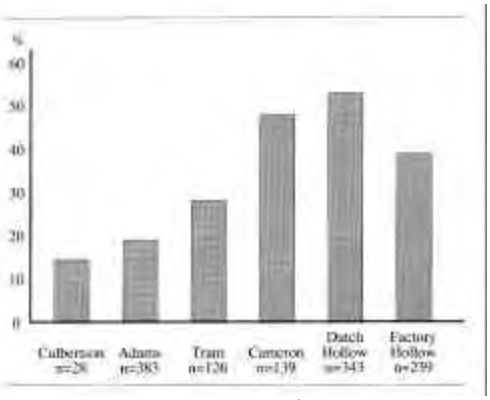

Figure 6. Proportions of immatures in cemetery populations of six early historic Seneca sites.

ences are pronounced). The stronger the biological relationship, the more closely the coefficient approaches zero.

In the Seneca study, the ordering of the coefficients within the western branch of the sequence demonstrated that the comparison between the inhabitants of the second site - Cameron - and the first (Adams) showed the least biological similarity of all comparisons in the study (Figure 5). The comparison between Cameron and Dutch Hollow (the second and third sites in this branch) also showed a relatively low degree of similarity. Unexpectedly, however, the Adams - Dutch Hollow comparison indicated a much closer relationship than either of those just mentioned. In attempting to resolve this discrepancy, the sites of the early part of the two branches of the sequence were aligned solely on the basis of the pattern suggested by the SEDs (Figure 4b). Since the pattern had indicated a strong biological relationship between Adams and Dutch Hollow, and a similarly strong connection between Tram and Cameron. Cameron was simply moved over to the eastern sequence, as the successor to Tram - an alignment that seemed more reasonable in terms of the inferred biological relationships. The parallel pattern of the two sequences of village movements which resulted from this realignment was something of a surprise and did not enter into the rationale underlying the proposed shift of the Cameron Site.

Demographic Evidence

The mortality pattern at these early sites seems to suggest that a portion of this period was characterized by unusually high infant/child mortality. Moreover, the identification of certain sites, but not others, with that phenomenon seems again to be more consistent with the proposed alternative interpretation of the sequence than with the original (Figure 6). The percentages of immatures (under 18 years) in the cemeteries of the first pair of sites in the sequence (Adams and Culbertson) are 18.8% and 14.3%, respectively. These are a bit low, but not too far out of line with the average in the 20% range - usually the upper half- seen in prehistoric sites (Churcher and Kenyon 1960; Kidder 1958; Sullivan and Katzenberg 1981). The Tram Site also fits into this range, and, at almost 29%, it is also at the upper end. An abrupt shift in this pattern occurs at Cameron where the frequency of immatures jumps to just over 48%. This unusually high percentage of immature individuals is seen also at the Dutch Hollow Site, where the frequency for this age category is even higher (52.5%) and at Factory Hollow where, although it is somewhat lower than at the other two sites. the frequency of immature, is 39%.

Relatively few adolescents are represented, particularly at the Cameron and Dutch Hollow Sites, the most affected age group being infants and children rather than immatures as a whole. Approximately one in three of the miniatures in the cemetery population at the Adams and Tram Sites were adolescents, while for the Cameron and Dutch Hollow Sites only one in ten of the large number of miniatures are accounted for by adolescents, the rest being infants and children. At Factory Hollow the proportion was intermediate at one in five.

It seems likely that the cause of the abnormally high numbers of individuals dying in childhood and infancy was an environmental catastrophe, such as famine, epidemic, or the synergistic interaction of the two. If that was the case, it appears that the Cameron and Dutch Hollow groups were nearly equally affected, with Factory Hollow slightly less so, and Tram very little, if at all. Thus, it is postulated that Cameron was occupied later than Tram, and that there was a temporal overlap in the Cameron and Dutch Hollow Site occupations.

Figure 7. Antler figurines from the Cameron Site. a. RMSC 5066/41; b. RMSC 5476a/41; c. RMSC 5476b/41; d. RMSC 5496/41; c. RMSC 5476c/41. Length of a: 4.8 cm.

Artifactual Evidence

The artifactual assemblages of the Tram and Cameron Site, of for further evidence of dissimilarities between the two sites. For example, small antler figurines in human form, associated with infants and children in the cemetery populations, are found at the Cameron Site as well as at Dutch Hollow and Factory Hollow - but not at Tram (Figure 7). Of interest here is the correlation of unusually high infant and child mortality at Cameron, Dutch Hollow, and Factory Hollow, and the presence of antler figurines exclusively in infant and child graves at these sites.

Suggested implications of the presence of figurines being buried in infant and child burials have been included in the following studies:

- ? William Ritchie's 1954 Dutch Hollow report, in which he suggests that these effigies were "almost certainly worn as protective charms" (Ritchie 1954:67);
- ? Arthur Parker's explanation that they were considered magical and provided a warning of impending danger (Parker personal communication to Carpenter as reported in Carpenter 1942);
- ? George Hamell's suggestion that they were buried only with children whose illness and death were attributed to witchcraft (personal communication to Matthews, 1978);
- ? Zena Matthews' acknowledgement of the possibility that there may be an association of figurines with European diseases (Matthews 1980).

Whether their primary use was to the living or to the deceased members of the population, the presence in increasing numbers of this rare artifact apparently coincides with a significant increase in infant/child mortality, indicating a possible connection between these two phenomena in the sites involved. Furthermore, the absence of this item at the Tram Site, while it is firmly in evidence at Cameron, Dutch Hollow, and Factory Hollow, suggests some temporal overlap in the occupations of the latter three.

A comparison of brass and/or copper assemblages from the Tram and Cameron Sites shows a number of distinctions and is again suggestive of a time difference. First, none of the rolled rings so common at the earlier Adams and Culbertson Sites, as well as at Tram (Figure 8), was found at the Cameron Site. Further, cut brass discs, occur with much greater frequent-

Figure 8. Rolled brass/copper ring from the Tram Site. New York State Museum catalogue number 15422. Diameter: 9.4 cm.

cy at Cameron than at Tram (or at Adams and Culbertson) and are typically domed like those from the later Dutch Hollow and Factory Hollow Sites, rather than flat like most of those from the other three sites (Figure 9). Finally, the Cameron Site brass assemblage also shows a high proportion of an unusual type of rounded brass bead produced from a small leaf-shaped blank (Figure 10) as opposed to the standard rolled tubular bead, produced from a rectangular blank. This is thought to have been a time-limited phenomenon since we see them at Cameron, while only a small number show up at the Tram Site and only n very few at subsequent sites.

The Tram and Cameron Sites also exhibit different assemblages of marine shell artifacts. Not only does shell occur in a higher percentage of the Cameron burials, but several new forms of shell artifacts appear that have no precedents at earlier sites, including Tram. One is a human figurine similar to the antler figurines discussed above; it is presumably subject to the same interpretations as those fashioned of antler (Figure 11). Thick shell discs also appear for the first time at Cameron and in considerable numbers (Figure 12). These appear to represent blanks for the making of discoidal beads and, along with the large chunks of cut shell that occur at the Cameron Site, may constitute evidence for a level of on-site shell bead production that is not apparent at the Tram Site.

The most striking point of contrast between the two site assemblages, however, is in the glass beads. Whereas beads are few in number and low in frequency in burials at Tram, they seem to have undergone an exponential increase at the

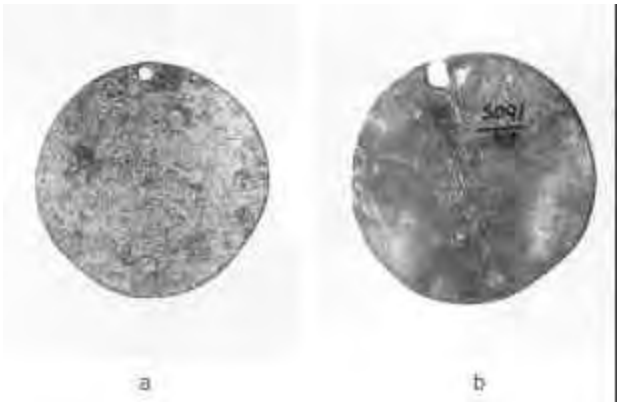

Figure 9. Brass/copper discs from the Cameron Site. a. flat, RMSC 9/41; b. domed, RMSC 5091/41. Diameter of a: 3.3 cm.

Figure 10. Rounded brass/copper beads from the Cameron Site. RV1SC 5386/41. Shown at actual size.

Cameron Site. In spite of the fact that the total numbers of burials excavated at both sites are nearly identical, the percentage of graves that contained glass beads is higher at Cameron (14.4% vs 6.1 %), and the overall number of beads recovered from those burials is significantly higher (522 versus 9). It should be pointed out that some additional beads from Tram are thought to have existed in the collections of the New York State Museum at one time, but field notes suggest small quantities, and they appear to have been lost or discarded. What is most significant, however, is that an almost entirely new array of beads is represented in this increased volume of beads at Cameron, as illustrated in Figure 13 which compares the incidence of distinct bead varieties at the Adams, Culbertson, Tram, and Cameron Sites.

A relatively large proportion of the beads represented in this sudden glut from the Cameron Site belongs to a complex of primarily tubular and oval beads made of dark blue and creamy white glass-particularly Kidd and Kidd varieties Ia4/5, IIa15, IIa57 and 1a19 (Kidd and Kidd 1970). Only one bead of this complex occurs in the Tram Site collection. Most

Figure 11. Marine shell figurine from the Cameron Site. RMSC 5060/41. Wight: 6.3 cm.

interestingly, we continue to see a few of these bead varieties at the two sites assigned to the subsequent occupation period -Dutch Hollow and Factory Hollow - but in greater abundance at Dutch Hollow. Like the high incidence of child and infant mortality discussed earlier, this is again thought to suggest a greater time overlap between Cameron and Dutch Hollow than between Cameron and Factory Hollow.

Kenyon and Fitzgerald (1986:23-30) maintain that this blue/white bead complex is derived, both in New York and Ontario, from French trade based in Ontario. There is some verification for the dating of this blue /white bead complex during the first decade of the 1600s in the following:

- Lescarbot's reference to the importation of blue and white tubular beads by French traders in 1604 (Lescarbot 1907-1914 V.II:322, VIII: 158): and
- Bradley's report that these tubular white beads are characteristic at a French post, dated to 1604 - 1605, on St. Croix Island in Maine (Bradley 1983; Table l: Kenyon and Fitzgerald 1986:15).

They suggest that the incidence of these beads began to decline in New York and Pennsylvania sometime between A.D. 1609 and 1614, when the Dutch introduced a new and varied complex of "polychrome" glass beads into this area. This would seem to indicate, then, that the occupation of the

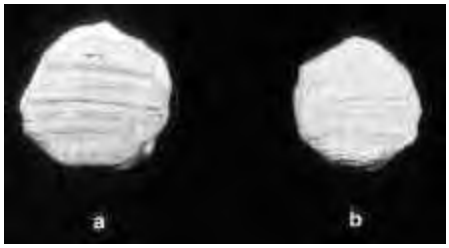

Figure 12. Marine shell discs front the Cameron Site. a. RMSC 5112/41; b. RMSC 5114/41. Diameter of a: 2.2 cm.

subsequent Dutch Hollow and Factory Hollow Sites, where the "polychrome beads " are so characteristic, began sometime around A.D. 1610 or so.

Unfortunately, ceramic evidence, which sometimes proves helpful with questions of this kind, seems to be inconclusive regarding the position or timing of these two sites. While an analysis of pottery-making traditions at these sites by Gian Cervone does not contradict the original hypothesis that Cameron directly succeeded Adams, pottery samples of equivalent size do not exist from either the Culbertson or Tram Sites (Cervone, personal communication 1989). We are hopeful that eventual comparisons of the Cameron material with that from Dutch Hollow and Factory Hollow will prove to be more informative.

Conclusions

In examining the evidence relating to this restricted period of the Sequence, it is certainly clear that both the Tram and Cameron Site occupations fit generally between the Adams/Culbertson period and the Dutch Hollow/Factory Hollow period. However, finer, more specific assessments must be made regarding the precise sequential position and timing of the two sites. At least two alternate scenarios seem possible (Figure 4). The first is that proposed by Wray and Schoff, with Tram and Cameron as contemporary sites in the eastern and western series, respectively. In the second, the Cameron occupation actually succeeds that of Tram in the eastern series, and overlaps briefly with that of the western Dutch Hollow Site.

If we accept the historical evidence which seems to support a date of approximately A.D. 1609-1614 for the divergence between New York and Ontario trade networks, a phenomenon presumed to be marked in the Seneca area by the presence of Dutch-made "polychrome beads," we would have to place the beginning of the Dutch Hollow and Factory Hollow Sites sometime around those dates. If so, the five subsequent occupation periods (which are well-represented by distinctive archaeological assemblages in Seneca sites) that

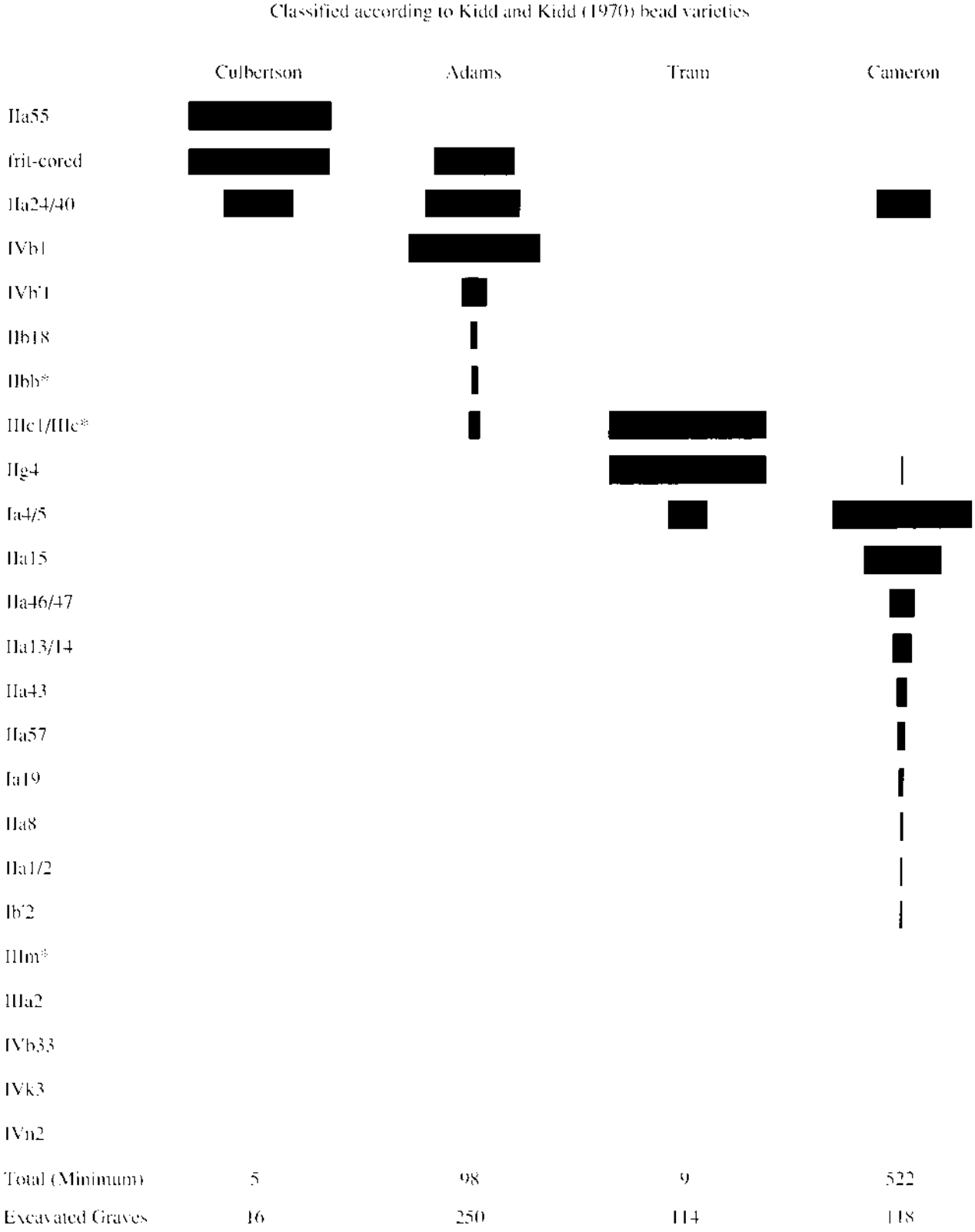

Figure 13. Percentages of distinct glass bead varieties at four early historic Seneca sites.

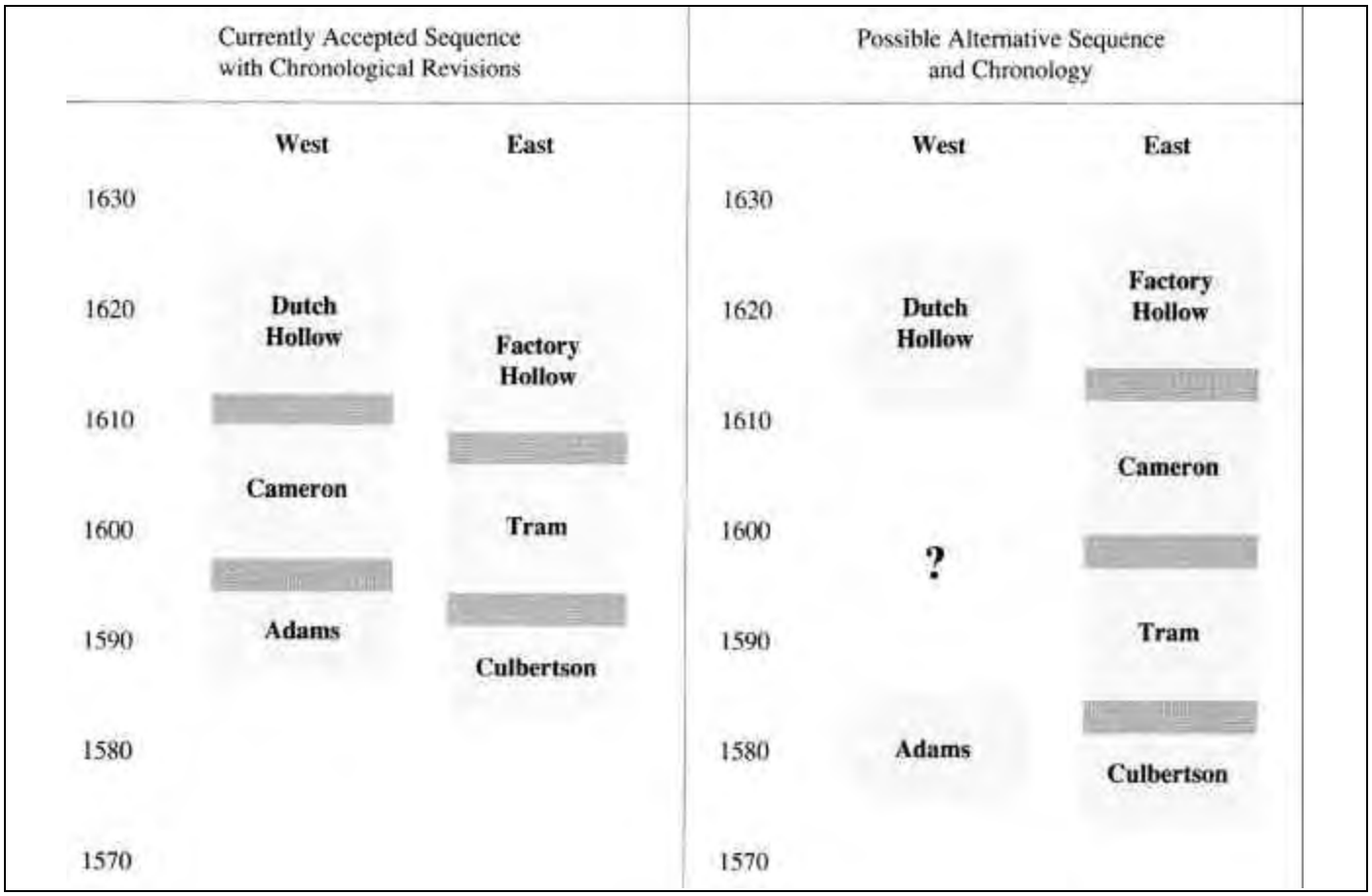

Figure 14. Proposed hypotheses for sequential positions and occupation dates of six Early Historic Seneca sites. a. currently accepted sequence with recent chronological revisions: b. possible alternative sequence and chronology.

fall between that time and A. D. 1687 would have averaged only about 15 years, rather than the 20 originally hypothesized. Thus, the chronological significance of these two alternate hypotheses becomes very apparent (Figure 14). In the first case, we are really dealing with only two occupation periods of about 10 to 15 years apiece, prior to the Dutch Hollow and Factory Hollow Sites. This would mean that the earliest sites with evidence of European contact, Adams and Culbertson, would date no earlier than about A.D. 1580. In the alternate chronology being proposed, this would expand to three occupation periods (also of 10 to 15 years apiece) preceding Dutch Hollow and Factory Hollow, and would bring the earliest contact sites back into the third quarter of the sixteenth century, beginning perhaps around A.D. 1570.

Thus, what is being proposed, in either case, is a slight upward shift in the absolute dates of early seventeenth-century Seneca sites, with Dutch Hollow and Factory Hollow representing benchmarks, and having initial occupation dates sometime between A.D. 1610 and 1615. Two alternate hypotheses are proposed for the position and dating of the four preceding sites. While the latter of these two alternatives is favored, based on the evidence presented here, additional information from the succeeding sites is needed for a more securely based adjustment. Artifactual and mortuary data from later sites must be compared if we are to resolve the questions of temporal and sequential relationships.

Epilogue

Far from negating the value of the existing Seneca sequence and chronology, we feel that these preliminary results demonstrate once again the value of the Wray and Schoff formulation in providing the necessary framework for focused research on the immense body of existing archaeological information relating to the Seneca. Ongoing testing and fine-tuning should only add to its usefulness in helping to forge the chronological ties required for an interregional perspective on the problems of the contact period in the Northeast.

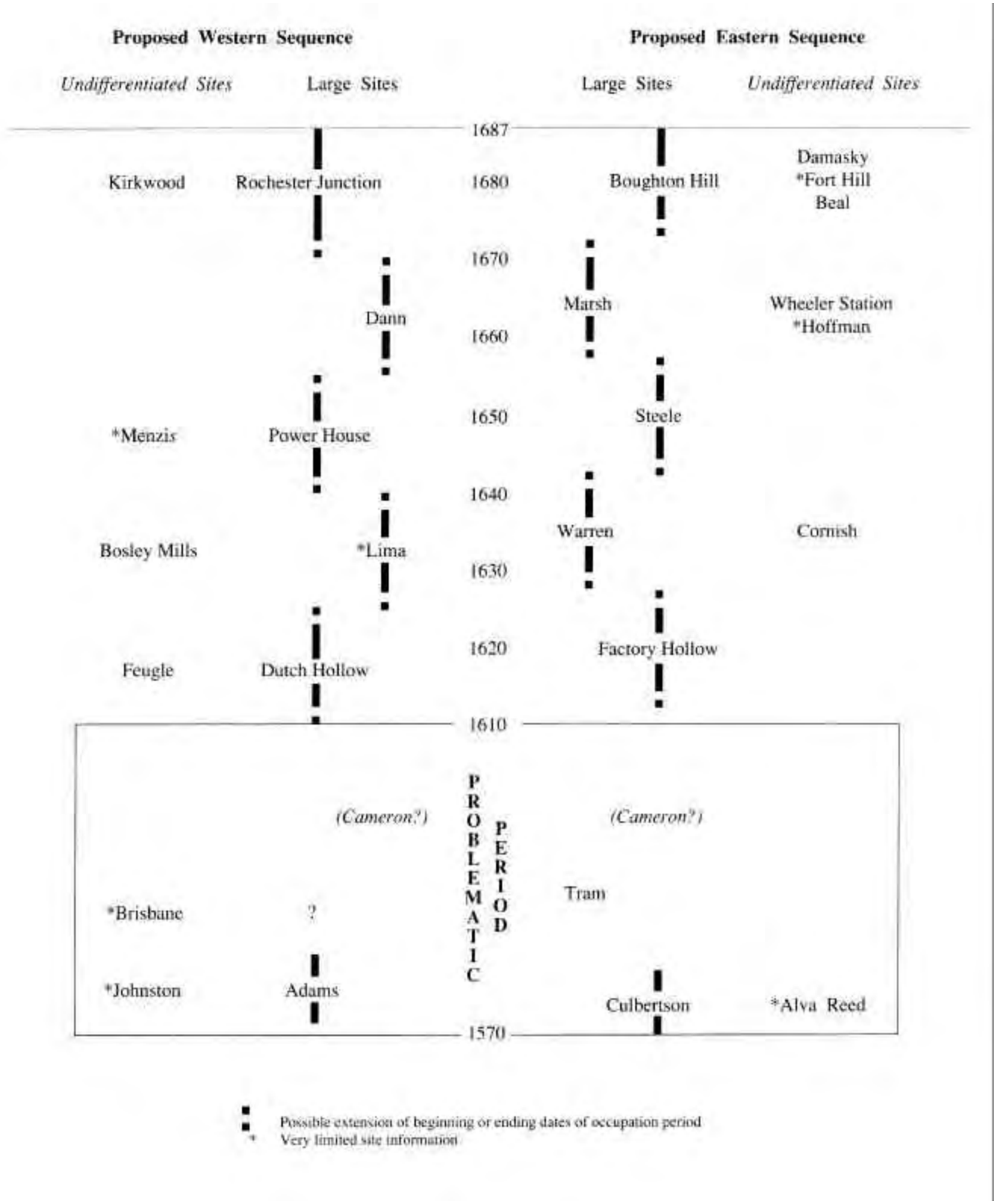

Figure l5. Proposed revision of chronology and eastern and western Seneca site sequence (c. A.D. 1570 - 1687).

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Cayuga Archaeology: Where Do We Go From Here?

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The purpose of this paper is to reintroduce the reader to Cayuga archaeology, briefly outline the results of my earlier research on Cayuga development, and suggest avenues for future research. Earlier research on Seneca and Cayuga development is reviewed. A hypothetical sequence of in situ development is described for the southern Cayuga, und ethnohistorical and archaeological evidence for their consolidation with a northern Cayuga population c. A.D. 1670 is presented.

Key areas in Cayuga archaeology that require further investigation are identified, and likely avenues of-investigation are outlined. A call is reiterated for a "clearinghouse" for information on Iroquois archaeology in the Cayuga territory.

Introduction

In terms of their prehistory, the Cayuga are the least understood of the Five Nations Iroquois. Perhaps this explains why my own investigation of Cayuga origins and development began in the Seneca territory with the study of a Cayuga site that turned out to be Seneca. Further study revealed that other "Cayuga" sites in the Seneca territory were also ancestral Seneca Sites. This led to a search for Cayuga (and Seneca) origins in the Cayuga territory. Both Marian White and Bob DeOrio had recognized the possibility of an in situ Cayuga development earlier (DeOrio 1977), but this theory had not yet gained acceptance in 1979.

In the course of my investigation into Cayuga origins, a large quantity of previously unpublished data from the Cayuga territory was compiled and analyzed, and data from earlier studies were re-examined. As a result, the chronological sequence of Cayuga sites was redefined in terms of local patterns of settlement and ceramic Culture which clearly demonstrate that the Cayuga developed in situ, out of the earlier Owasco populations who had occupied the historic Cayuga territory.

The results of this study were published by the Research Division of the Rochester Museum and Science Center (RMSC) in 1984. Unfortunately, little work has been done on Cayuga archaeology since then. The many questions regarding Cayuga archaeology and our understanding of Cayuga development that were left at the end of this study remain unanswered. The prehistory of the Cayuga is still poorly understood, but this need not continue to be the case. In spite of Skinner's lament in the 1920s that Cayuga sites had generally been despoiled, there are a great many untapped data sources (e.g. unrecorded/unstudied sites, collections, and information in the heads of avocational archaeologists) that need to be systematically examined. These data have enormous potential for answering the many questions that remain in the area of Cayuga archaeology. The purpose of this paper is to re-introduce you to Cayuga archaeology, to briefly outline the results of my research on Cayuga development (Niemczycki 1984), and to suggest some avenues for future research in this area.

Redefining Cayuga Prehistory

When I began the investigation of the Phelps Site in 1979, the first problem encountered was the determination of the cultural identity of its occupants. This palisaded Iroquois village site, located between the historic Seneca and Cayuga territories, had at various times been identified as both Seneca and Cayuga. At first, it appeared that resolution of this problem would be a simple matter. A comparative analysis of the ceramics from this site and collections from known Seneca and Cayuga sites would quickly reveal the identify of the Phelps Population. But problems in real life and real archaeology are seldom so simple.

Examination of the Phelps ceramics revealed that the majority fell into the Richmond Incised, Cayuga Horizontal, Lawson Opposed, and Ontario Horizontal types. According to MacNeish's (1952) typology, the Phelps Site should have been occupied by a mixture of Cayuga and Ontario Iroquois (Neutral or Erie) Populations. This interpretation was quickly dismissed with the realization that the analysis of the Phelps ceramics had raised more questions than it had answered. Worse still, no one knew the answers.

MacNeish's (1952) typology did not provide an adequate description of prehistoric Seneca ceramics, and prehistoric sites in the Seneca territory had gone unidentified or had been identified as Cayuga by virtue of the presence of the "Cayuga types" of Richmond Incised and Cayuga Horizontal. The prevalent theory was that the Seneca did not arrive in their historic homeland until late prehistoric times when they pushed the Cayuga, who had arrived there earlier, further west into the Cayuga Lake region. It seemed that Phelps was one of the sites occupied by the Proto-Cayuga as they moved toward Cayuga

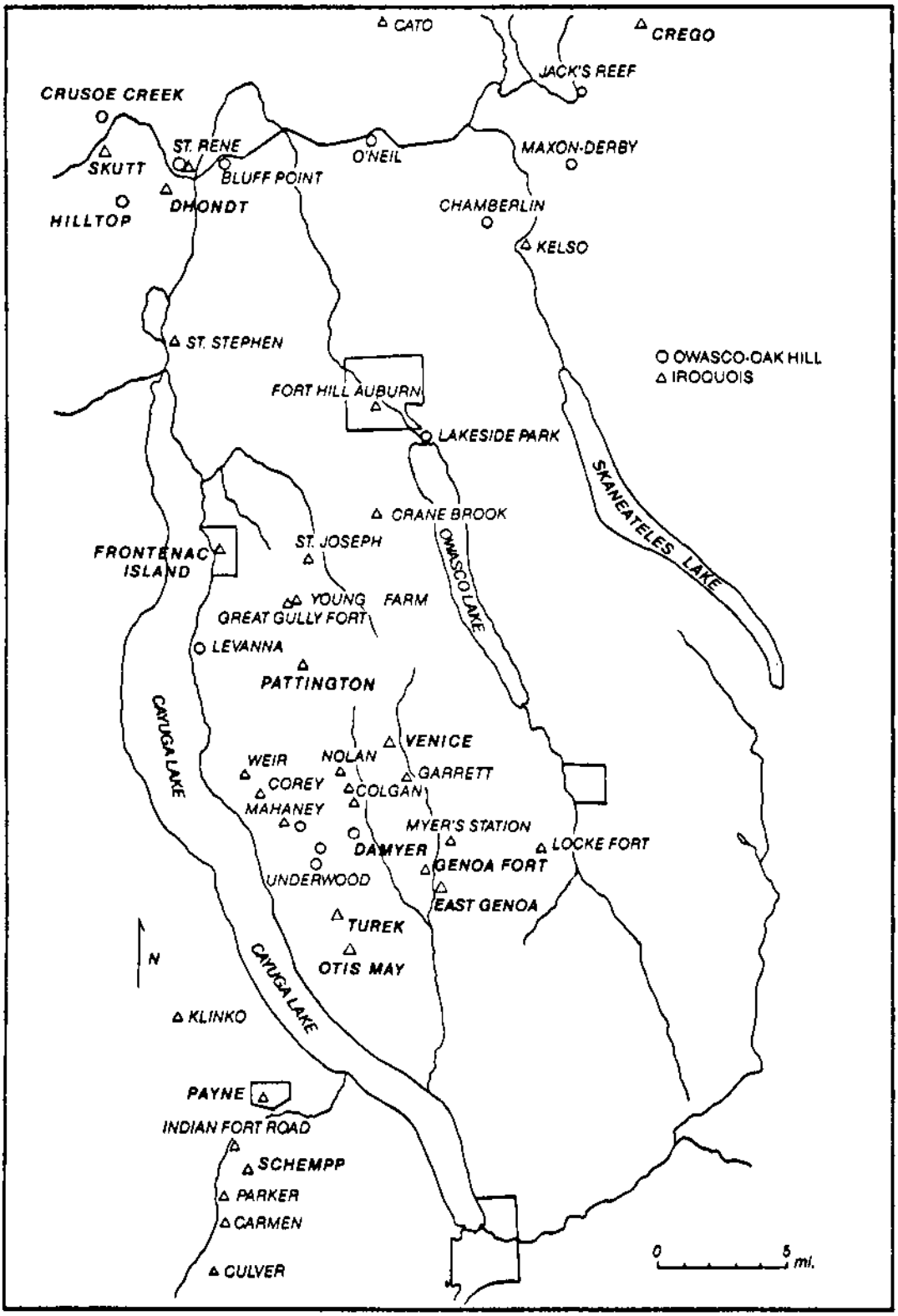


Figure 1. Sites in the Cayuga Territory A.D. 1000-1700.

Lake. The problem of identifying the Phelps population was no longer simple. Resolving it involved distinguishing Seneca and Cayuga sites, delineating the sequence of movements of both the ancestral Seneca and Cayuga populations, determining what the relationship was between them, and discovering where the Phelps Site fit into the total Seneca-Cayuga developmental sequence.

Preliminary examination of ceramic assemblages from prehistoric sites in both tribal territories suggested that the Seneca and the Cayuga had evolved out of a common dispersed population and developed separate ceramic styles and identities only after A.D. 1550. To test this hypothesis, I decided to collect ceramic data from as many prehistoric sites in both territories as possible, place them in sequence through seriation, and search for microtraditions or attribute variations which could be used to reconstruct specific developmental sequences. The result of this analysis was the discovery of a pattern of ceramic stylistic continuity extending back to at least A.D. 1250-1300 in the Cayuga Lake region. The Cayuga obviously had not originated in the Seneca territory. The Cayuga had developed in situ within their historic tribal territory.

The degree of ceramic similarity between sites in the Cayuga territory was used in conjunction with archaeological and ethnohistorical data on settlement to identify site sequences representing the movements of specific population groups and to define the developmental relationship between these groups. The result was a general outline of in situ Cayuga development from c. A.D. 1000 to 1700, and the identification of two specific prehistoric site sequences representing regionally separate population groups that ultimately consolidated with others to form the Cayuga tribe. Ironically, the Phelps Site, which was identified as a very late prehistoric Seneca site, had no part in the Cayuga developmental sequence.

The developmental sequence proposed for the Cayuga was based on the analysis of available ceramic and settlement data from prehistoric sites and on both published and unpublished reports on historic sites (Niemczycki 1984). This sequence is revised here based on information contributed by Bob DeOrio and Harold Secor. The sequence of Cayuga development, as proposed in 1984, begins with the Middle Owasco site of Levanna on the east side of Cayuga Lake, but the roots of Cayuga culture lie further north in the Seneca River drainage.

The Owasco Roots of Cayuga Culture

A number of Early and Middle Owasco Phase sites (A.D. 1000-1250) have been identified in the Montezuma Marsh-Seneca River region north of Cayuga Lake (e.g., Bluff Point, Hunter's Home A, Crusoe Creek, Jack's Reef). This rich area was evidently a center of Late Woodland Owasco cultural development out of Late Middle Woodland, Kipp Island, and Hunter's Home manifestations, but by A.D. 1100-1200 Middle Owasco populations occupied villages at Levanna on the east side of Cayuga Lake and Lakeside Park at the north end of Owasco Lake. These populations are the most likely predecessors of the proto-Cayuga population that occupied the region between Cayuga Lake and Little Salmon Creek during the thirteenth through fifteenth centuries (A.D. 1250-1500).

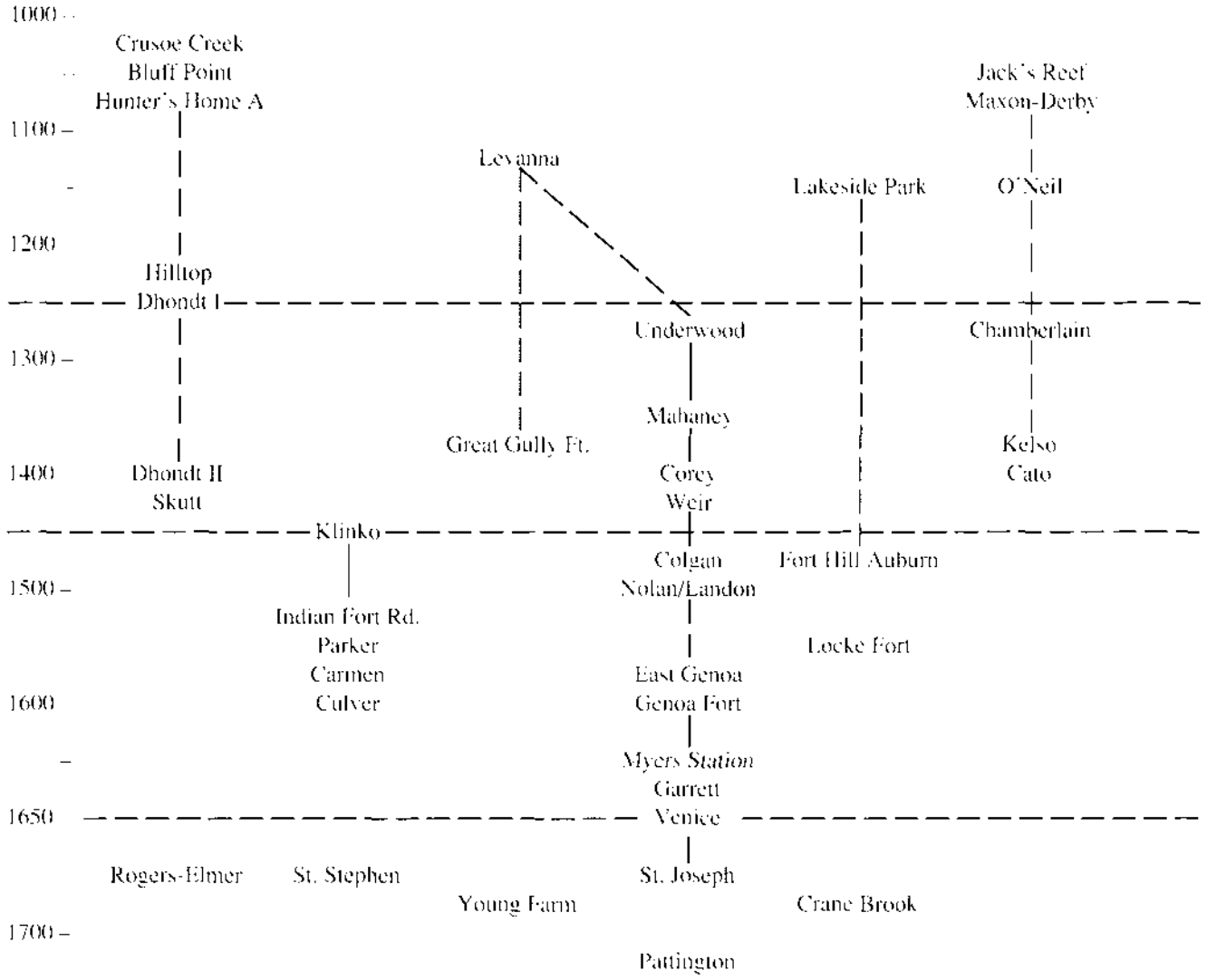
In addition there is ample evidence of Middle-Late Owasco occupation in the Savannah region along Crusoe Creek. Classic Owasco ceramics have been recovered from multicomponent sites such as Hunter's Home and Dhondt, and the Fort Hill (Hilltop) Site, which is described as a Late Owasco village surrounded by a palisade and earthring (Secor 1987:44). According to Secor (1987:44), Owasco ceramics identical to those at the Hilltop Site were recovered from Dhondt located one half mile east along Crusoe Creek. He believes this was a satellite camp site used by the residents of the Hilltop village. However the majority, of ceramics at Dhondt are Iroquois. The mixture of Owasco and Iroquois types may indicate that Dhondt was a small Transitional Iroquois site similar to Underwood.

The Transition to Iroquois Culture

From A.D. 1250 to 1350, a Transitional Iroquois, proto-Cayuga population occupied several small sites representing base camps or hamlets north of King Ferry (Underwood, Bradley, Wilbert) and along Little Salmon Creek (Damyer). Between A.D. 1350 and 1450, the pattern of settlement changed as this population began consolidating into villages. The first Early Iroquois sites are small (e.g. Mahaney, Abbott), but later sites such as Corey and Weir represent villages of several acres. A high degree of ceramic stylistic continuity among the sites of Underwood, Mahaney, and Weir indicates that they represent successive occupations by the same population group. Ceramic samples from the other sites were inadequate for statistical analysis, but available ceramic and settlement data suggest that the sites of Underwood, Wilbert, Bradley, Mahaney, and Weir represent a continuous sequence of occupation by a single population group from A.D. 1250 to 1450, although more than one of these sites may have been occupied simultaneously).

North of Aurora, the sequence of development cannot be traced through the Transitional and Early Iroquois phases. The Chamberlin and Kelso Sites, located north and east of Skaneateles Lake, represent a second Transitional Iroquois -Early Iroquois sequence in the area. These sites were identified by Tuck (1971) as proto-Onondaga, but the locations of the subsequent sites occupied by this population group are unknown. Another sequence may be represented by the Cato Site (A.D. 1350-1400), located on Parker Pond north of Seneca River, and the Skutt and Dhondt Sites along Crusoe Creek. All these appear to represent Early Iroquois occupations c. A.D.

Table 1. Sequence of Cayuga Development (revised 1990).



1400-1450 (Secor 1987:48). These three sites may have been occupied by the population that ultimately occupied the Rogers-Elmer (St. Rene) Site at Hunter's Home, but no immediate successors have been identified in this region. Subsequent settlements could have been located within the current Montezuma Marsh area, or these sites could be the predecessors of sites such as Klinko west of Cayuga Lake or Crego/Indian Springs to the east along Seneca River. Neither site has a known antecedent. Great Gully Fort (c. A.D. 1350-1450), southeast of Union Springs, may represent still another developmental sequence that contributed to either northern or southern Cayuga development.

Late Prehistoric Sequences

Late Prehistoric Iroquois occupation (A.D. 1450-1550) in the Cayuga territory is represented by the sites of Fort Hill Auburn, Colgan, Nolan/Landon, and Locke Fort on the east side of Cayuga Lake; and by Klinko, Payne, Indian Fort Road, Schempp, and Parker on the west side of the lake. Fort Hill Auburn, located in Auburn at the foot of Owasco Lake, may represent a northern proto-Cayuga population, developing in situ out of the Owasco population at Lakeside Park, which may ultimately have occupied the mission site of St. Stephen in 1668.

Colgan and Nolan/Landon appear to represent a single village sequence which is a continuation of the Underwood-Weir Sequence. The temporal relationship between Colgan and Nolan is tentative since ceramic data from Colgan were taken from earlier reports. Colgan may actually postdate Nolan. However, the high degree of ceramic similarity between Nolan/Landon and Weir (169*) indicates that they share the same ceramic micro-tradition and population. The Nolan/Landon Site dates to c. A.D. 1500, and Locke Fort, nine miles east, may be its successor, but ceramic data from Locke Fort were not examined and so this connection could not be confirmed. Locke Fort could represent another as yet unidentified village sequence.

The Klinko-Parker sequence on the west side of Cayuga Lake begins c. A.D. 1450 and has no known local antecedents. Klinko is most similar ceramically to Richmond Mills (181) and California Ranch (180) in the Seneca territory, and Nolan/Landon (175). Although this seems to suggest a Seneca territory source for the Cayuga,. Richmond Mills, California Ranch, and Klinko are contemporary sites, and the Seneca territory sites are also without local antecedents. The high degree of ceramic similarity of all three of these sites to Mahaney and Weir (e.g. Klinko-Weir 173, Klinko-Mahaney 172) indicates that their populations had their origin on the east side of Cayuga Lake and evolved from or were closely related to the Underwood-Weir-Nolan population.

Klinko, Payne, Indian Fort Road, Schempp, and Parker appear to represent the successive north-to-south movements of a single village population in spite of the fact that Klinko and Parker (135) are not particularly similar ceramically. This is probably due to the temporal distance between them and a break in ceramic stylistic continuity between A.D. 1500 and 1550 that is observed in both the Seneca and Cayuga territories.

Contact and Consolidation

During the protohistoric phase, A.D. 1550-1650, the continuation of the Klinko-Parker sequence is represented by the successive sites of Carmen (Stevens) and Culver and ends with Culver c. A.D. 1600. On the east side of Cayuga Lake, this phase is represented by Genoa Fort (A.D. 1575-1625), Myer's Station (A.D. 1620-1640), and Garrett (A.D. 1640-1650) located along Little Salmon Creek. Although Myer's Station and Garrett probably represent the successive movements of a single village population toward the Union Springs region, this could not be verified through ceramic analysis. In addition, the direct antecedents of Myer's Station and Genoa Fort could not be determined.

At the end of the late prehistoric phase the sites of Culver, Nolan, and Locke Fort apparently represent two or three separate population groups which consolidated territorially in the vicinity of Genoa to form a tribal entity, but the village or villages occupied by these populations c. A.D. 1550- 1600 have not been identified. Genoa Fort, occupied somewhere between A.D. 1575 and 1625, is reported to have had less than one acre of habitable area and thus could not have accommodated the population of even one of these antecedent villages. It is likely that the Culver, Nolan, and Locke Fort populations occupied at least one other village in the Genoa region and that Genoa Fort was a satellite of this village. According to Robert DeOrio (1989: personal communication), the East Genoa Site, located east of Genoa Fort on the opposite side of Big Salmon Creek, could be the site of such a village. By A.D. 1625 the entire southern Cayuga population in this region may have been consolidated at Myer's Station. Between 1640 and 1660 this population moved north along Salmon Creek to occupy the sites of Garrett (Culley's) and Venice.

The Historic Cayuga

By the Historic Period, beginning A.D. 1650, this southern Cayuga population evidently occupied a single village, as Radisson reported that the Cayuga occupied three villages in 1653. The southernmost of these was probably near Venice Center. The village site reported at Venice should be the successor of Garrett. The other two were presumably located north of Cayuga Lake. Ethnohistoric accounts place the Cayuga at three principal sites in 1668. These were Oigouen, Thiohero, and Onontare which the Jesuits named respectively St. Joseph, St. Stephen, and St. René (White, et al. 1978:500).

St. René apparently was located at the Rogers-Elmer Site which shares its location with the Hunter's Home Site on Crusoe Creek. This was the site of an extensive village occupation and an adjacent burial ground during the latter half of the seventeenth century (Secor 1987:49). Ethnohistoric sources indicate that this village was occupied in 1668, but suggest that its population had moved south to the Tri-Towns settlement visited by Greenhalgh by 1677 (DeOrio 1978, 1989: personal communication; White et al. 1978:500). At least a portion of this population (presumably the residents of the Young Farm Site) moved to Pattington (Watkins) by 1720 and then to settlements along the shore of Cayuga Lake (DeOrio 1978, 1989: personal communication).

In 1668, St. René and St. Stephen were located north of Cayuga Lake, and St. Joseph was probably located near Mapleton on Yawger Creek. By 1677, Greenhalgh reports that the Cayuga occupied three villages within a mile of each other. Follett (1957:23) believed that these villages were at the sites of St. Joseph, Crane Brook, and Fleming. The site of St. Joseph apparently represents the northward movement of the Garrett-Venice Population. The other two sites of this village cluster

* Coefficients of ceramic similarity are given in parentheses.

(Tri-Towns) may represent the southern relocations of the populations of the missions of St. René and St. Stephen.

Follett's (1957) identification of the Tri-Towns sites was used in my original outline, but DeOrio (1989: personal communication) suggests that these unfortified, open villages, referred to as Tri-Towns, were located at Young Farm on Great Gully, St. Joseph on Yawger Creek, and Crane Brook. Both St. Joseph and Crane Brook are located in the township of Fleming. The material culture of the Young Farm residents suggests a strong association with the mission of St. Joseph, and Young Farm is sometimes referred to as the mission site. Although DeOrio (1978) identifies St. Joseph and Young Farm as two separate village sites, it is possible that the St. Joseph population eventually moved to Young Farm.

These three villages represent the final territorial consolidation of the southern Cayuga and a northern Cayuga population of unknown origin. It is highly likely that this northern population also developed in situ from a local Owasco base: however, a population movement into the region north of Cayuga Lake in protohistoric times cannot be ruled out.

Summary

In summary, two specific developmental sequences were defined based on regional settlement data and ceramic attribute analysis. These sequences suggest the development of the southern Cayuga out of a Transitional Iroquois base beginning c. A.D. 1250, which in turn is probably derived from the local Owasco population at Levanna. The link between the protohistoric sites in these sequences and the historic Cayuga sites could not be established through ceramic analysis, but the transition into the Historic Period could be reconstructed based on archaeological and ethnohistorical data and theory. Thus a hypothetical sequence of in situ development was outlined for the southern Cayuga from c. A.D. 1000 until 1670 when they are joined by the northern Cayuga.

Although several prehistoric sites have been located in the northern Cayuga region, these are widely scattered and the sequence of occupation can not yet be traced in this region. The best evidence of a northern developmental sequence comes from the Savannah region where occupation along Crusoe Creek extends from the Hunter's Home phase through the Historic Period. However, several gaps in this occupational sequence exist. Most notable is the absence of prehistoric or protohistoric sites postdating A.D. 1450 in this region.

Future Research - Where Do We Go From Here?

While this outline represents a start in the right direction, obviously there are many problems that need to be resolved and questions that need to be answered. These fall into three general areas of research that need to be addressed.

l. The hypothesized developmental sequence proposed for the southern Cayuga is still incomplete. Several portions of this sequence remain speculative. For example, a link between the Underwood-Nolan/Landon sequence and the preceding Owasco population could not be demonstrated. Nor could sites linking Nolan/ Landon and its proposed successors Locke Fort and Myer's Station be identified. The immediate antecedents of Genoa Fort are unknown, and sites linking the western Klinko-Culver sequence to earlier or later sites in the Cayuga territory have not been located. In addition, the proposed Myer's Station-St. Joseph sequence is based primarily on ethnohistoric data and requires archaeological support.

2. The source of the St. René and St. Stephen populations is unknown. Although it seems apparent that historic Cayuga were the result of the consolidation of northern and southern populations, the source of the northern Cayuga could not be determined. Sites such as Great Gully Fort, Fort Hill Auburn, Dhondt, and Cato suggest the development of the northern Cayuga out of a local Owasco population, but it is also possible that the northern Cayuga had their origin outside of the historic Cayuga territory. There is a possibility that the Kelso population or other populations from the east or west could have moved into this region along the Seneca River. Furthermore, although there is no evidence supporting input from the south, in the absence any comparative Study of Cayuga and Susquehannock sites there is no evidence to preclude this either.

3. The sociocultural processes responsible for Cayuga tribalization need to be examined. The dual nature of Cayuga development and late final territorial consolidation (c. A.D. 1650) may represent an adaptation to a unique environmental situation.

Future research in Cayuga archaeology must he aimed at resolving a variety of problems ranging from answering specific questions about gaps in site sequences to developing more general theoretical frameworks to describe and explain cultural processes. We can and must begin moving towards finding answers to these questions and solutions to these problems. This is not an impossible task. There is a great deal of existing data that was not considered in my research. My analysis was limited to ceramic collections from sites dating A.D. 1250 -1550 and regional settlement data such as site size, character, and distribution gleaned from reports on recorded sites. Existing ceramic collections from sites such as Levanna, Damyer, Landon, Colgan, Locke Fort, and Genoa Fort were not systematically analyzed. Furthermore, a systematic search

would surely uncover additional collections and the locations of many locally known, but unrecorded sites.

Future analyses of ceramics and other artifact categories, and comparison of total assemblages available from known sites will confirm or alter the outlined sequences, fill in gaps, and correct discrepancies. However, many of the sites mentioned have never been seriously studied and systematic testing is needed. The collection and analysis of existing data from recorded and known, but unrecorded, sites should add a great deal to our understanding of the sequence of population movements associated with Cayuga development.

Of course, in a large portion of the Cayuga territory, archaeological data from the Late Woodland are almost totally lacking. Basically, we know little about Prehistoric Iroquois occupation north of Aurora, west of Cayuga Lake above Trumansburg, or east of Owasco Lake. In these areas, systematic regional surveys will be required to fill in the archaeological record. Systematic survey of areas that are poorly known archaeologically and testing of many of the known, but unexcavated, sites will be necessary before more sophisticated and comprehensive studies into ecological relationships, settlement and subsistence patterning, and sociocultural evolution are possible.

The best way to start is by beginning with what we know. The first step is to build an inventory of known data sources (e.g. site locations, landowners, collections, and collectors). This can then be followed by the systematic recording, collection, and analysis of available data. Every archaeologist in this area, whether professional or avocational must share responsibility for this. In 1977, Robert DeOrio called for the establishment of a "clearinghouse" for information on Iroquois archaeology in this area. The need to establish such a "clearinghouse" still exists. Perhaps local NYSAA chapters could act in such a capacity. If we pool the information we discover in our individual archaeological endeavors and combine our resources, the outline proposed here need not remain the "last word" in Cayuga archaeology for long.

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Mohawk

Dean R. Snow, Van Epps-Hartley Chapter

The Mohawk Valley Project has filled in some important gaps in Northern Iroquoian prehistory. Information from over 100 components has been gathered and secured for the future. Data from excavations, older collections, and historical documents have been used to determine that epidemic depopulation of Mohawk villages did not begin until the 1630s. This finding is relevant to the reconstruction of continental population sizes in 1492. It has helped to refute the hypothesis that sixteenth-century pandemics dramatically reduced very high Indian populations before first direct contact with Europeans.

The Mohawks are central to Iroquois prehistory, to the League of the Iroquois, to colonial history, and remain prominent in the modern world. The Mohawk Valley Project has spent a decade salvaging neglected collections and the information associated with them, while at the same time carrying out excavations to clarify the processes through which sites and artifacts were produced.

The Mohawk Valley Project went through initial planning in 1981. Field excavations were begun in the summer of 1982. The first two years of the project were supported jointly by the State University of New York at Albany, SUNY, and the State University College at Oneonta. William Starna and I co-directed the project during the first two seasons, using a combined field school team to explore the research potential of the Elwood (Snow 1985) and Oak Hill #1 Sites. This startup period also allowed us to refine and focus long-term research goals and methodology. In 1983, a team of graduate students also undertook test excavations at the Jackson-Everson Site (Kuhn and Snow 1986).

The project had support from the National Geographic Society in 1983. This funded an air photo survey of several major village sites at a time when the demographic goals of the project were coming into focus and the measurement of village areas was emerging as a critical research need. The project also had support from Earthwatch during 1983 and 1984. This support allowed us to acquire the tents and other field equipment we would need for the large crews that would be fielded from then until 1988. William Starna's prior experience in the Mohawk Valley was critically important in these initial years of the project. However, he has been drawn into legal research related to American Indians since 1984, and now serves as consultant to the project rather than as a co-director. Over the years several M.A. and Ph.D. students have worked on the project. Doctoral dissertations derived from the project have already been completed by Guldenzopf (1987) and Kuhn (1985). Another is expected soon from Susan Bamann.

The National Endowment for the Humanities began funding the project with a grant for the period 1984-1985. In 1984 we excavated the Rumrill-Naylor Site. However, the emphasis of the first NEH grant was on the recovery of archaeological data from many existing public and private collections, and on the recovery of data crucial for the understanding of both the collections and Mohawk sites that were at risk. Many collections, some of which were themselves a century old, were in danger of loss of rapid deterioration at that time. Much of the information about collections and sites was unrecorded and known only to older collectors and amateur archaeologists. Information at risk was recovered and collections were inventoried during this year. Perhaps more importantly, the initial NEH grant set a process in place that allowed the recovery effort to continue to the present. Several older people who were important sources have died since 1984, but only one of them (Gilbert Hagerty) did so before we had a chance to inventory his collection. The collection is currently out of reach, but should be available soon. Fortunately, much of what he knew was recorded just before he died and has been published posthumously.

We have examined over 100 collections and have inventoried the largest and most comprehensive of them. Of these, 53 are currently subsets of the Mohawk-Caughnawaga Museum collection or the associated collection of the Order Minor Conventuals. I became chairman of the Board of Trustees of the Mohawk-Caughnawaga Museum in July, 1990, on the day that the museum and the order became formally separated. I am now working with the new board to ensure that this important collection is safe guarded for future research. I am also pleased to report that the extensive collection of the Van Epps-Hartley Chapter is being computerized and that this collection also seems secure for the future.

In 1984, the very large and important Frey, Richmond, and Montgomery County Historical Association collections were all at grave risk in a damp cellar in Ft. Johnson. New York. As

a result of the Mohawk Valley Project, all three collections were brought on loan to the University at Albany for inventory, curation, and research.

The large Jackowski collection was inventoried shortly before the owner died. The collection was then combined with the Constantino collection. The latter owner has also died, but his widow has asked the University at Albany to conduct a new comprehensive inventory, and she is committed to making the collections available for display and study.

The National Endowment for the Humanities funded again for the period 1985-86, including both summers. The earlier grant had laid the necessary groundwork for all subsequent field and documentary research in the Mohawk Valley Project. We excavated two sites in the summer of 1985. The two sites, Otstungo and Indian Castle, anchor the ends of the Mohawk village site sequence that covers the period of interest to the project. At Indian Castle we were successful in locating and testing the remains of the home of Joseph Brant, war chief of the Mohawk at the time of their final departure from the valley. The excavation clarified shifts in architectural form, personal property inventories, and social organization that had affected the Mohawk in the eighteenth century (Guldenzopf 1987).

Otstungo is a fortified hilltop village site occupied around A.D. 1500. It has been known to local collectors for at least 1500 years (Squier 1849). Because of its date of occupation, Otstungo represents the initial state of Mohawk settlement for purposes of the goals of the Mohawk Valley Project. It preceded the founding of the League of the Iroquois, something that we were less sure of until 1987. It contained no evidence of European influence. Further, it contained a wealth of information that turned out to exceed our expectations in almost every respect. As it happened, Otstungo had never been plowed, something we anticipated. However, a major portion of it had also never been disturbed by collectors and looters, something that we had been too cautious to anticipate or even hope for. As a consequence, we quickly realized that our excavation grid System with its 1.5 m cells was too coarse for the detailed provenience data available on this site. We decided to use minimum units of only 0.75 m for debitage and other common remains, while point plotting all more significant artifacts. Further, we were able to quickly discover a line of regularly-spaced magnetic anomalies with our magnetometer in an area we suspected of having the remains of a longhouse. We correctly inferred that these marked the locations of hearths within the longhouse by orienting the excavation grid to the line of hearths rather than to cardinal directions, we made sure that our small excavation units would maximize the detailed information that were acquired from the house excavation.

Undisturbed longhouse remains are extremely rare in Iroquoia. There are no others known for the Mohawk drainage. Whole vessels have been found in dense localized sherd concentrations. Areas of effigy pipe manufacture have been discovered, with the fragments of exhibit quality pipes lying in small clusters. Food preparation areas have been defined by mortars and carbonized seeds. Well-swept aisles that had heavy traffic are clearly delineated from storage areas and sleeping compartments. Indeed, Otstungo is giving us data that will allow a much clearer interpretation of all other excavated Mohawk longhouses, past and future.

We were so impressed by the potential of Otstungo that in addition to halving the size of the minimum provenience unit, we committed additional personnel and other resources to the detailed study of site contents. We began an extensive flotation program in 1985. Further, we began a soil chemistry analysis program as well. The former allowed us to explore aboriginal diet and the distribution of food preparation activities within the site. The latter allowed us to develop chemical means to determine house sizes and locations on less well-preserved sites. The specific results of these analyses are only just now coming back from researchers at other institutions. Rather than speed excavation of Otstungo and risk the loss of data, we left the excavation incomplete in 1985 and returned to it in 1986. Excavation was nearly completed by the end of the 1986 season, but rather than rush the last few excavation squares, we finished it at the beginning of the 1987 season before moving on to the next excavation site. Since then the National Geographic Society has decided to feature Otstungo in its October 1991 magazine issue.

The grants we received enabled us to conclude all of the necessary field work and to prepare the first two volumes of reports for publication. Most of our effort and funding through the last stages of our field work was directed at refinement of the archaeological sequence. Our summer excavations over the last few summers concentrated on the sites of England's Woods and Cayadutta. Our purpose was to sort out the complex and fine-grained relationships of nearly 100 site components as they related to one another in time and space. The chronology Table 1 shows only the sequence of major village sites as we have finally come to understand them. Regular readers will recognize that the basic structure of this framework was laid out by Donald Rumrill (1985) in *The Bulletin*, NYSAA Number 90. We still disagree on some points, and we are probably both wrong on a few. However, although minor refinements continue to be made, this basic sequence appears now to be Secure. Many more associated hamlets and cemetery sites could also be included if space allowed.

The late Prehistoric and Historic Periods have set the context of the project. We have inventoried 20 sites for the fifteenth century, 9 for the sixteenth century, 53 for the seventeenth century, and 22 for the eighteenth century. Those shown in Table I and several other village sites in this total of 104 components from four centuries have been examined closely. We have detailed excavation data for those shown in bold type, and basic test data and area measurements on the rest. Excep-

Table 1. Sequence of Major Mohawk Villages Known as of June 1990.

Date	Western Series	Central Series	Eastern Series
1776			
	Indian Castle		Fort Hunter
1755			
	Prospect Hill	**[Bohringer]**	Gravel Ridge
1712			
	Allen		Milton Smith
1693		FRONTENAC RAID	
	Jackson-Everson	Lipe #2	**Caughnawaga**
1683			
	White Orchard	Dewandalaer Schenck	Fox Farm
1666		DE TRACY RAID	
	Allen	Horatio Nellis	**Freeman**
		Mitchell	Printup
1655			
	Crouse		
	Oak Hill #1	**Sand Hill**	Van Evera-McKinney
1635			
	Failing Brown	**Rumrill-Taylor**	Cromwell
	Sand Hill	Bauder	Yates
1624		MOVE TO SOUTH BANK	
	Kilts? **Rice's Woods**	Briggs Run	Martin
		Coleman-Van Duesen	Barker
	Wagner's Hollow	**England's Woods**	Chapin
1609			
	Ganada Smith-Pagerie		
	Garoga	**Klock**	**Cayadutta**
1550			
	Cairns **Otstungo**	Wormuth	Saltsman?
1500			
	Elwood, Getman and 20 other small village sites known for this century		
1400			

tions are Failing and Crouse, which were mostly destroyed by construction of the New York State Thruway, and Yates and Sand Hill, which have been destroyed by other construction. Furthermore, Freeman and Prospect Hill are in modern residential areas and are consequently difficult to examine. Indian Castle, Gravel Ridge, and Fort Hunter are late dispersed sites that defy accurate areal measurement. All other major village sites have been measured by transit and/or magnetometer surveys, and most have been sampled for diagnostic artifacts.

Taken together, we have 17 sites for which our own or previous excavations have produced substantial results. Our own excavations have dealt with Indian Castle, Jackson Everson, Oak Hill #l, Rumrill-Naylor, England's Woods, Cayadutta, Otstungo, and Elwood. Ganada and Garoga were both excavated nearly a century ago in 1905 by Harrington (n.d.), and the artifacts are preserved at the Peabody Museum, Harvard. The Rice's Woods, Klock, Smith-Pagerie, and Garoga Sites were excavated by Robert Funk and New York State Museum crews. Reports on Garoga are available (Funk 1967; Ritchie and Funk 1973:313-332), and Funk intends to prepare reports on the remaining three sites soon. Getman, which is about the same age as Elwood, was also excavated by the New York State Museum (Ritchie and Funk 1973:291-312). Bohringer, which lies in the Schoharie Valley, is currently undergoing testing by John Ferguson and crews organized through the Iroquois Indian Museum. Caughnawaga was excavated in the 1950s and reported on briefly by Thomas Grassmann (1952, 1969). Sand Hill is a complex site worked on by Wayne Lenig, Peter Pratt, and others. Pratt is currently preparing a report. Kingston Larner carried out salvage excavations at the Freeman Site as well as another site not shown on Table 1. His recent retirement from medical practice will provide him with the time he needs to revise his reports on these sites for publication.

Many, more sites are known more superficially. I am now about to prepare a volume will contain detailed reports on the 17 sites that have undergone controlled excavation, along with shorter summaries for 31 additional village sites and their associated cemeteries. I hope that this volume will be of value to other scholars working in North American archaeology, ethnohistory, and historical demography. It will also provide the foundation for a multiple resource nomination to the National Register of Historic Places. The nomination will in turn will help secure and preserve the sites for the future.

Because of unusually favorable archaeological circumstances in the Mohawk drainage, we have had an opportunity to acquire an empirical basis for the measurement of the timing and magnitude of demographic changes resulting from epidemics in the sixteenth and seventeenth centuries. Although there appear to have been other significant episodes of demographic change in North American prehistory, none matches this one in speed or scale. Moreover, measurement of this process has never before been achieved at this scale by archaeological means. Schacht (1981) has discussed the problem and has proposed some solutions at larger scale, but demographic processes over the course of decades rather than centuries remain very difficult to approach through archaeology. Until recent years, we have had only the vaguest understandings of American Indian population levels in 1492, the magnitude(s) of their decline, and the epidemic processes that drove them. The result has been widespread uncertainty and controversy expressed in the works of scholars such as Dobyns (1983), Ramenofsky (1987), and Ubelaker (1976, 1988).

We have had considerable success so far in resolving the problem of measuring demographic change in the Mohawk case. The reasons for our success are that most Mohawk sites are located on good soils that are currently cultivated, and few appear to have been lost to modern construction. Professional and amateur interest in the sites has been high for 150 years, so few have escaped concerted searching. Few sites are complicated by earlier or later occupations, few have been destroyed prior to study, and it is likely that most have been discovered. Furthermore, Mohawk village sites in the centuries of interest here were typically very regularly built settlements. In each case a village was occupied for only one or a few decades, after which the community relocated to a new site.

The villages and the longhouse structures they contained were so regular that we have determined that we can derive village population from measured site area with 90% accuracy (Snow and Starna 1989:143). All extant Mohawk village sites have been measured for this purpose since 1982. Thus the aggregated Mohawk population at any date between 1500 and 1700 can be measured by summing the population totals for the village sites occupied at that date.

Tracking the movements of communities from village site to village site has proved to be much more difficult and perhaps impossible. This is mainly because known processes of community fissioning and fusing complicated the relocation process. Tuck (1971) and Wray and Schoff (1953) have proposed sequences for the Onondaga and Seneca that assume much simpler processes, but these sequences do not account for the small temporary hamlets and factional disputes that we know to have characterized all Iroquois nations. White (1976:120) long ago expressed doubt about neatly reconstructed village lineages, and we agree that the practice risks imposing unrealistically simplified order on complex evidence. Consequently, we assume only that we can determine contemporaneity of Mohawk villages, and we make no specific claims regarding separate Mohawk village lineages through time. Fortunately, we are still able to measure aggregate population change over time (Snow 1990).

I have undertaken computer simulation in order to clarify the demographic processes that drove demographic change in the sixteenth and seventeenth centuries. There have already

been some informative revisions to these models, and to our assumptions about the progress of epidemics. The simulations have shown that given the Mohawk settlement pattern, a smallpox epidemic attacking a village of 100% susceptibles would have infected all of them over the course of 150-200 days, regardless of contact rates or the likelihood that contacts resulted in infections. In other words, the only way for a Mohawk population to avoid 100% infection was for some individuals to be either immune due to earlier infection (true only in later epidemics) or out of town. The curves produced by computer simulation match the curves we get directly from archaeology and early documents. The Mohawk example shows how archaeology can contribute to research in other fields.

The Mohawk case is an important one because it is central to a heated controversy that has arisen over the question of population levels at the time of Columbus. Dobyns (1983) has long claimed that severe unreported pandemics reduced American Indian populations during the sixteenth century, such that American Indian populations of the early seventeenth century were already small residual fractions of earlier populations. Our work to date has shown that the Mohawk population was actually increasing through the sixteenth century, reaching its peak in 1634, then declining rapidly as a consequence of crowd infections introduced from outside (Snow 1990). Supporting evidence for similar events in other areas is beginning, to come in. For example, the work of Gary Warrick (personal communication 1990) in Ontario indicates a rapid population increase after A.D. 1300 and no depopulation until the seventeenth century.

The second contribution has to do with the importance of the Mohawk cultural sequence to the late prehistory and ethnohistory of North America. The Mohawks were dominant members of the League of the Iroquois, central to the colonial history of America, major participants in the American Revolution, and (with the other Iroquois) subjects of the classic works of Lewis H. Morgan. They remain in the news even today, and for that alone their prehistory and history are important. The Mohawk Valley Project has always enjoyed the active support of scholars, Mohawks, and a few people lucky enough to be both.

The third contribution is the practical one having to do with stewardship of archaeological collections and dissemination of information related to those collections. The publication of collections inventories will be an important aid to curators as well as to scholars who until now have had difficulty locating suitable materials for study.

The fourth contribution is also a practical one related to site preservation and the publication of site reports. Brief descriptions of all Mohawk village sites have already been written and fuller descriptions of sites excavated since 1982 are well advanced. The brief descriptions have already been submitted to the National Park Service, and one of them (Indian Castle) is being developed as a National Landmark nomination at the Philadelphia office. Because of the current vulnerability of village and cemetery sites, both professional archaeologists and Mohawks are eager to see these properties protected for the future.

The Mohawk Valley Project is still in progress, but the field work is done, and a variety of reports and papers are already out. If all goes well, the volumes detailing site reports and collections inventories will be completed by autumn 1992. Mohawk archaeology has finally begun to catch up with what is already known of several other nations of the Northern Iroquoians.

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Oneida Archaeology: The Last Quarter Century

Peter P. Pratt. William Beauchamp and Chenango Chapters, NYSAA

Oneida archaeology with its emphasis upon settlement pattern studies is summarized in relation to the various avocational and professional researchers who have been involved. Theories concerning Oneida origins and village movements as well as future research strategies are also presented.

Over the past quarter century, the Chenango Chapter of the NYSAA has focused in large measure on settlement pattern studies. These studies are, for the most part, exemplary, not only for the fastidious nature of the excavations but for the quality of the research upon the recovered data and for the efforts expended by a series of dedicated avocational archaeologists working in their spare time.

By living relatively nearby the sites they are studying, these researchers can savor their data in a way few professionals, limited by time and money constraints, can afford to do. The pace of these investigators is slow and methodical and leads from the field to the laboratory and to the library as well as to calling upon specialists on a host of subjects. Usually, the ultimate rewards are publications of substance and lasting value.

There has evolved from shared pleasures, including academic accomplishment, a camaraderie among Chenango Chapter members that can hardly go unnoticed at this annual meeting. At the root of it all is the Chapter's founder and chief mentor, a stickler for excellence, Theodore Whitney. It was he who was the first to lead Chapter members in work of a major scale on Oneida sites. This work was to expeditiously appear first in Whitney's erudite study of the Thurston Site (Whitney 1964) (the possible location of the village visited by van den Bogaert in 1634) and, second, in his provocative work relating to the late prehistoric Buyea Site (Whitney 1970). In the latter study Whitney raised issues which are still relevant and being worked on today. Whitney noted, for example:

> No site study in Oneida territory can be fully pursued without a consideration of file unique cultural background history of its people. Although we subscribe to the "in-situ" origin theory I'm the Five Nations, we find no evidence in the area of an Owascoid proto-Oneida. However, this negative evidence is consistent with the long accepted theory that the Oneida people were a relatively recent split from the Onondaga and/or Mohawk tribes. Archaeology of the region does nothing to relate this idea, but does raise some additional thoughts and a few questions [Whitney 1970: 1].

Whitney went on to observe

> The location pattern of Oneida sites supports the idea that they are a split from Onondaga. The earliest site are on the western edge of Oneida territory, adjacent to the eastern fringes of Onondaga [Whitney 1970:2].

Each of these matters is an ongoing concern of researchers today. Ancestral Oak Hill Horizon sites are being sought both in Mohawk and Oneida/Onondaga territory in an endeavor to understand something more of the cultural dynamics leading to the emergence of these people as tribal entities.

Whitney's field observations at Buyea complemented his insightful opening remarks. He discovered that the village palisade was of unusual construction-in this case, flimsy and was located on the top of a precipitous slope. Furthermore, Whitney not only isolated the main features of a longhouse but discovered in the post-mold complex such things as a probable wind buffer and a possible signal or trophy pole outside the building and drying racks and even a possible bear pen inside the building.

Whitney's analysis of the pottery provided an all too familiar note as he said:

> In the task of comparing pottery typologies from various sites, we encounter so many variables that caution must be taken in the use of data. As has already been pointed out, a given sherd can he put in more than one MacNeish type. A student of potter is prone to favor the types with which he is more familiar. We look for a more standard, more definite way for attacking this problem [Whitney 1970:1].

In 1966, my doctoral dissertation, Archaeology of the *Oneida Iroquois as Related to the Champlain-Iroquois Battle of 1615*, appeared on microfilm. In this study it was shown that the Oneida had indeed evolved in situ, that the St. Lawrence Iroquois were not their ancestors, that the Oneida had not developed in a "cultural backwater," and that Nichols Pond was not the site of the Champlain-Iroquoian battle of 1615. Also, in this study MacNeish's typology was revised insofar as it applied to the Oneida.

Additional studies on Oneida continued to be carefully researched, illustrated, and thought provoking. Chapter members under Whitney's direction were to take on still larger settlement pattern studies. The newly undertaken studies concentrated on the protohistoric Bach Site (Whitney 1967)

and produced a contour map showing the location of an entire longhouse, evidence of at least eight additional houses, a palisade, and artifacts which suggested that the Diable and Bach Sites might have existed at the same time or that the occupations overlapped (Whitney 1964). These were very important considerations not only for Oneida chronology but for Oneida cultural development as a whole.

In 1971, Stanford Gibson (Gibson 1971) set the stage for more intensive ecological studies making a signally important contribution, “An Elevation Comparison of Iroquoian Sites in Three Valleys in Central New York State." In 1976, an expanded version of Pratt's 1966 study appeared in print as Archaeology qt the Oneida Iroquois Vol. 1(Pratt 1976). This study focused on cultural dynamics through time, comparing and contrasting Oneida evolution with that of other Iroquoian peoples. A host of ecological considerations were addressed of which of particular interest were Gordon DeAngelo's calculations for maximum length of village occupancy on Honeoye loam, the soil most common to Oneida village sites. Also, of particular interest in the Oneida data was the argument that the League of the Iroquois may well have been founded as early as the late sixteenth century (Pratt 1976).

It was during the 1970s that clay smoking pipe researcher John McCashion came to be recognized as an outstanding scholar whose work could be, and has been, utilized to provide dating refinements. McCashion pointed out countries of origin for European pipes and provided wonderfully colorful historical anecdotes covering these pipes and their makers (McCashion 1975, 1979). It was during the 1970s, too, that much more was sought on comparative data from outside Iroquoia. Monte Bennett provided the additional impetus, thanks in good measure to McCashion. His co-authored work with Richard Cole on the Marshall Site (Bennett and Cole 1976) and Douglas Clark and Allen Owen's study of the Cody Site (Clark and Owen 1976) are especially notable steps forward in Chapter research.

Settlement pattern studies by the Chapter members escalated. Monte Bennett's study of the Blowers Site (Bennett 1979) was a critical evaluation of the data from that site as it related to others in the Oneida sequence. Another landmark study including a careful consideration of ecological concerns and providing a wealth of comparative data on Oneida appeared in 1980. This impressive work by Richard Hosbach and Stanford Gibson (Hosbach and Gibson 1980) on the Wilson Site was nicely complemented by an appendix by Whitney on native pottery and another by Joseph Grzibowski on trade beads and wampum.

From 1980 onward, the overwhelming bulk of the published studies has come from the briskly moving pen of Monte Bennett, often with co-authors. They include scholarly works on Cameron (Bennett 1981; Bennett and Hatton 1988). Lanz (Bennett 1982), Quarry (Bennett 1984) and Primes Hill (Bennett 1988). As in the past, Bennett's studies reflect meticulous field work and scholarship. Bennett is a tribute to his early mentors, Whitney and Gibson, who are still active and productive working as leaders to a team of Robert Doyle, Vernon Lindsey, and the late Herman Weiskotten Jr. in their studies in 1986 on the hitherto little known Tuttle and Bronk Sites. They found a multiple occupation on the latter (Gibson 1986). Unlike the many sites exhibiting multiple occupations in neighboring Mohawk territory, this was the first site of that character to be discovered in the Oneida sequence.

"Up and coming," as the saying goes, in Oneida research is Herman Weiskotten Jr.'s son, Daniel, who has single-handedly revealed the outlines of the palisade at the protohistoric Diable Site. At this site the "Wednesday Afternoon Group" (currently consisting of Dr. Francis Haley, Stanford Gibson, Joseph Grzibowski, and Dr. Alexander Neill led by Dr. Richard Hosbach) has been investigating house patterning. This group has now transferred operations to another little known site, Marshall, on which Dr. Neill has found what Adrian Mandzy (Mandzy 1989) suggests may be the ornamentation of a Bible cover. Research is underway to determine the identification underlying the date and significance of this unusual item.

Additional current research leads us back to Daniel Weiskotten, whose provocative study of Oneida origins appearing in a chapter bulletin last year (Weiskotten 1988) suggests possible early movement of the Oneida from south of Cazenovia westward, My wife, Marjorie, and I, along with Weiskotten, jointly and independently, have been searching for lost sites in the known Oneida archaeological region, as well as for sites bordering it. It is safe to say at this point that there is some evidence emerging that indicated that at least some of the Oneida may have come from southern New York.

In conclusion, seeking cultural origins, establishing sound dating frameworks, discovering subtleties in cultural evolution as ties to cultural patterning, and entering these findings in database files are today's primary objectives in Oneida research.

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The St. Lawrence Iroquois of Northern New York

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Iroquois .sites in northern New York, southeastern Ontario, and .southeastern Quebec have long perplexed researchers. This paper reviews the history of work in northern New York and discusses hypotheses as to who these people were and what happened to them.

In the program for this conference my paper is entitled "Jefferson County Iroquois." With all due apologies, I have changed the title of my paper. Jefferson County is a political entity and has nothing to do with the Iroquois who lived in northern New York, southeastern Ontario, and southwestern Quebec during the Late Woodland Period. Indeed, the sites are not restricted to Jefferson County but occur in St. Lawrence, Lewis, northern Oswego, Franklin, and Clinton Counties in New York as well as in Vermont, Ontario, and Quebec.

When Peter Pratt and I began our work in northern New York in the 1960s, these people were variously known as the Laurentian Iroquois, as ancestors of the Mohawk, or following MacNeish (195?), as ancestors of the Onondaga-Oneida. Research at that time indicated that the Mohawks were developing in the Mohawk Valley and did not come from northern New York (Lenig 1965).Peter Pratt had recently completed his dissertation on the Oneida indicating that they were developing in Madison County from at least A.D. 1475 (Pratt 1966, 1976). James Tuck had completed his dissertation on the Onondaga and had found that they were developing in the Syracuse area (Tuck 1971).

The term "Laurentian Iroquois" was found to be confusing. Every time one said "Laurentian Iroquois," people sought a relationship with the Laurentian Archaic. Peter and I began calling these people the "St. Lawrence Iroquois," "St. Lawrence" indicating the major drainage area in which the sites predominantly are found. At the Iroquois Conference in 1968, we had dinner with William Ritchie and talked about the confusing names. We decided at that dinner that the people should be known as "St. Lawrence Iroquois."

The primary concentration of St. Lawrence Iroquois sites is in Jefferson and St. Lawrence Counties and Southeastern Ontario. Since James Pendergast has covered the St. Lawrence Iroquois on the Canadian side of the border, my paper will concentrate on the sites in Jefferson and St. Lawrence Counties. Descriptions of these sites in the literature date to 1802 when Rev. .John Taylor traveled in the Black River country and described sites near Adams in Jefferson County (Taylor 1802). Other nineteenth-century writers visited and described some of the sites, including, notably, Ephraim Squier (1849), Franklin Hough (1854), Edgar Emerson (1898), and William Beauchamp (1886. 1900). In 1906, Mark Harrington of the Peabody Museum conducted excavations at several sites in Jefferson County (Harrington 1922). Arthur Parker in 1922 provided a list of sites for these areas, drawing heavily on the previous descriptions by others (Parker 1922).

William Ritchie surveyed in both Jefferson and St. Lawrence Counties. He visited a number of sites but only did preliminary testing (Ritchie 1968). Numerous large collections have been made from these sites. Many of the sites have been badly damaged. Indeed, when we began our work, there was a real question if anything useful could be learned from them. There were even stories of stumps of trees being dynamited by a local school principal in order to dig under them. This man refused us access to his collection.

We began work in 1967 with survey for sites and excavation at the Pine Hill Site in St. Lawrence County. This work was done in Conjunction with a SUNY College at Oswego Field School. Following a paper presented on that work at the NYSAA meeting the next spring. I was approached by Merrill Waters, a long time member of NYSAA, concerning a site which he had found in Jefferson County. This site, Camp Drum #l, appeared to be similar to Pine Hill. Waters was pleased to have the involvement of professional archaeologists to augment his own very careful work at the site.

We began work at the Camp Drum #1 Site with a field school in 1968. Work continued on the site each year until 1983 when difficulties with the Department of Interior led to a hiatus in our work.

In the late 1960s, we continued survey for sites working in northern New York, Vermont, Quebec, and Ontario. We conducted major excavations at the Bourassa Site near Trois Rivieres, Quebec, and the Trent Site in Ontario. We tested a number of other sites such as Swarthout, Talcott Falls, Nevins, Norwood, Pierce's Corners, Washburn, Frank #1, and Frank #2, to name a few.

During this period our research questions were as follows: If the St. Lawrence Iroquois were not the ancestors of the Oneida and Onondaga, who were the? And secondly, what became of them after Roberval last saw them in 1543 and Champlain could not find them in 1603? Our work identified

some 40-50 sites in New York alone that could be attributed to St. Lawrence Iroquois. The sites vary from small fishing camps to large village sites. The sites also vary in time period from early sites, which appear to be contemporary with Owasco, to late prehistoric sites. No evidence of trade goods has been confirmed on any of the sites in northern New York.

Based upon this research, we hypothesized that these sites represented a previously unidentified Iroquois group or groups. There are so many sites that it is likely that more than one group is involved, a view supported by Lounsbury who also noted that linguistically the St. Lawrence Iroquois were more closely related to the Huron than they were to any of the Five-Nations Iroquois (Lounsbury 1961). They appeared to be developing in the St. Lawrence area from an earlier people whose sites resemble Owasco and Pickering but who had their own unique characteristics as well.

Now, what happened to them? In light of the historic evidence (cf. Trigger and Pendergast 1978), it seems likely that the St. Lawrence Iroquois were driven out of their homeland by Iroquois or other invaders. That they were decimated by European diseases is also probable (Fenton 1940). That they were motivated to leave since they could no longer raise productive maize crops due to the Little Ice Age (beginning about 1550), as indicated by the pollen spectra (Martijn 1969) is also a distinct probability. Whatever occurred, and it was probably a combination of factors, we believe the majority of them left the St. Lawrence area and joined the Huron in the area of the Trent waterway. Analysis of the materials from the St. Lawrence area in northern New York shows a small but persistent amount of Huron pottery on St. Lawrence Iroquois sites - 5-10%. Much the same may be said for St. Lawrence Iroquois pottery on Huron sites (cf. Pendergast 1965:41; Wright 1966:71). It appears that not only did the St. Lawrence Iroquois maintain a long period of contact with the Huron, but they may have been closely related to them ancestrally.

When the St. Lawrence Iroquois left their homeland, we believe that most of them joined their long-time friends to the north. Small factions may have joined other groups such as the Oneida or Onondaga. Conversations with James Tuck and with Peter Pratt suggest that small numbers may have joined these groups, but there is no evidence of a large movement of people to the south. James Bradley, on the other hand, argues that the St. Lawrence Iroquois of Jefferson County were absorbed by their enemies, the Onondaga (Bradley 1987). While this is a thought-provoking idea, we do not believe that there is sufficient evidence to support it.

Such is not the case for the Huron. At the Trent Site near Lindsay, Ontario, (70 mi [113 km]) northeast of Toronto) where we worked in 1970, about 25-35% of the material showed St. Lawrence influence (i.e. St. Lawrence ceramics or ceramics with St. Lawrence Iroquois and Huron traits on the same sherd). That site also revealed evidence of a formidable stockade and a small quantity of trade goods (rolled brass tubular beads) indicating the site is of the time period when something of moment was happening to these people.

At about the time we began working in northern New York, Marian White of SUNY Buffalo began working in Jefferson County. White was particularly interested in tracing population movement in the Sandy Creek drainage and apparently preferred exclusive research in the county. At a meeting at the State Museum in 1968-I969 with William Ritchie we discussed our various research questions, and it was decided that they complemented one another.

Another player in northern New York at that time was Peter Miller. At the time he was a Syracuse University graduate student who had taken a teaching job at SUNY College at Potsdam. He later moved to Kutztown State University, Pennsylvania. Peter Miller worked on several sites in the area, and especially at the St. Lawrence Iroquois site at Depauville. It was the excavations of burials at this site that led to the New York Archaeological Council (NYAC) burial moratorium and, indeed, had much to do with the forming of NYAC.

Peter Miller was followed at SUNY at Potsdam by Albert Dekin, who also worked on St. Lawrence Iroquois sites, notably Pine Hill. Garret Cook is now at SUNY at Potsdam and has been conducting excavations in northern New York. Though he has done some testing of St. Lawrence Iroquois sites, his research has centered on earlier horizons, particularly the Archaic.

Going back to the early 1970s, Marian White, unfortunately, became ill and later passed away. Her interest in Jefferson County was taken over by Earl Sidler, then a graduate student of Marian's. He was going to do a dissertation on the Iroquois of Jefferson County. Parenthetically, I think that it was Marian's feeling of exclusivity about Jefferson County, followed by Earl Sidler's dissertation interests, which led to the term "Jefferson County Iroquois."

Sidler had interests aside from archaeology and found it difficult to complete his dissertation work. He has recently moved to Florida and has decided that he can no longer actively pursue his Jefferson County interests. About a year ago William Engelbrecht was able to obtain from Sidler the prodigious quantity of material he had amassed. Engelbrecht is currently going through this information and recently presented a paper relating to it at the Northeastern Anthropological Association meetings.

Returning once more to the early 1970s, we had to switch the nature of the research we pursued in northern New York. With the budget crunch that hit SUNY, the SUNY at Oswego field school was eliminated 1971. Other funds to pursue traditional academic research also were reduced at about the same time, and more money was going into contract work. We became involved in that contract work, and in 1977, I left teaching to do contract work full time.

This did not mean that we abandoned our interest in northern New York -only how we pursued it. To date we have

done over 25 contracts in Jefferson and St. Lawrence Counties including several long gas line and transmission line projects. In fact, when we are asked to bid on a project in the St. Lawrence Iroquois area, we bid low to try to have an opportunity to gather additional data. We expect to be in Jefferson County this summer field testing a 20-mi (32-km) gas line which runs through some very sensitive St. Lawrence Iroquois areas.

Recently, I was appointed "archaeologist" on the Harley J. Makee Memorial Committee on Historic Resources of the American Institute of Architects. The committee covers a 12 county region which includes northern New York. My charge, as a member of the committee, is to develop a database of archaeological resources within the 12-county area - again an opportunity to gather information pertinent to my research interests.

Over the past several months we have moved to a new phase of research on St. Lawrence Iroquois. After over 20 years of gathering data on these sites, we have decided to computerize our data and, while we are doing it, record additional data to be used in looking for site location patterning. When we began work in northern New York computers were not powerful and were not readily available. Today I have sitting on my desk more computing power than the whole college had when we started.

We have created a series of interrelated dBase files. These include files for site locations, environmental data, references and collections. We are recording sites by UTM and locating them on computer-generated maps using AUTOCAD. We are superimposing various environmental data in different layers of the AUTOCAD maps. These layers can be turned on and off in different combinations to see different relationships.

We have also generated a random sample of 200 locations within Jefferson and St. Lawrence Counties. We have recorded the same environmental data for these points as we have for sites. This information will serve as base line data to test hypotheses about site location. We will be able to test specific assertions such as that St. Lawrence Iroquois sites are near swamps. Well, are they any closer to swamps than any randomly selected location within these two counties?

I had hoped to have some results of this work to report to you at this meeting, but we are still sorting out site data and getting UTM designations for sites. The soil information is also not complete. The soil survey for Jefferson County is at the printers now, and the St. Lawrence soil data needs one more season of field work. I might say that the Soil Conservation Service has been most cooperative in making their field notes available.

Within the next two or three years this work should be near completion. We hope we may be able to produce a predictive model for site location based upon a specific cultural group, St. Lawrence Iroquois, at least on the U.S. side of the border.

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The St. Lawrence Iroquoians: Their Past, Present, and Immediate Future

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This paper presents a comprehensive examination of St. Lawrence Iroquoian history, ethnohistory, and archaeology. European voyages to the Strait of Belle Isle during, the second decade of the sixteenth century serve to introduce the incidents, including, the Cartier-Roberval episodes, which brought Europeans into contact with the St. Lawrence Iroquoians in the sixteenth century as far up the river as present-day Montreal. The principal hypotheses which reflect nineteenth- and early twentieth-century thinking regarding the origins and fate of these people, the so-called St. Lawrence and Southern Hypotheses, are reviewed. The origins and significance of the Kwedech appellation are discussed. The genesis of the current St. Lawrence Iroquoian taxonomy, and the problems arising from the use of this model, are examined in the light of Iroquoian archaeology in Jefferson County, New York, eastern Ontario, and southern Quebec. The several hypotheses which have been proposed to explain the disappearance of the St. Lawrence Iroquois prior to A.D. 1600 are discussed. The paper concludes with a proposal to adopt a new taxonomy in which archaeologically distinct entities (tribes?)) are demonstrable spatially and temporally in the vast region now homogeneously attributed to the St. Lawrence Iroquoians as a single people. Problems regarding the use of ^{14}C *dates to create Iroquoian site sequences in this context are discussed.*

Introduction

I would like to thank the Chenango Chapter of the New York State Archaeological Association, and Dr. Richard Hosbach in particular, for this opportunity to discuss the St. Lawrence Iroquoians with such a large gathering of Iroquoianists. While many here today are familiar with most of the Iroquoian groups under discussion - some may not be familiar with "the new boy on the block," the St. Lawrence Iroquoians, the people Jacques Cartier met in 1534. I would like to relate to you briefly the fascinating story of how over the past 200-odd years Cartier's Stadaconans and Hochelagans have emerged as the St. Lawrence Iroquoians. I would also like to provide you with a glimpse of the course St. Lawrence Iroquoian archaeological research appears likely to steer over the next few years.

Earliest Records

Unlike the Five, later Six, Nations of the Iroquois Confederacy who remain among us to this day, the Iroquoians Jacques Cartier met in 1534 had disappeared from their homeland in the St. Lawrence Valley by 1603 when Samuel de Champlain visited this region. As a result they were not extant to be named by the European explorers and missionaries as were the other Iroquoians which will be discussed today. Neither are there voluminous records to describe these people (Biggar 1924; Cartier 1580).

These Iroquoians had first encountered Europeans early in the sixteenth century, possibly as early as the second decade when Norman and Breton fishermen were making landfalls in these latitudes. In a description of events which took place prior to 1539, an account regarding the Parmentier brothers records how it was their experience in the New World that:

> When the fishing season ends … they [the Indians] return with their catch in boats made of bark of certain trees called Buil to go to warmer countries - we know not where [Hoffman 1961: 170; 1963:14; Ramussio 1556:417, 423-424].

Jacques Cartier's remarks describing the Indians he met on Greenly Island at Blanc Sablon in June 1534 are remarkably similar. Cartier related in part:

> There are people in this coast ... [who] are wide savage folk .... They have canoes made of birch-bark [bouays de boul] in which they go about.... Since seeing them I have been informed [presumably by his crew or other French crews who were familiar with this region] that their home is not at this place, but they come from warmer countries to catch seals and to get other food … [Biggar 1924:22-23].

It is not certain whether Thomas Aubert's encounter with the Natives in 1508 is an earlier experience in this long sequence of Norman and Breton encounters with the Indians from the St. Lawrence Valley of which the accounts by the Parmentier brothers and Cartier are but the recorded incidents. In any event these accounts, which are widely separated in time, indicate that it had long been common knowledge that Norman and Breton pilots were in contact with the Indians from warmer climes who visited this coast as far north as the Grand Bay and the Strait of Belle Isle. The Basque identifica-

tion of the Indians who were perpetuating this seasonal pattern of visits, which included those Iroquoians from the Canada region who had killed members of Cartier's party in 1535-1536, serves to endow credibility upon the suggestion that Parmentier prior to 1529 and Cartier in 1534, and possibly others following Aubert since 1508, had encountered Iroquoians who lived on the St. Lawrence River. This is not to claim that Iroquoians alone were participants in these events. The part played by Algonquians, principally Montagnais, is not germane in the context of this work.

Nevertheless, it remained for Jacques Cartier to provide the earliest documented first-hand account of an Iroquoian encounter with Europeans. In July, 1534, at Gaspe near the mouth of the St. Lawrence River Cartier encountered some 300 Iroquoians from Stadacona, their village near present-day Quebec City, who were making one of their several seasonal visits to this region to fish. These people too had come to the Gulf of St. Lawrence from warmer climes (Biggar 1924:62). Later during this voyage at Natashquan west of Anticosti Island, Cartier met yet another group who came from warmer climes (Biggar 1924:77). Clearly these people were familiar with the French fishing fleet farther to the north in the Strait of Belle Isle.

The following year Cartier ascended the St. Lawrence River to Stadacona with the help of the Iroquoian guides he had kidnapped in 1534, and went on up the St. Lawrence River to visit the Hochelaga, Iroquoians whose village was located where Montreal now stands. After a few hours stay in Hochelaga, Cartier returned to Stadacona where he spent the winter of 1535-1516 before returning to France.

In 1541 Cartier returned to establish a colony in the "Canada" region, the Stadaconan name lie used for the riverside region between Ile aux Coudres some 90 km downriver from present-day Quebec City, and present-day Three Rivers, approximately. Where he had been more or less welcomed as a visitor in 1535, he was not welcome as a settler in 1541. The hostility he encountered, coupled with his determination to ensure that he received full credit from Francis I at first hand for his discovery of diamonds and gold near modern Quebec City, prompted Cartier to abandon his plans for settlement and to return to France in the spring of 1542. Unfortunately for the reputation of the lands discovered by Cartier, neither the diamonds nor the gold he brought to the king were genuine.

In 1542 Jean-Francois de la Rocque, Sieur de Roberval arrived with more settlers to reinforce the colony he expected Cartier to have founded the year before. Having fortuitously met Cartier in the harbour in St. John's Newfoundland, Roberval learned that Cartier had not been able to establish a colony over the period 1541-1542 as planned. Nevertheless, Roberval proceeded to the site near present-day Quebec City which Cartier had selected for the colony. In the spring of 1543 Roberval abandoned his plan to settle in the Canada region and returned to France. Hostility with the Natives was almost certainly a major reason as Carleill explained in April 1583 (Quinn 1979:27-34), but scurvy and the realization that they had not found the El Dorado they sought may have also have hastened their departure.

Spain was concerned that this French activity was an intrusion into the regions claimed under the Treaty of Tordesillas of 1494 which had divided the New World between Spain and Portugal. On September 22, 1542, French and Spanish Basque fishermen, who had for some years made a practice of fishing in the latitudes of the new-found lands, were interrogated in Fuenterrabia, Spain, by Spanish authorities seeking to learn more about French activity in these latitudes. The depositions taken at that time (Biggar 1930:460-4) relate how these Basque fishermen had met a fierce people from a warmer land who had long seasonally fished and hunted seals in the Strait of Belle Isle. They explained that some of these people called themselves Canalensis (Barkham 1980:54 n. 18; Lope 1850:154). One of those they met was a chief from the Canada region, and they related to the Basques how he had killed 35 of Cartier's men. The Basque fishermen went on to relate how these and other Natives willingly had come aboard European ships to drink, eat, and trade for European goods with the crew. By 1542 these Natives were able to communicate in French, English, and Gascon (Basque).

Nothing more is heard of events on the St. Lawrence River until c. 1580. Presumably by this time the hostility which had arisen as a result of the Cartier/Roberval attempt to settle in this region had subsided. By 1583 and for the next few years, Breton and Norman, and later Biscayan, merchants secretly sent ships to trade for fine furs in the regions Cartier and Roberval had visited. Some of these crews brought Indians back to France. Among these traders was Jacques Noel, Jacques Cartier's nephew, whose records indicate that by 1583, possibly 1585, he had climbed Mount Royal and bypassed the Lachine Rapids using a channel on the north side of the island, but he makes no mention of the Hochelagans. In January, 1588, Noel obtained a monopoly to trade for furs in these regions as a result of his claim to have inherited the rights granted to Jacques Cartier under the terms of Cartier's charter. By May of that year the merchants of St. Malo had argued so convincingly that they too had long traded for furs in the regions Cartier had visited, that Noel's monopoly was revoked. Later in 1613, these merchants also strongly resisted Champlain's attempt to obtain a fur-trade monopoly in New France. They argued vehemently contradicting Champlain's claim that he had discovered the St. Lawrence River as far upstream as the Lachine Rapids. Among the evidence marshaled by the merchants to refute Champlain's claim was the Supplement to Claudius Ptolemy's work published in 1603 which stated in part:

> for thirty-five years or more [since 1508, Breton, Norman, and Biscain, had]...penetrated deep into the said river, passing Quebec and the lake [Lake St. Peter] ... [where they] had traded in the said lake and above [LeBlant et Baudry 1967:246-247; Pendergast 1985a:79].

They went on to explain how in fact when Champlain reached "the first sault" (the Lachine Rapids) m 1603, there he found,

> an infinite number of people from various provinces of France up to the number of nine or ten barques who all-together had traded at this location [the Lachine Rapids] [LeBlant et Baudry 1967:246-247; Pendergast 1985a:79].

These circumstances directly or indirectly represent the primary and contemporary accounts extant regarding the St. Lawrence Iroquoians after they had encountered Europeans. Sometime during this period (several archaeologists have suggested c. 1580), the Iroquoians living in the St. Lawrence Valley ceased to exist as a distinct entity, having been disbursed or killed.

Identity

William Fenton (1940:167), William Ritchie (1961:27-30), Bruce Trigger (Pendergast and Trigger 1972:3-108), and others have examined the literature to postulate an origin and identity for these Iroquoians. Suffice it here to mention the highlights of the long tale which describes attempts to explain the origin and identity of the Hochelagans and Stadaconans encountered by Jacques Cartier.

The St. Lawrence Hypothesis

Prior to the introduction of the in situ hypothesis proposed by Richard S. MacNeish (1952), on which the present orthodoxy regarding Iroquoian origins is premised, there were two major hypotheses regarding their origin. Both involved major migrations by significant numbers of people. One of these, which has been called the St. Lawrence Hypothesis, would have an undifferentiated Iroquoian homeland on the St. Lawrence River from whence these people moved to become the historic tribes of the Five Nation Iroquois Confederacy and the Huron Confederacy. This concept has its genesis in the writings of Nicolas Perrot, who, writing between 1680 and 1718, related how the Iroquoians had been driven from their St. Lawrence Valley homeland by the Algonquians (Biggar 1924: 161 n. 63; Blair 1911(1):42-3; Perrot 1864). The recounting of this tale by Charlevoix (1923:288-93), Bacqueville de La Potherie (1753:288-94), and Lafitau (1724:101) gave rise to a vague tradition in which the Mohawk homeland was said to have once been located near present-day Montreal, a location later supported by David Cusick (1825). Lewis Henry Morgan, who quoted Cusick in this regard when he published his *League of the Ho-de-no-.sau-nee* (Morgan 1851:4-5), believed the Hochelagans were Huron Iroquois and the Stadaconans were Algonquians. Dawaon (1860:488) reversed this identification making the Hochelagans Algonquians. Later Hale (1883a:10-11) also espoused the St. Lawrence River homeland concept.

By 1851 attempts had begun to equate the Hochelagans with one or another of the historic Iroquois tribes or the Huron. Several of these identifications were proposed usually with reservations or elaborations by Sulte (1882), Hale (1883a:10; 1894), Wilson (1884:81), Douglas (1897), Hewitt (1907), and Beaugrand-Champagne (1936:192). Clarke (1870) claimed that the Seneca and Wyandot (Huron) had lived in separate villages near Montreal. By 1865 Canadian scholars had adopted this location for the Huron (Dionne 1880:57-60; Faillon 1865, 1:424; Ganong 1889:53), and in 1884 Sir Daniel Wilson adapted material from Hale and Clarke to support his version of the St. Lawrence Hypothesis. Wilson claimed that when the Iroquoians left their homeland in the St. Lawrence Valley, the Huron remained behind, and Hochelaga was their principal town. Later when the Huron quarreled with the Seneca, the Huron moved to Western Ontario. Wilson's identification of the Iroquoians in the St. Lawrence Valley as "Huron-Iroquois" would live on in the works of some scholars for much of the twentieth century. Later Beaugrand-Champagne (1937) drew upon Cusick's work to suggest that the Tuscarora too had once lived near Montreal. Dawson (1888:45) suggested the Hochelagans were an ancient group, apart from the historic Iroquoian tribes and confederacies, who shared a common ancestry with the Erie. Subsequently, he suggested that when Cartier arrived, these otherwise unidentified people were living between the Iroquoians and Algonquians, and Hochelaga was one of their last villages. Initially Beauchamp (1894) reverted to the earlier French tradition suggesting that the Hochelagans were Mohawk. Later Beauchamp (1905:110, 134, 137, 147) claimed the Mohawk, Onondaga, and Oneida all once had lived on the St. Lawrence River- the Mohawk near Montreal, the Oneida and Onondaga between present-day Montreal and Kingston. Lighthall (1899) accepted Wilson's identification claiming that the Hochelagans were "Huron-Iroquois" who had migrated from the Huron homeland on Georgian Bay to the St. Lawrence River. Later he (1924:95-6, 106; 1934:106) went on to suggest that offshoots of these "Huron-Iroquois - had given rise to the Mohawk, who subsequently fled the St. Lawrence River region to their historic territory in New York State. There they became historic Mohawk and Oneida. Those who remained behind became the Hochelagans who too later fled the St. Lawrence region to join their erstwhile Mohawk comrades in New York. Others who remained behind became the Algonquian Ononchataronon (Petit Nation) in eastern Ontario. Frank Ridley's (1952a, 1952b) proposal that a Lalonde culture from the Georgian Bay

Region gave rise to the Huron and the Onondaga closely approximates Lighthall's earlier hypothesis. Roland Orr (1914:15) agreed that the Huron had lived on the St. Lawrence River, but he claimed that the Hochelagans were Petun, the Tobacco Nation. Alfred Bailey (1933:105) would have the Mohawk at Stadacona and the Huron, or the Onondaga, at Hochelaga. Norman Emerson (1954) suggested that the Hochelagans and Stadaconans were the remnants of a proto-Neutral group who remained in the St. Lawrence River Valley after the main body had moved westward to become the historic Neutral and Huron. Until recently most maps showing the location of the Iroquoian groups indicated that the St. Lawrence River Valley was occupied by the "Huron" or the "Huron-Iroquois" when Cartier arrived as is evidenced by Parker (1922: 136), Jenness (in seven editions 1932-1977:290), and Driver (1961).

The Southern Hypothesis

The alternative Southern Hypothesis, which post-dates the St. Lawrence Hypothesis, has the Iroquoians originating near the mouth of the Ohio River from whence they migrated northeastward becoming corn farmers on the way. In this context Herbert M. Lloyd postulated in his annotated 1904 edition of Morgan's *League* that a group ancestral to the Mohawk-Onondaga-Oneida and Huron crossed to the north shore of the Great Lakes at present-day Detroit/Windsor and continued eastward along the north shore of Lake Ontario. At the eastern end of Lake Ontario the Onondaga turned southward into Jefferson County, New York. The Mohawk continued down the St. Lawrence River as far as present-day Quebec City. Other Iroquoians identified by Lloyd as Huron settled at Hochelaga. After Cartier's visit in 1535, Lloyd has the Mohawk drive the Huron from Hochelaga which became the Mohawk capital. Subsequently the Mohawk were defeated by a combined Huron-Algonquian group and forced to flee to the Mohawk Valley where they had joined the Oneida, Onondaga, Cayuga, and Seneca in the League which had been formed by that time. David Boyle (1906:147-58) was an early supporter of Lloyd', hypothesis. In 1916 Arthur Parker published his influential *Origin of the Iroquois* which, having emphasized the unreliability of Iroquoian oral traditions (1916:482), espoused Lloyd's hypothesis of a southern origin. The working hypothesis proposed by Parker would have the Seneca, Susquehannock, and Tuscarora migrate from the Iroquoian homeland near the mouth of the Ohio River to their historic locations on a route south of the Great Lakes. Lloyd suggested that another group consisting of the Huron and undifferentiated Mohawk-Onondaga moved into southern Ontario on a route north of the Great Lakes. Departing from Lloyd's concept, Parker has this Mohawk-Onondaga group, which presumably included the Oneida, extend their territory down the St. Lawrence River as far as present-day Quebec City with their principal villages near where Montreal now stands. War with the Algonquian Adirondack forced the Mohawk-Onondaga-Oneida group to form a defensive league which eventually took in the Seneca and Cayuga. Later this war forced the Mohawk-Onondaga-Oneida group to split. Those who fled to New York State became the "true" Mohawk, Onondaga, and Oneida. Those who remained on the St. Lawrence River he named *Laurentian Iroquois*. It is significant to note that Parker twice (1916:483; 1922:106) created a Mohawk-Laurentian Iroquois synonymy that limits his reference to the *Laurentian Iroquois* to the Mohawk alone. Apart from his views regarding the origin of the League and details regarding the sequence in which the Mohawk Occupied the Montreal area, Parker's working hypothesis (1916:503) closely resembles Lloyd's concept. Orr (1919:13-17) was an early supporter of Parker. Bailey (1933:98) adopted Parker's use of the Laurentian nomenclature and offered four options regarding their identity: they were either a Huron vanguard, or they were Mohawk-Onondaga, or they were a rear guard of the Mohawk-Onondaga, or they were a distinct and separate group. He based the latter conclusion on the philological works of his friend Louis Allen (Orr 1919:13-17).

In 1924 Lighthall (1924:95-6, 106) abandoned the concept of a northern Iroquoian origin in the St. Lawrence Valley in favor of the Southern Hypothesis. Nevertheless, he retained his claim that Hochelaga was a Huron village and that these Huron had driven the other Iroquoians then living on the St. Lawrence into New York State where they had become the historic Mohawk and Oneida. Some years later William Ritchie (1944:26-7; 1965:299-301) closely followed the Southern Hypothesis which had been proposed by Lloyd, Parker, and Lighthall.

In his influential work, Problems Arising from the Historic Northeastern Position of the Iroquois, William Fenton (1940:176-7) proposed four explanations to explain the fate of Cartier's Iroquoians on the St. Lawrence River. His first option would have the Stadaconans join their friends the Huron, while the Hochelagan, who were hostile to the Huron, joined the Iroquois Confederacy in New York State. His second option reversed this arrangement with the Hochelagans joining the Huron and the Stadaconans joining the League. Fenton's third option had both the Hochelagans and the Stadaconans joining the Iroquois Confederacy. In his fourth option, which anticipated by some twenty years or more an opinion currently held by several scholars, Fenton made the Iroquois on the St. Lawrence River a distinct people who were assimilated by the Huron and the Five Nation Iroquois. He called them "Laurentian" thereby introducing a new meaning for the *Laurentian Iroquois*. It will be recalled Parker had reserved the name *Laurentian* for an undifferentiated Mohawk-Onondaga-Oneida group and later for the Mohawk alone (Parker 1922:106).

Linguistics

Linguistic Studies of the Iroquoians in the St. Lawrence Valley are based on some 200 items contained in the vocabularies collected by Jacques Cartier (Hoffman 1961:156-60, 217-27) as a result of his voyages in 1534 and 1535-1536. Some of these items were recorded on the St. Lawrence River as a result of Cartier's visits to the Stadacona and Hochelaga regions while other items were recorded in France from the natives Cartier took back with him. There is no indication which items can be attributed to each of these sources. Neither are the several sources for the Cartier vocabularies consistent. There are three manuscript versions of Cartier's first account and six of his second, and it is not certain that any of these are originals.

The earliest study of Cartier's vocabularies by the philologist Abbe Etienne Faillon resulted in their being identified as Huron-Iroquois (Faillon 1865). Four years later Abbe Jean André Cuoq published the results of his work in which he identified them as Iroquois, probably Mohawk (Cuoq 1869:198-204). Subsequently, several works confirmed one or another of these conclusions (Barbeau 1961; Hale 1883a. 1894: Hoffman 1959: Robinson 1948).

In 1961 Floyd Lounsbury suggested that the Cartier vocabularies represented a separate Iroquoian language which he named *Laurentian*. Subsequently he explained that the Cartier vocabularies must have been derived from speakers of more than one Iroquoian language. He found that some words were clearly aligned with Onondaga, Cayuga or Seneca: others could be Mohawk. Others could be a conservative or archaic Huron dialect. Because these three sets of words are mutually exclusive, Lounsbury concluded that the speakers spoke at least three languages. If *Laurentian* was one of these, it was but a local dialect of that language and the other two languages must have been spoken by visitors, migrants, or captives resident in the region visited by Cartier. But he was not certain that the residue of items in the vocabularies, those which do not fit these three categories, constituted a fourth language. As a result, he concluded in 1978 that it was not yet possible to state that *Laurentian* was a distinct language separate from the other Iroquoian languages (Lounsbury 1978:335).

In 1982 Marianne Mithun published a paper. "The Mystery of the Vanished Laurentians," in which she compared words from the Cartier vocabularies with cognates from other Northern Iroquoian languages. She found that some sound changes were shared with words in other Northern Iroquoian languages. These changes were not those found in any other single Iroquoian language. She also found that not all the words in the Cartier vocabularies exhibited the sound changes in the same environments, as they might be expected to if a single language was involved. Her conclusion that the vocabularies were a composite of dialects, possibly languages, that did not represent a single dialect/language (Mithun 1982:242) confirmed Lounsbury's findings. Mithun went beyond this to conclude that at least one of the languages/dialects in the vocabularies was not ancestral to any of the other attested Iroquoian languages. Since some feature of the words in the vocabularies were not shared with any other known Iroquoian language, it must be assumed there was a separate and distinct *Laurentian* language. Mithun Suggested:

> Whoever the Laurentians were, members of the group were clearly Iroquoian and clearly in contact with other Lake Iroquoian people [Huron, Wyandot, Five Nation Iroquois, and Susquehannock] ... As a whole the vocabularies seem about equidistant from all the Lake Iroquoian languages [Mithun 1982:242].

This conclusion closely parallels a similar conclusion derived from St. Lawrence Iroquoian archaeological data, particularly diagnostic ceramic attributes. These too suggest that the St. Lawrence Iroquoians were in contact with several of the Five Nations and Huron Confederacy tribes from the middle prehistoric era.

At this juncture it might be well to recall that there was considerable speculation in the late nineteenth century regarding a possible genetic link between Basque and the Iroquoian and Algonquian languages on the basis of certain parallels of grammatical structure (e.g., Hale 1883a, 1883b:187; Reade 1888:34). While this speculation must today be seen as groundless, sporadic comments by sixteenth-century European fishermen and chroniclers indicate the likely presence of a trade language established during earlier periods of contact between the Basque and the Indians in the Newfoundland and Cape Breton latitudes, and in the Strait of Belle Isle in particular (Biggar 1930:454-9; Lescarbot 1911(2):24). In the latter region the Basque came into contact with the Iroquoians from Stadacona. It has been argued that the word Iroquois is a Basque word which made its way into Algonquian and Iroquoian languages as a result of these contacts (Bakker 1989).

The "Kwedech"

Jacques Cartier's account of his encounter with the Stadaconans at Gaspe in 1534 recounts how the "Toudamans" from the south, which included the Micmac at least, waged war continually against the Stadaconan. Two years earlier they had attacked the Stadaconans on an island, probably Ile Verte, off the mouth of the Saguenay River (Biggar 1924:177-8; Hoffman 1961:204; Thevet 1557:401). In keeping with the St. Lawrence Hypothesis described earlier, then current, Abbe Cuoq (1869:198-204) suggested that the language recorded in the Cartier vocabularies was Mohawk. In 1888 Silus Rand rendered the Micmac word for Mohawk as *Kwedech* (Fenton 1978:321; Fenton and Tooker 1978:479; Rand 1888:172). Bernard Hoffman (1955:73-80, 1959, 1961:148-155, 211), no longer believing in a Mohawk homeland in the St. Lawrence Valley, suggested that the language of Cartier's Iroquoians be known as *Kwedech* (Trigger and Pendergast 1978:360).

Complementary Micmac (Toudaman) legends regarding their hostilities with the Stadaconans indicate that the Kwedech homeland was on the Restigouche River (Rand 1894:200-18; 294-7) or on the Nepisiquet River (Cooney 1832:170) from whence they were driven by the Micmac. Roy Wright (1989: personal communication) has interpreted these Micmac legends to indicate that the Restigouche and Nepisiquet rivers were but Kwedech assembly areas from which they attacked the Micmac. However persuasive this historiography may be, it is tempered by intrusions into New Brunswick by the Mohawk (JR 28:37, 45:73), who at that time could also have been known to the Micmac as Kwedech (Fenton 1978:321; Fenton and Tooker 1978:479; Rand 1888:172).

Archaeology

Over much of this period there was a growing awareness of the significance of Iroquoian archaeological remains which had a bearing on the origin of the Iroquoians and the identity of the Iroquoians who had lived in Jefferson County, New York, eastern Ontario, and Southern Quebec.

Jefferson County, New York

The earliest recorded interest in St. Lawrence Iroquoian archaeological sites dates from 1802 when the Rev. John Taylor recorded the size, shape, and location of five circular earthworks near Sandy Creek in Jefferson County, New York (Taylor 1850). In 1817 De Witt Clinton mentioned these sites in a paper he delivered as president of the Literary and Philosophical Society of New York (Clinton 1820). However, it remained for Ephriam G. Squier in 1858 to compile a detailed survey of the archaeological sites in Jefferson County under the auspices of the New York Historical Society and the Smithsonian Institution (Squier 1851a, 1851b). This gave rise to several largely derivative works of which those by Franklin B. Hough (1850, 1851, 1854), Henry Woodworth (1895), and Edgar C. Emerson (1898) are noteworthy. William M. Beauchamp included much of this information in *The Aboriginal Occupation of New York* (1900). In 1906 Mark Raymond Harrington investigated fourteen archaeological sites in Jefferson County for the Harvard Peabody Museum, where his field notes are on file. Harrington (1922:339) published a report on this work in Arthur C. Parker's Archaeological History of New York in which he identified these sites as Onondaga following Beauchamp's (1900:12) earlier identification. While Harrington thanked local collectors for their help in locating sites and some for having donated their extensive collections to the New York State Museum, he noted several times how by 1906 these same collectors of "Indian relics" had ravaged the archaeological sites in Jefferson County. In 1921, Alanson Skinner provided a general account of his excavations on the Putman Site, Jefferson County in his *Notes on Iroquois Archaeology*. The next year Arthur C. Parker's *Archaeological History of New York* appeared which included a section locating Jefferson County archaeological sites. Parker (1922:572) identified these Iroquoian sites as Onondaga.

By 1926 the Jefferson County Historical Society had formed an "Indian Committee" under Charles H. Cogden which by 1929 had been chartered as the Hough Chapter of the New York State Archaeological Association. The chapter held annual dinners in Watertown to which they invited as speakers several well known archaeologists including Alvin Dewey, Mark Harrington, Arthur Parker, and Henry C. Shetrone.

Some idea of the destruction caused by the collectors in Jefferson County can be gained from contemporary extensively illustrated articles in the *Watertown Times*. The Times published an invitation to the public to spend the weekend digging what the writer described as "the last opportunity to see a previously untouched ancient Indian village in this region." The Monday edition noted that over the weekend some 1500 men, women, and children "students of archaeology" turned out under ideal weather with picnic lunches and shovels to dig in spots indicated by Mr. Elnathan Lucas. Several pictures show the large crowd which "went to work with enthusiasm."

Years later William A. Ritchie visited many Iroquoian sites in Jefferson County, but he did not publish an account of his work there (Funk 1977). During the 1960s the State University of New York at Buffalo (SUNYAB) conducted surveys in Jefferson County under the late Marian White in anticipation of SUNYAB undertaking large-scale Iroquoian excavations. Work by Robert Weber (1968) and the Reverend Earl Sidler III (1971) is noteworthy in this regard. During this period Peter Miller excavated the site at Depauville. Commencing in 1968 Peter Pratt and Marjorie Burger (now Marjorie Pratt) excavated the Camp (Fort) Drum 1 Site that Merrill Waters had surveyed earlier. David Guldenzopf conducted excavations on this site over the period 1988-1989 in anticipation of an extensive long-term excavation program by the AFAR Foundation, Cambridge, Massachusetts, under the direction of Richard MacNeish and James Pendergast. In 1989 William Engelbrecht, assisted by Earl Sidler and Michael Walko, undertook a survey of Jefferson County Iroquoian archaeology in preparation for commencing a major and extensive excavation program. Some 60 Iroquoian sites were located (Engelbrecht, et al. n.d.).

Lake Champlain Watershed

Commencing c. 1825 an accumulation of Iroquoian ceramics in Vermont suggested the presence of a St. Lawrence Iroquoian population in the Lake Champlain Valley (Haviland and Power 1981; Huden 1971; Perkins 1876, 1909, 1971). In 1961 Schuyler Miller analyzed a significant sample of Iroquoian ceramics in several Vermont institutions revealing the presence of a full range of proto-Iroquois ware from the Castle Creek Owasco through to the late St. Lawrence Iroquoian. The St. Lawrence Iroquoian Ware closely resembles that from St.

Lawrence Iroquoian sites in eastern Ontario and Southern Quebec and from further afield in Jefferson County, New York. (A copy of Miller's paper is on file in the Archaeological Survey of Canada. Canadian Museum of Civilization). Recently Haviland and Power (1981:136, 140) noted the presence of this proto-Iroquois and St. Lawrence Iroquoian pottery (1981:144) and suggested that the St. Lawrence Iroquoian ware was either made by the Abenaki potters to simulate St. Lawrence Iroquoian pottery, or the Abenaki obtained it in trade with the St. Lawrence Iroquoians (1981:144, 168), presumably from those nearby in eastern Ontario and southern Quebec. Haviland and Power rejected the presence of a St. Lawrence Iroquoian population in Vermont and. by extension, excluded them from the Lake Champlain Valley. Discussion of Iroquoian ceramics at the Campobello colloquium in August 1987 concluded that these specimens were from "find spots," as distinct from habitation sites, which reflected a transient St. Lawrence Iroquois presence in the Lake Champlain Valley. Bearing in mind that these "find spots" have not yet been investigated archaeologically, except for surface collecting, this conclusion appears premature. Fortunately, James Petersen's paper "Evidence of the St. Lawrence Iroquois in Northern New England: Population Movement, Trade or Stylistic Borrowing," presented at the Northeastern Anthropological Association annual meeting in March 1989 at Montreal, has re-opened discussion regarding the nature of the St. Lawrence Iroquoian presence in the Lake Champlain Valley and elsewhere in New England and Maine. Presumably the outcome of archaeological investigations of Iroquoian and Iroquoian-like sites in this region will have significant bearing on our understanding of St. Lawrence Iroquoian sites in the Richelieu River Valley (Chapdelaine 1989a).

In a paper presented at the symposium *Vermont and Canada: Regional Ties that* Bind held in Montpelier, Pendergast (1990) noted how, using ceramics, the ancestry of the St. Lawrence Iroquoians in Vermont had been traced in the Lake Champlain Valley from the Castle Creek Owasco period at least through the Oak Hill Horizon to a terminal period represented by some St. Lawrence Iroquoian archaeological sites in eastern Ontario and Southern Quebec. Trigger (1985:147) has suggested that the St. Lawrence Iroquoians on the St. Lawrence River were destroyed by the Iroquois, probably Mohawk, raiding into the St. Lawrence Valley for European material as early as 1570. Certainly by 1580 French fur traders began operating as far up the St. Lawrence River as the Lachine Rapids (LeBlant et Baudry 1967:246-7; Pendergast 1985a:79-80; Quinn 1979(4):304-311). Pendergast (1990) has suggested that the movement of these Iroquois, essentially Mohawk, through the Champlain/Richelieu Valley to gain access to European material on the St. Lawrence River appears to have resulted in the destruction of the St. Lawrence Iroquoians in Vermont early in the contact era as well as any Algonquians who denied them access to this material.

Ontario

Concurrent with this activity in Jefferson County and Vermont, there was in Canada a growing interest regarding the origins of the Iroquoians generally and the identity of Cartier's Hochelagans and Stadaconans in particular. In 1860 Sir John William Dawson (1860:430-49) published a paper in which he described artifacts he had collected from a sand pit then being excavated in downtown Montreal. He believed these were the remains of Hochelaga (Dawson 1860:446), and he was quick to note the similarity between this material (Dawson 1861:362-73) and that which W.E. Guest had collected in 1854 on the Roebuck Site in Grenville County, Ontario, some 120 mi (193 km) to the west (Guest 1856). In 1891 George Laidlaw excavated several Huron sites some 150 mi (240 km) further to the west on the axis of the Trent River in Victoria County, Ontario (Laidlaw 1891:76-7). Laidlaw and David Boyle (1891:25) both recognized the similarity between some of the artifacts they excavated in Victoria County, particularly the ceramics, and those collected by Dawson in Montreal. Wilson (1884:81) had noted these similarities earlier and concluded that the Huron had lived in the Montreal area and that Hochelaga was a Huron town. Laidlaw anticipated by some fifty-five years an approximation of opinions currently held by some archaeologists when he suggested that these sites in Victoria County were the villages of the Hochelagan refugees who had filed the Montreal area. He speculated :

> this country [Victoria County] was inhabited by a people which were absorbed or exterminated by the Hurons, or else they sought shelter with the Hurons from the savage forces of the Iroquois. These people may or may not have been the Hochelagans of Cartier; the evidence further shows that they were. So let us extend their territory to this region [Victoria County on the eastern edge of Huronia] [Laidlaw 1891:77].

Significantly, and surprisingly in view of the similarities and his familiarity with Squier's work in Jefferson County, Guest did not associate the artifacts he excavated at Roebuck with those Squier had excavated earlier in Jefferson County, nor had Dawson connected his material with Squier's. Laidlaw saw the connection between his material in Victoria County and Dawson's material from Montreal, but its similarity with that from Roebuck and Jefferson County appears to have escaped him. Boyle did not connect the Beckstead Site, which he visited twice (Pendergast 1966:63), with Roebuck or Dawson or with the Jefferson County sites, nor did he remark on the similarity of Beckstead ceramics with some from Huron sites in Victoria County. It remained for William J. Wintemberg to recognize the full range of these similarities and their significance within the orthodoxy prevailing at that time.

In 1936 the results of Wintemberg's extensive excavations in the Roebuck Site in 1912 and 1915 were published by the National Museum of Canada. In 1937 Sir Francis Knowles published his analysis of the 85 human burials Wintemberg

had excavated at Roebuck. Having identified only four of these as adult male residents of the village, the remaining 31 being the mutilated remains of captive males, Knowles has raised questions regarding St. Lawrence Iroquoian burial practices which remain to be answered (Pendergast 1983:49-56) including the possibility of their having small ossuary burials (Pendergast 1983:53, 1985b:33). Bruce Jamieson's (1983b) analysis of the Roebuck specimens, and the scattered bone in particular, provides another opinion on the number of individuals represented and a detailed examination of prisoner sacrifice and cannibalism on the site.

Wintemberg's work, which deserves particular recognition as having been the first definitive archaeological report on a St. Lawrence Iroquoian village, identified the Dawson Site in Montreal as having been inhabited by Iroquoians having the same material culture as those at Roebuck (Wintemberg 1936:90, 122). He also listed eight other sites in eastern Ontario and three in southern Quebec, all on the St. Lawrence watershed which shared this material culture (Wintemberg 1936:121). Wintemberg's inventory provided the earliest glimpse of Iroquoian settlement patterning and long survived as the definitive list of Iroquoian sites in this region until the 1950s and 1960s when it was enlarged significantly by the sites discovered by George Gogo near Summerstown, Ontario. Although Lloyd (1904), Beauchamp (1905), and Parker (1916) had earlier identified the Iroquoians in Jefferson County as being Onondaga, for some reason Wintemberg chose to refer to Alanson Skinner's later and largely derivative work (1921:19, 29-30, 139) when he identified the material he excavated at Roebuck as Onondaga (Wintemberg 1936:14, 52, 57, 80. 82, 122). Wintemberg (1936:31, 49, 50, 63, 72) made several comparisons of Roebuck artifacts with those from Laidlaw's Huron sites in Victoria County, but he did not attempt to equate these Huron sites with Roebuck or with Dawson's Site in Montreal, nor did he equate these Huron sites with the "Onondaga" sites in Jefferson County. Having made this Onondaga connection premised on the presence of a common material culture, Wintemberg returned to an orthodoxy then current. He resorted to the hypothesis which would have a group of undifferentiated Mohawk-Onondaga-Oneida living on the St. Lawrence River at this time, with Hochelaga at present-day Montreal their major centre (Beauchamp 1905:110, 134, 137, 147; Lloyd 1904: Parker 1916). Wintemberg identified Roebuck, and the sites on the St. Lawrence River with a similar culture, as proto-Mohawk-Oneida-Onondaga, representing a time before this group left the St. Lawrence to separate into these historic tribes. It is noteworthy that he did not refer to them as *Lawrentians*, the name Parker (1922:106) had reserved for those Mohawk who remained behind on the St. Lawrence after his proto-Mohawk-Oneida-Onondaga group had left the region.

In 1951 John Witthoft published a paper, "Iroquois Archaeology at the Mid-Century", which reflected the archaeological opinions that had been expressed during the six annual Conferences on Iroquois Research (commencing in 1945), and by those scholars comprising the Committee on Iroquois Ceramics which met in Rochester, New York, in October 1947. The consensus was:

> Material from Laurentian Iroquois sites is not merely Onondaga-like; in most details it precisely resembles material from Jefferson County and Onondaga County sites of proto-historic stage.... Laurentian Iroquois must represent an intrusion from Jefferson County (judging by pottery types, pipe form, and bone tools) which became extinct in the early seventeenth century, was absorbed by the Huron and Algonquian [sic] or withdrew to the Onondaga area [Withoft 1951:316-7].

This Laurentian Iroquois consensus continued until 1962 (Trigger 1962:240, 244).

William Ritchie (1961:28) re-examined the Dawson (Hochelaga?) Site material (Pendergast and Trigger 1972) and confirmed the Onondaga identification. Although an undifferentiated Mohawk-Onondaga-Oneida affiliation would linger on (Lenig 1965:70: Noble 1968:270), the trend was clear. By 1966 the certainty that the Iroquoians in the St. Lawrence Valley were undifferentiated Onondaga-Oneida prompted J. V. Wright (1966:4) to call for an end to the use of "Laurentian Iroquois" in favor of Onondaga-Oneida. The Mohawk, by that name and by Parker's *Laurentian* synonymy would at last be removed from the St. Lawrence Valley.

In Situ Hypothesis

In 1943 James Griffin questioned the validity of the longstanding migration hypotheses in the light of contemporaneous archaeological evidence. Misgivings in this regard led him to suggest that the Iroquoians were the in situ descendents of an indigenous Woodland people. Bertram Kraus (1944:311) supported Griffin in this regard. However, it remained for Richard S. MacNeish (1952) to marshal the archaeological evidence from the six Conferences on Iroquois Research and the Rochester Ceramic Conference in 1947 to demonstrate the validity of the Iroquoian in situ development that Griffin had postulated. Apart from his identification of Cartier's Iroquoians as Onondaga-Oneida, and some technical ceramic modifications, MacNeish's hypothesis has stood the test of time for nearly forty years remarkably well. To this day it remains the plinth on which Iroquoian studies, in this context, are constructed.

MacNeish (1952:71) suggested that the Cartier vocabularies (Hoffman 1961:217) were more likely to be Oneida than Mohawk. Furthermore, the similarities between Onondaga and Oneida ceramics, coupled with the early concentration of his Onondaga ceramics in Jefferson County, prompted MacNeish to locate the in situ development of an undifferentiated Onondaga-Oneida group in Jefferson County. Subsequently, according to MacNeish's application of his in situ hypothesis

to this region, this still undifferentiated Onondaga-Oneida group expanded moving down the St. Lawrence River at least as far as present-day Quebec City. MacNeish's hypothesis involved a northward movement of Iroquoians reciprocal to the southward movement which had been postulated by Lloyd (1904) and Parker (1916:1922) to explain events in this general area. Nevertheless, MacNeish (1952:73) stated clearly, "The archaeological materials from Hochelaga [the Dawson Site] are Onondaga-Oneida, not Mohawk." if indeed Dawson's Site in Montreal is the site of Cartier's Hochelaga (Pendergast and Trigger 1972).

Where Wintemberg had equated Dawson's Hochelaga with Roebuck and several similar village sites in eastern Ontario and southern Quebec and identified them as undifferentiated Mohawk-Onondaga-Oneida in accordance with the southern migration hypothesis then current, MacNeish (1952:57, 66, 73, 84) proposed an in situ development of undifferentiated Onondaga-Oneida in Jefferson County, some of whom migrated northward into the St. Lawrence Valley where they were located at Hochelaga and Stadacona when Cartier arrived.

That same year, 1952, William Ritchie wrote regarding the genesis of his Chance Horizon:

> archaeological indications suggest to the writer the hypothesis of a northern New York separation in the Jefferson County area, the parental proto-Onondaga remaining behind until later; the proto-Mohawk-Oneida moving into eastern New York bearing the northern elements which were to enter into the composite Chance horizon culture [Ritchie 1952:27].

Ritchie (1952:25) also remarked on the presence of Mohawk pottery in MacNeish's Onondaga and Oneida pottery type series. Ritchie (1952:25) noted three possibilities which would explain this anomaly, but he favored "a culturally retarded Mohawk development [that] adopted only some of the ceramic types (the Mohawk types) in the Onondaga-Oneida assemblage.- MacNeish (1952:73) had earlier explained this situation to be a reflection of the ceramic diffusion which had taken place with the Onondaga-Oneida being the donor group.

St. Lawrence Iroquoians

Taxonomy Origins

Over the period 1946-1966, James Pendergast, and in 1964, James Wright (Chapdelaine 1989a: 178-224) excavated material from several Iroquoian sites in eastern Ontario and Southern Quebec. Subscribing to MacNeish's hypothesis, Pendergast (e.g., Pendergast 1966:79) attributed these sites to an undifferentiated Onondaga-Oneida and upon occasion to the Onondaga. In a discussion which took place at McGill University in 1966, Trigger recounted to Pendergast his theory (Trigger 1963:94) that Cartier's Iroquoians were a separate Iroquoian group apart from the Five Nation Iroquois, whose material culture reflected, in part, their having adopted certain eastern Iroquois material culture traits, particularly the Onondaga-Oneida ceramics described by MacNeish (1952). Subsequently Trigger explained (Pendergast and Trigger 1972:70-71) how the linguistic evidence presented by Bernard Hoffman (1959) and Lounsbury (1961) led him to conclude that Cartier's Iroquoians were distinct. Lounsbury's later work Iroquoian languages (1978:340) further demonstrates these linguistic differences. As a result Pendergast discontinued the Onondaga-Oneida identification of the archaeological sites in eastern Ontario in favor of the more noncommittal "Iroquoian inhabitants of the St. Lawrence River valley" (Pendergast 1967a:68). By 1966 Trigger (1966, 1967:65, 1968) had adopted the name "St. Lawrence Iroquoians" for these people, a name akin to that which earlier had been suggested by Bernard Hoffman (1955:78,79; 1961 passim) when he chose to distance himself from the undifferentiated Onondaga-Oneida-Mohawk identification then current. Hoffman and Trigger were unique among the Iroquoianists in this regard.

In 1969 James Tuck presented his doctoral dissertation, *Iroquois Cultural Developments in Central New York*. Having examined the Jefferson County archaeological material and the material excavated by Pendergast and Wright in the St. Lawrence Valley, Tuck concluded that the St. Lawrence Iroquoia (sic) were "not Onondaga (Tuck 1969:397-9). By exclusion Tuck had separated the Iroquoians who lived in the St. Lawrence River Valley from the Onondaga. Earlier Donald Lenig in his influential work *Oak Hill Horizon* (1965) had demonstrated the validity of MacNeish's (1952:70-4, 83) in situ hypothesis as regards the Mohawk thereby distancing the Mohawk from a Mohawk-Onondaga-Oneida lineage. Dean Snow's Mohawk Valley Project (1982, 1985: personal communication) has not indicated a need to revive the Laurentian Iroquois concept regarding Mohawk origins on the St. Lawrence. Peter Pratt (1976:148), and lately the Chenango Chapter of the NYSAA (Richard Hosbach. 1990: personal communication, personal observation) has demonstrated that the Oneida were not the Iroquoians of the St. Lawrence Valley.

The conclusion was clear: Bernard Hoffman and Bruce Trigger were correct. The Iroquoians in the St. Lawrence Valley were neither the antecedents of the Five Nation Iroquois tribes nor were they the antecedents or descendents of any of the other named historic Iroquoian tribes or confederacies. They were a distinct group of Iroquoians whom Bruce Trigger had named "St. Lawrence Iroquoians."

Apart for minor differences regarding the use of St. Lawrence *Iroquoians* by some scholars (Barré et Girouard 1978:43; Clermont, Chapdelaine, et Barré 1983:169; Chapdelaine 1989a:14; Pendergast 1973; Snow and Lanphear 1989:302; Trigger 1967:65), and St. Lawrence *Iroquois* by others (Girouard 1975:5; Marois 1978:107; Wright 1972b:86), most Iroquoianists have accepted Jacques Cartier's Iroquoians and their antecedents as a discreet group of Iroquoians. Nevertheless,

the *Lawrentian Iroquois* aberration continues to appear from time to time in the works of reputable scholars (e.g., Dobyns 1989:288-9) who remain unfamiliar with the rigid particularization intended by Parker when he introduced the *Lawrentian* classification.

Ontario

In 1970 James Wright re-excavated the heavily damaged Roebuck Site where he was able to obtain, for the first time extensive St. Lawrence Iroquoian settlement pattern data (Wright 1979:68). In 1972 Pendergast excavated the Stewart Site (Wright 1972), the first St. Lawrence Iroquoian fishing station to provide settlement pattern data. In 1979 Phillip Wright and Peter Engelbert continued this work, excavating portions of a large midden when the site was threatened by a housing development.

In 1975 Pendergast (1975:47-55) proposed an in situ hypothesis to explain the origin of the St. Lawrence Iroquoians in the St. Lawrence Valley generally and in the regions above Hochelaga in particular. He postulated that c. A.D. 1250 Pickering and Pickering-mixed Canandaigua Owasco people extended their influence, including primitive agriculture, into the area around the foot of Lake Ontario in Canada and the United States and eastward into the St. Lawrence River Valley regions that had long been occupied by an indigenous, riverine-oriented Point Peninsula people (MacNeish 1952:83; Wright 1966). This Pickering influence, initially restricted to the north shore, initiated an in situ development which subsequently spread from that area down the St. Lawrence River culminating in the St. Lawrence Iroquoians whom Cartier visited at Hochelaga in 1535. The Pickering-mixed Canandaigua-Owasco influence, which was almost wholly restricted to the southeast shores of Lake Ontario, initiated a more local development in that area which, in part, culminated in the St. Lawrence Iroquoians whose archaeological remains are found in Jefferson and St. Lawrence Counties, New York. Subsequently, J.V. Wright's excavation on Gordon Island in the Thousand Islands in 1978 (Wright n.d.: 7) and Chapdelaine's examination of the material from Pointe aux Buissons and the Gogo collection from the Lake St. Francis area (Chapdelaine 1989: personal communication) has demonstrated that like the Pickering element, this Owasco component also extended down the St. Lawrence Valley at least as far east as Lake St. Louis.

As might be anticipated from events which took place farther west among the Ontario Iroquois (Wright 1966), c. A.D. 1350, this Pickering-Owasco presence on the St. Lawrence was followed by Middleport. Sites showing evidence of this Middleport influence are located on the banks and islands of the St. Lawrence River (Pendergast 1964b) where sites had earlier reflected a Pickering-Owasco influence. There is the suggestion that an increase in population took place on this time level, probably as a result of the increased importance of agriculture. Trigger has suggested that after this period of Pickering influence the St. Lawrence Iroquoians "developed separately from their western neighbours" (Trigger 1985:96).

Between A.D. 1350 and A.D. 1400 there was a marked change in settlement patterns. The riverine-oriented campsites showing a Middlepoint influence were replaced by a small agriculturally oriented inland villages and campsites located on light sandy soil not far from the St. Lawrence River. The Berry Site (Pendergast 1967b) and the small site nearby at Cazaville are typical of these early village sites. As might be expected, there was a significant increase in population at this time. By c. A.D. 1425, on the Salem Site time level, a cluster of contemporaneous and sequentially occupied large inland villages appears in the Summerstown area (Pendergast 1966, 1968, 1969, 1974). It is important to note that this expansion took place in the vicinity of Lake St. Francis, an area favored by aboriginal people continually and increasingly since PaleoIndian times (Kenyon 1959:52; Ritchie 1965:17).

Circa A.D. 1450, a second cluster of sequentially occupied and contemporaneous large inland agricultural villages occur some 50 mi (80 km) southwest of the Summerstown cluster in the vicinity of Prescott (Wintemberg 1936:121; Pendergast 1962; 1988). The Roebuck Site (Wintemberg 1936), the Maynard-McKeown Site (Pendergast 1988), and the McIvor Site (Chapdelaine 1989a) are probably the best known of these. Unlike the Summerstown cluster the Prescott villages are not adjacent to an area where there is known to have been a long sequence of Iroquoian development akin to that which is known to have occurred in the Lake St. Francis and Lake St. Louis areas. Pendergast suggested that the Prescott village cluster- may have originated with the movement of a portion of the Summerstown people from the heavy glacial till and rough boulder-strewn soil which predominates in this area onto the light, stone-free sandy soil which predominates in the Prescott area. There the soil is much better suited to Iroquoian agricultural methods.

Circa A.D. 1525-1550, there is evidence of a significant Huron influence on at least two of the larger villages in the Summerstown cluster and on the Maynard-McKeown Site in the Prescott cluster (Pendergast 1968, 1988). This influence continues into protohistoric times in the eastern portion of the area and is evident by the Huron influences noted on the Dawson Site (Pendergast and Trigger 1972) which, if it was not Cartier's Hochelaga, was contemporaneous, or nearly so, with Hochelaga.

In 1979 Bruce Jamieson located a large double-palisaded village site near Spencerville, Ontario - the first Iroquoian site in the Prescott cluster to be discovered since Wintemberg's survey of this area prior to 1920. This raises again the possibility of there being still other village sites unlocated in this cluster and the need to avoid dogmatic reconstructions of these St. Lawrence Iroquoians at this time. Jamieson also excavated on the 27/VII Site discovered by Wintemberg (1936:121). It seems likely that this farm hamlet was not contemporaneous with the Cleary village site not far distant.

Quebec

Apart from Dawson's works over the period 1860-1888 which describe his "Hochelaga" Site in downtown Montreal and Lighthall's papers which seek to explain Dawson's Site in terms of Cartier's Hochelaga, there was little Iroquoian archaeology in Quebec until 1927. In that year William Wintemberg recovered Iroquoian-like pottery at Kegashka on the west side of the Gulf of St. Lawrence (Wintemberg 1929), and he examined the site at Lanoraie, Berthier County (Wintemberg 1927, 1929), which he compared with the site at St. Regis that had been discovered in 1914 (Wintemberg 1936:121). Although several collections were made subsequently at Lanoraie (Ayotte 1932; Beaugrand-Champagne 1933; Martijn 1978:11-18; Morin 1933) and the Wintemberg pottery sample had been analyzed earlier (Trudeau 1971), it remained for Norman Clermont, Claude Chapdelaine, and Georges Barré to examine the site in detail (Chapdelaine 1985a; Clermont, et al. 1983).

In the meantime a new generation of scholars had conducted excavations on several Iroquoian sites on the lower St. Lawrence River and on its tributaries (Martijn 1989; Rancour 1984). These include Ile aux Basques (Martijn 1969), Metabetchouan (Simard 1970). Mandeville (Chapdelaine 1989a; Girouard 1972), Pointe-aux-Buisson Station 2 (Girouard 1975), Beaumier (Marois 1978), Deschambault (Benmouyal 1982, 1983; Girouard 1979), Grandes-Bergeronnes (Chapdelaine 1984a), Chicoutimi (Chapdelaine 1984b, 1988a), Bourassa (Clermont, et al. 1985), Pointe-aux-alouettes (Levesque 1962:47; Plourde 1987, 1989), and Cap Tourmente (Chapdelaine 1989b). This work has expanded the Iroquoian occupation eastward beyond the limits theretofore postulated.

Commencing in 1975 and continuing in 1976, 1977, and 1988 a series of excavations were conducted by Jean Mandeville, Laurent Girouard, and Jocelyne Seguin in the Place Royale, Quebec City with expectations of revealing evidence of a St. Lawrence Iroquoian presence which hopefully could be associated with Stadacona. The small sample of Iroquoian pottery and smoking pipes recovered resembles the Dawson Site material with the addition of cordwrapped-stick-impressed decorative motifs (Clermont et Chapdelaine 1989). In 1982 Jean Guy Brossard and Arnold Feast undertook excavations in Place Royale in downtown Montreal with expectations of unearthing St. Lawrence Iroquoian material could be associated with Hochelaga. The small sample of Iroquoian pottery recovered, which was less diagnostic than that excavated in Place Royale, Quebec City, included a Huron vessel, but once again none of the European material unearthed was in an indisputable archaeological context with the St. Lawrence Iroquoian material (Jamieson 1987:59-71). Hopefully work commenced by Claude Chapdelaine in 1989 in the Cap Tourmente area will locate some of the villages mentioned by Cartier and reveal European material in an archaeological context with St. Lawrence Iroquoian material.

Having demonstrated this long-term Iroquoian presence in the lower St. Lawrence Valley which dates from an early Owasco-like period (Chapdelaine 1988b: Plourde 1987, 1988, 1990) there arises the distinct possibility of there having been an Iroquoian in situ development in this region akin to that which took place in Jefferson County and in the Lake St. Francis region. This concept runs counter to some current opinion which would have a late St. Lawrence Iroquoian expansion into the lower St. Lawrence Valley from a homeland in Jefferson County or eastern Ontario (Pendergast 1982a; Wright 1982) which is reminiscent of the Southern Hypothes is described earlier.

A long-term program to identify Iroquoian variability in the lower St. Lawrence Valley in terms of pottery and ceramic smoking pipe provenience and seriation derived from an analysis of trace-elements has been undertaken by Robert Crepeau and Greg Kennedy (1987, 1988) and Claude Chapdelaine and Greg Kennedy (1989). Chapdelaine and Kennedy's (1989:3) reliance upon the homogeneity of 30 pottery samples collected at Place Royale, Quebec City, as regards the presence of trace elements, enables them to use this trace element pattern as the reference pattern against which to compare Iroquoian and Iroquoian-like pottery from Red Bay in the Strait of Belle Isle, Newfoundland, and from Lac Temiscouata and Cap Tourmente Sites in Quebec. While the trace element patterns for the samples from Red Bay and Cap Tourmente do not resemble the Place Royale reference pattern, the Davidson pottery sample from Lac Temiscouata provides a good match with the Place Royale pattern (Chapdelaine and Kennedy 1989:4-5). The connection between this Lac Temiscouata pottery and Place Royale, Quebec City, contradicts a proposal by Pendergast in 1968. This proposal was premised on ceramic concepts which have since been overtaken as a result of excavations on the lower St. Lawrence, in which he speculated that this pottery was Algonquian pottery which simulated Iroquoian ware (Martijn 1969:83-84). An earlier attempt to trace St. Lawrence Iroquoian provenience using the X-ray fluorescent method to identify trace elements in St. Lawrence Iroquoian pottery (Trigger, et al. 1980) was not as conclusive.

However attractive it might be to end any of these site sequences on a well-known, firmly dated historic site, this is not possible. There are as yet no Iroquoian sites in the St. Lawrence River Valley which have European material in an indisputable archaeological context which would date them as protohistoric or contact sites. The villages noted by Cartier in 1535 and 1541 during his travels on the St. Lawrence River had already disappeared when Champlain visited the area in 1603, and they remain unlocated to this day as is evidenced by recent work in the vicinity of Stadacona and Hochelaga and in the Cap Tourmente area.

Disappearance of the St. Lawrence Iroquoians

Over the years several reasons have been advanced to explain the disappearance of the St. Lawrence Iroquoians from their homeland sometime during the period between 1543 when they expelled Roberval and his settlers from their homeland and 1603 when Champlain returned to this region. The earliest of these is Marc Lescarbot's account which records how sometime prior to 1608, 8000 Iroquois invaded the St. Lawrence Valley where they exterminated the Hochelagans and certain Algonquians who lived there (Grant 1914:114, 117, 267-8). The Erondelle translation of Lescarbot's work relates that this took place "eight years ago;" i.e., about 1600 (Hoffman 1961:203; Ross and Power 1928:182). A later account by Dennis Jamet in 1615 (Jouve 1915:61) supports Lescarbot's information that the Hochelagans were destroyed as a result of their "furious wars" with the Iroquois, but he places the date at "80 years ago;- i.e., about 1535. In 1697 Charles Aubert de La Chesnaye related how the Algonquians used to point out the ruins of the villages destroyed during these wars (Bailey 1933:106). Sagard (1866:217) mentions the ruins of an Indian fort on the hill at Quebec City c. 1623, although these are more likely to be the remains of defensive works erected by Iroquoian invaders than the remains of Stadacona. The remains of a village seen at Three Rivers c. 1635 (JR 8:27-29) is probably attributable to the Montagnais and Algonquin as Sagard (1866:846) related. Du Creux's 1664 *History of Canada* also relates how the Hochelagans were destroyed by the Iroquois and that the ruins of Hochelaga were still visible at that time (Robinson 1951:370). Du Creux, never having visited New France, is probably repeating Lescarbot. The Jesuit Relation for 1642 relates how Algonquians on Montreal Island explained to Maisonneuve how the many people who had earlier inhabited the island and the hills to the south and east had been defeated by the Huron. Some of them had fled to the Five Nations and others to the Abenakis. Others, in this case the Algonquin Ononchataronon (Pendergast and Trigger 1972:77), had fled a short distance up the Ottawa River (JR 22:215-7; 29:147, 173; Shea 1870:127-128). Circa 1680, possibly as late as 1718, Nicolas Perrot related how the Iroquois had lived in the region between present-day Montreal and Three Rivers from whence they were driven to the region south of Lake Ontario by their Algonquian (Adirondack) neighbours (Bacqueville 1753:288-294; Charlevoix 1923:288-293; Lafitau 1724:101; Perrot 1864:42-47). As Trigger has pointed out, only one of these stories refers to Hochelaga by name, although all these accounts are usually presumed to deal with Hochelaga (Pendergast and Trigger 1972:82).

Nineteenth-century scholar's opinions regarding the disappearance of the Hochelagans and the Stadaconans was premised largely on the identity attributed to these people as a result of the various interpretations of the ethnohistoric and historic literature. As a result the disappearance of the Hochelagans and Stadaconans was seen essentially in terms of Mohawk. Onondaga, and Huron prehistory and history. This methodology contrasts sharply with twentieth-century scholars' emphasis on the growing accumulation of archaeological data. As a result new interpretations have been placed on the works of the chroniclers, historians, cartographers, and ethnohistorians, and wholly new diachronic hypotheses have been proposed to explain the disappearance of the Iroquoians from the St. Lawrence Valley.

War has long been said to be responsible for the disappearance of the St. Lawrence Iroquoians. Lescarbot (1928:182) recounted how they had been destroyed in "furious wars," and several modern scholars have interpreted the archaeological data to confirm this conclusion. Some would have them destroyed wholly or in part by the eastern tribes of the Iroquois confederacy, particularly the Mohawk and Onondaga (Bradley 1987:86-87; Pendergast 1990:119; Trigger 1968). Others would have them destroyed wholly or in part by the Huron (Pendergast 1981a; Wright 1972b:90, 1979:71-75). Recently, topical authors have espoused the destruction of the St. Lawrence Iroquoian by the Huron alone (McMillan 1988:63), although their fate has not yet been agreed by Iroquoian scholars. It is interesting too to note how recent research regarding the effects of European disease on North American natives in the sixteenth and seventeenth centuries (Dobyns 1983, 1989) has rekindled discussion on the part played by European diseases in the destruction of the St. Lawrence Iroquoians (Snow and Lanphear 1989). The idea that they migrated from the St. Lawrence Valley to Huronia by way of the Humber and Trent Valleys as Norman Emerson suggested (1954:251-252, 260) has not been borne out by the archaeological data.

Most suggestions derived from archaeological data regarding the fate of the St. Lawrence Iroquoians have their genesis, in part at least, in the four options suggested by William Fenton (1940). Those who interpret the archaeological evidence to indicate the St. Lawrence Iroquoians were at war with the eastern Iroquois, principally the Mohawk (Fenton 1940:176-177) and the Onondaga (Bradley 1979:113, 1987: 86-7), would have St. Lawrence Iroquoian survivors held captive by these Iroquois. On the other hand those who view the archaeological data as overwhelming evidence that significant numbers of St. Lawrence Iroquoian refugees lived on with the Huron (Laidlaw 1891:76-77; P.G. Ramsden 1977) and to a lesser extent the Petun (Gerrad 1980: personal communication; Wintemberg 1946) are not in agreement regarding the nature of this relationship. Some (Pendergast 1975, 1985b, 1988; P.G. Ramsden 1977: 293; Trigger 1985; Wright 1972b:90, 1979:71-5) interpret the presence of St. Lawrence Iroquoian women's pottery and the absence of St. Lawrence Iroquoian men's smoking pipes on some Huron village sites. Coupled with the presence of Huron women's pottery and the absence of Huron men's smoking pipes on some St. Lawrence

Iroquoian sites to indicate that this Huron-St. Lawrence encounter was hostile. This particular distribution of St. Lawrence Iroquoian and Huron smoking pipes and pottery, coupled with the presence of cannibalized human remains and village defensive works, has been interpreted to indicate that female St. Lawrence Iroquoians were held captive in these villages while St. Lawrence Iroquoian men prisoners were killed. This hostility has also been attributed to the need for the hinterland Huron to eliminate the St. Lawrence Iroquoians as middlemen to give the Huron direct access to European goods by then being introduced on the lower St. Lawrence and in the Gulf (Pendergast and Trigger 1972:71-92; Tooker 1964:3; Trigger 1968, 1976:220, 1985:144-148, 1987; Pl. 33: P.G. Ramsden 1978). Clearly this "middleman" concept can only apply to the protohistoric and historic Iroquoian era which, for reasons mentioned earlier, could not have commenced before the second decade of the sixteenth century.

Some scholars have questioned the validity of interpreting this distribution of men's smoking pipes and women's pottery solely in the context of it being evidence of Iroquoian hostility and warfare (Jamieson 1983a, 1990; Trigger 1989: personal communication; Warrick and Jamieson 1988). Although recent studies of Five Nation Iroquois pottery (Engelbrecht 1972, 1974) and Mohawk smoking pipes (Dean Snow 1988: personal communication) indicate that these commodities had been distributed by trade in that region, it would be imprudent to suggest that events at one time level among the closely-knit Confederacy Iroquois were paralleled identically among the St. Lawrence Iroquoian all time levels, or for that matter among the Huron.

In a paper presented at McMaster University in 1982, Pendergast (1982a, b) introduced an hypothesis in which he suggested that the destruction of the St. Lawrence Iroquoians could not be attributed solely to a series of European-generated events that took place over the last few decades of the sixteenth century in the St. Lawrence Valley east of Montreal. He introduced archaeological evidence that indicated the destruction of the St. Lawrence Iroquoians resulted from a long sequence of events over the whole of the region between the foot of Lake Ontario and present-day Quebec City, and beyond that terminated after the arrival of the Europeans c. 1580. He postulated a prehistoric period of hostility between the St. Lawrence Iroquoians living in Jefferson County and the Huron then located in the hinterland immediately north of Lake Ontario on the basis of archaeological evidence derived from several of these Huron villages (e.g., Payne [Pendergast 1963, Emerson 1966], Parsons [Emerson 1968], Waupoo [Pendergast 1964a], Lite [Pendergast 1972], and Draper [Pearce 1978]). Later hostilities between the Huron and St. Lawrence Iroquoians in the protohistoric and contact periods were probably aggravated as a result of the St. Lawrence Iroquoian involvement in the movement of European material to the interior. This could only have occurred after the arrival of the Europeans. By this time, possibly as early as c. 1520 and particularly after c. 1565, the St. Lawrence Iroquoians were limited to the St. Lawrence Valley from Hochelaga (Montreal) eastward.

Bruce Trigger remarked upon the significance of this phased hypothesis in his *Natives and Newcomers*.

> Pendergast's (1982a) study of Iroquoian material from Jefferson County, New York, has cast a totally different light on this problem [the fate of the St. Lawrence Iroquoians]. His conclusions underlie the new "compromise" solution (as regards the St. Lawrence Iroquoians) proposed in chapters 2 and 3 [Trigger 1985:351].

Later Pendergast (1985b) expanded upon his 1982 hypothesis by inviting attention to the Huron traits (i.e.. pottery, ceramic and stone smoking pipes, bone tools and ossuary burials) which prevail on certain St. Lawrence Iroquoian sites in Jefferson County. In particular, he noted the presence of Huron men's smoking pipes on some St. Lawrence Iroquoian sites in Jefferson County and the presence of St. Lawrence Iroquoian discoidal clay beads (Pendergast 1981b) and smoking pipes on some Huron sites. Although only one clay smoking pipe, the Roebuck Human Effigy, appears to be diagnostic of the St. Lawrence Iroquois, and it only within a prescribed region (Pendergast n.d.; C. Weber 1970:67, 240, App. D), this distribution of men's smoking pipes contrasts sharply with the absence of Huron men's smoking pipes on St. Lawrence Iroquoian sites in the Prescott village cluster and on early and middle sites in the Summerstown village cluster. Neither is the Huron pottery which is found on late St. Lawrence villages (e.g., Dawson [Pendergast and Trigger 1972:114-119], Glenbrook [Pendergast 1981a], McKeown [Pendergast 1988]) present on St. Lawrence Iroquoian sites which are earlier (e.g., Roebuck [Wintemberg 1936], Salem and Grays Creek [Pendergast 1966]). Clearly there were phases in Huron-St. Lawrence hostilities during which the rules of war differed. The acceptance of Huron men captives by Jefferson County St. Lawrence Iroquoians on a late prehistoric time level and again but later in the Summerstown village cluster and during the contact era at the Dawson Site contrasts sharply with the situation on the early and middle prehistoric Summerstown cluster villages and the middle prehistoric period villages in the Prescott cluster when the archaeological evidence shows little if any contact with the Huron.

Subsequently several scholars have adopted the concept of a phased destruction of the St. Lawrence Iroquoians on a regional basis as the basic premise for the several hypotheses which seek to explain the disappearance of these people (Jamieson 1990; C.N. Ramsden 1989:64-65; P.G. Ramsden 1989; Warrick, et al. 1988).

Peter Ramsden (1989) uses four models to examine the reasons which caused the St. Lawrence Iroquoians to be in the Victoria County area. He rejects their having migrated to this region and their having been present as traders because these options have no basis in fact. He rejects their having been

present as captives who had been conquered by the Huron because he interprets the ethnohistoric references to indicate that raiding, not genocidal war, was the norm prior to 1600. Nevertheless, it is noteworthy that the Iroquoian war which destroyed the Huron in the late 1640s is not the earliest indication that Iroquoian hostilities could result in Iroquoian population shifts. The displacement of the Massowomeck prior to 1623 (Pendergast 1991) and the Wenro by 1638 might be claimed to suggest that regardless of the form Iroquoian warfare may have taken, it has long been the cause of significant Iroquoian population shifts which could result in the group being attacked being grossly altered, even destroyed, whether or not that was the attackers' intention. Ramsden uses the "intra-site spatial patterning in the distribution of St. Lawrence items" on the Kirche Site and "the influx of male-related objects coupled with an increase in locally made St. Lawrence pottery on the Kirche and Coulter sites" to conclude, with reservations, that the St. Lawrence Iroquoians in Victoria County were refugees seeking asylum from their unnamed enemies who drove them from the St. Lawrence Valley.

Bruce Jamieson (1990) assessed the reasons for the dispersal of the St. Lawrence Iroquoians in terms of a pan-Iroquoian hypothesis he and several others jointly had proposed in which three categories of escalating hostility were attributed to three temporal phases over the period A.D. 900-1650 (Jamieson 1983a, 1983b; Warrick, et al. 1988). During the second phase, 1400-1535, Jamieson would have a St. Lawrence Iroquoian group, then largely located in Jefferson and Grenville Counties and amicably allied with the Huron, come increasingly under attack by the Iroquois, presumably the Five Nations. By 1535, the St. Lawrence Iroquois were located on the lower St. Lawrence River where by 1600 they had succumbed to European disease and attacks by the Iroquois and the Micmac. Survivors sought refuge with their Huron and Algonquian allies. This raises again Fenton's fourth option (Fenton 1940:176-177) and, obliquely, Laidlaw's longstanding suggestion regarding the fate of the St. Lawrence Iroquoians (Laidlaw 1891:77).

A Proposal for Future Research

I would like to take this opportunity to expand this phased hypothesis and suggest several new directions which future St. Lawrence Iroquoian research might follow. Preliminary to this discussion it would be well to recall that the term "St. Lawrence Iroquoian" was introduced nearly thirty years ago as a generic device under which it would be possible to examine the Iroquoians in the St. Lawrence River Valley without fear of their being confused with other Iroquoians, and tribes of the Iroquois Confederacy in particular. When my interest in the archaeology of this region began in 1947, there was very little archaeological evidence regarding Iroquoians in the St. Lawrence Valley. With the accumulation of archaeological data and experience there has been a growing awareness of the need to rethink the concept which would have a discrete Iroquoian entity (tribe? confederacy?) living over the 320-mi-long territory between Watertown, New York, at the foot of Lake Ontario to present-day Quebec City and beyond (Chapdelaine 1980:150; 1989b:27). Jacques Cartier provides good reason to anticipate regional variations which should be discernible in the archaeological assemblages (Trigger and Pendergast 1978). He wrote:

> They [the Hochelagans] do not move from home and are not nomads like those of Canada [between Isle Coudres and Trois Rivieres, approximately] and of the Saguenay, notwithstanding that the Canadians and some eight or nine other tribes along this river [the St. Lawrence] are subjects of theirs [the Hochelagans] [Biggar 1924:160-161].

Several scholars have provided the impetus to move in this direction. Barré, Brossard, Chapdelaine, Clermont, Girouard, Jamieson, Mandeville, Marois, Pratt, Ribes, and Seguin have opened a whole new frontier on the lower St. Lawrence River. Significantly, Cote (1986), Clermont, Chapdelaine, and Ribes (1985) and Michel Plourde (1987) have demonstrated that this manifestation has its genesis in an early Iroquoian period. As early as 1981, Claude Chapdelaine had postulated that it was incorrect to suggest that the St. Lawrence Iroquoians, who occupied the vast and diverse territory between the foot of Lake Ontario and the lower St. Lawrence Valley, were a single homogenous people. Bruce Jamieson (1986: personal communication) has suggested that the date now attributed to Roebuck is too late. Excavations by Joseph Benmouyal (1982, 1983) on the village site at Deschambault southwest of Quebec City where the ceramics closely resemble those in eastern Ontario, and the extensive excavations on the McKeown village site in the Prescott cluster (Pendergast 1988) have revealed the need to rethink existing concepts of St. Lawrence Iroquoian village distribution, settlement pattern, and defensive works. Clearly there is a need to adjust the prevailing orthodoxy to accommodate these and other new data.

In 1985 Claude Chapdelaine suggested seven geographical regions spread from the foot of Lake Ontario to the Ile de Orleans in which to group regional St. Lawrence Iroquoian cultures (Chapdelaine 1985b: carte I). In 1987 James Bradley proposed four regional cultural subgroups which would serve to cluster the St. Lawrence Iroquoians: a riverine group centered around Quebec City, an agricultural group located between Montreal and Prescott, an agricultural group on Lake Champlain, and an agricultural group in Jefferson County (Bradley 1987:84). In 1988 Chapdelaine proposed three geographical regions in which to group the St. Lawrence Iroquoians: a Province Occidentale, a Province Centrale, and a Province Orientale (1988b). In 1989 Chapdelaine suggested six geographical areas which represented Iroquoian Cultures in the St. Lawrence Valley which he again clustered in three

regions: a Province Meridional, a Province Centrale, and a Province Septentrionale (Chapdelaine 1989a:258-9). Recently Chapdelaine (1989b:256-261; 1990:60) has proposed new names for the three regions he had suggested in 1988. These are a Western Area or Hochelaga Province, a Central Area or Maisouna Province, and an Eastern Area or Stadacona Province. The Western Area encompassed the Richelieu Valley in Quebec and the St. Lawrence Valley from the foot of Montreal Island to Lake Ontario, including Jefferson County. The Central Area occupied the region eastward from the L'Assomption River to include the territory immediately east of the St. Maurice River. The Eastern Area commenced on the eastern boundary of the Central Area, east of the St. Maurice River, and continued eastward half-way to Tadoussac.

Endowed with this experience and the accumulation of archaeological data now available, I would like to discuss in greater detail the Iroquoians who lived in the St. Lawrence Valley from Montreal Island westward, including those in Jefferson County.

Although detailed archaeological evidence is not yet available to demonstrate certain of the implications which will arise from the regionalization hypothesis I will propose here, the outcome seems likely to reflect reality more closely than do several facets of the current orthodoxy. However, the absence of archaeological data still lacking in the early Iroquoian era, and the large geographical gaps still extant demands that this discussion be preliminary and general in nature. There is also the overall need to provide for time and space to reflect the emergence of new archaeological data throughout the whole region but particularly in Jefferson and St. Lawrence Counties where much work remains to be done.

It is postulated that the region comprising Jefferson County, New York, and the St. Lawrence Valley eastward to include Montreal Island was contemporaneously occupied by two clusters of confederated villages (tribes ?) in the fifteenth and most of the sixteenth centuries. Only the easternmost elements of these people were extant to be encountered by Europeans who entered the St. Lawrence Valley-Gulf of St. Lawrence early in the sixteenth century. Apart from microvariations in pottery decorative motifs and techniques, smoking pipe styles, the relative incidence of stone and bone tools, and settlement pattern differences imposed by the configuration of local terrain and the fortunes of war at the time, these two peoples shared a common material culture. Subsistence patterns varied as a result of the climatic differences which prevailed over the regions of the St. Lawrence Valley occupied by Iroquoians, which spans some three degrees of latitude, but essentially the Iroquoians west of Montreal Island were farmers who heavily supplemented their diet of corn, beans, and squash with fish. Meat was an opportunistic ingredient usually associated with the fall hunt and the raising of captive beasts. Seasonal rounds exploited the natural food sources particularly fish-runs, but little that was edible was overlooked.

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For ease of reference the Iroquoians who lived between Cornwall, Ontario, and the east end of Montreal Island, approximately, will be referred to as the Hochelaga Iroquoians in recognition of the Cartier's encounter at Hochelaga being the earliest European intrusion into Iroquoia. The westernmost people, those living at the foot of Lake Ontario in Jefferson County and those in Grenville County will be referred to as the Border Iroquoians. This designation reflects the location of their territory on the northern border of Five Nation Iroquois territory and on the eastern frontier of the Southern Huron and their homeland having spanned both international and state/ provincial borders in this region.

The Hochelaga Iroquoians originated as an indigenous riverine-oriented Middle Woodland base in much of the upper the St. Lawrence Valley particularly around Lake Francis (Kenyon 1959; Pendergast 1964a, 1975, 1979) and Lake St. Louis (Claremont and Chapdelaine 1982). Their presence on a proto-Iroquoian time level is represented by small and still localized samples of Owascoid ceramics excavated on Gordon Island in the Thousand Islands (Wright n.d), Thompson Island in Lake St. Francis (Kenyon 1959) and at Pointe-aux-Buissons (Chapdelaine 1980:147-151). The Gogo, Cazaville, and Berry archaeological sites (Pendergast 1967b) represent the presence of Hochelaga Iroquoians on the early Iroquoian time level. Their presence in the middle time period is evidenced by several village sites in the Summerstown village cluster in Glengarry County, Ontario, (e.g., Salem, Grays Creek, and Sugar Bush Sites [Pendergast 1966, 1974, 1975] and some of the manifestations at Pointe-aux-Buissons [Girourd 1975]). Elements of the Hochelaga Iroquoians (e.g., the Glenbrook village site [Pendergast 1981a]) remained on in Glengarry County well into the terminal prehistoric period. Indeed, the Glenbrook Site may yet prove to be a protohistoric village. Other elements of the Hochelaga Iroquoians remained on in the Montreal Island region where their descendants were encountered by Jacques Cartier at Hochelaga and Toutonaguy in 1535. The Dawson Site (Pendergast and Trigger 1972) and at least one site nearby are representative of these people. The Deschambault Site (Benmouyal 1982, 1983) far to the east in the region southwest of Quebec City, which greatly resembles both the Hochelagan and Border Iroquoian sites, is anomalous in the context of the current orthodoxy. When Iroquoian villages on the Stadacona time level have been investigated, Deschambault may prove to be a manifestation in that lineage. In the meantime the similarity of Deschambault archaeological assemblages to those in eastern Ontario raises the possibility of its being an eastward intrusion of the Hochelaga Iroquoians into Chapdelaine's Stadacona Province (Chapdelaine 1990: Fig. 3) on a time level not yet revealed by an archaeological village site in the Stadacona Province. No Hochelaga Iroquoians survived to greet Champlain in 1603. The several hypotheses that have been proposed to explain the reasons why they disappeared have been discussed earlier.

The Border Iroquoians had their in situ genesis in the region on the south shore at the foot of Lake Ontario as a result of a Pickering Ontario Iroquois influence on an indigenous Owasco base which in turn had arisen from the widespread Middle Woodland culture that had prevailed in this region (Pendergast 1975). Later in the middle period of their existence the Border Iroquoians in Jefferson County became hostile to the Southern Huron (Wright 1966) whose villages were then located in the hinterland immediately north of Lake Ontario as is evidenced by the Waupoos Site (Pendergast 1964a), the Payne Site (Emerson 1966; Pendergast 1963), the Lite Site (Pendergast 1972), the Draper Site (Finlayson 1985; Pearce 1978), and the Parson Site (Emerson 1968). There having been no European material excavated on these Southern Huron sites, with the possible exception of Parson (John Reid 1977: personal communication), all are believed to be late prehistoric. Later these Southern Huron moved further into the hinterland north of Lake Ontario to the Balsam Lake region, Victoria County, where they joined an indigenous Huron people who had had little if any contact with St. Lawrence Iroquoians as is evidenced by the paucity or absence of St. Lawrence Iroquoian artifacts excavated on the Rumney Bay and Hardrock village sites (Nasmith 1981:149-50; C.N. Ramsden 1989:63). The Benson (Emerson 1954:203; P.G. Ramsden 1977), Dawn (C.N. Ramsden 1989), Kirche (C.N. Ramsden 1989), and Trent (Burger and Pratt 1973) village sites, and possibly Coulter (Ramsden 1989), represent Southern Hurons who had moved northward into the Victoria County area. On these sites the varying incidence of St. Lawrence Iroquoian pottery provides some idea of the long-term and variable intensity of these Hurons' involvement with the St. Lawrence Iroquoians. At the Benson, Coulter, and Kirche Sites the St. Lawrence pottery present represents some 10 per cent of the pottery sample, as was the case earlier on the Southern Huron sites immediately north of Lake Ontario. This suggests that the liaison between these people was chronic but not intense over this period. On the other hand the significantly greater evidence of St. Lawrence pottery reported by Burger and Pratt (op. cit.) on the Trent Site, 35 per cent, suggests that these people were heavily involved with the St. Lawrence Iroquoians. It remains to be demonstrated archaeologically whether this Huron involvement was with the Border Iroquoians from Jefferson County, or from Grenville County, or from both areas at different time levels.

By the time the Huron were visited by the French early in the seventeenth century these Huron had abandoned the Victoria County region and were located in eastern Huronia adjacent to Lake Simcoe. While these prehistoric Southern Huron displacements may not be attributable solely to their enmity with the Border Iroquoians, hostility cannot but have been a major reason for their relocation northward.

The location of the Border Iroquoian villages during the generations immediately preceding their occupation of the Prescott village cluster remains uncertain. However the absence of archaeological sites ancestral to the Prescott village cluster in this area leaves the distinct impression that these Iroquoians may have moved onto the sandy soil in Grenville County from elsewhere. As was suggested by the hypothesis proposed in 1975, elements of the Hochelaga Iroquoians may have moved westward from the heavy, rocky soil in Glengarry County to the light, more readily tillable sandy soil in Grenville County (Pendergast 1975). The Beckstead Site (Pendergast 1984), which lies approximately midway between the Hochelaga Iroquoian Summerstown village cluster and the Border Iroquoian Prescott village cluster, has been attributed to this movement (Pendergast 1975). This hypothesis has found support with some scholars (Jamieson 1982:82).

The second option would have elements of the Border Iroquoians move northward from their homeland in Jefferson County into adjacent St. Lawrence County. Some of these crossed the St. Lawrence River into Grenville County to occupy large tracts of stone-free sandy soil well suited to Iroquoian agricultural practices. There, sometime before prehistoric hostilities with Southern Huron commenced, these Border Iroquoians established the Prescott village cluster as is reflected by the presence of the Roebuck (Wintemberg 1936), Crystal Rock (Pendergast 1962), McIvor (Chapdelaine 1989a), and McKeown (Pendergast 1988) village sites. The absence or paucity of Huron pottery on some of these Prescott cluster sites suggests that initially these villages had little if any contact with the Huron. Possibly the Border Iroquoians in these villages were present in Grenville County before enmity between the Jefferson County Border Iroquois and the Southern Huron on the north shore of Lake Ontario arose. Alternatively, hostile relations between the Border Iroquoians in Jefferson County and the littoral Huron had not yet extended to include the Border Iroquoians who had moved to Grenville County. The significant presence of Huron pottery on other Border Iroquoian sites in the Prescott village cluster, and the McKeown Site in particular (Pendergast 1988), indicate that later, probably in the terminal prehistoric period, these Border Iroquoians, like their brethren in Jefferson County had been earlier or contemporaneously, were fully engaged in a war with the Lake Ontario Huron. The Border Iroquoian pottery present on terminal prehistoric Huron sites in the Victoria County region, after these Huron were driven northward from the north shore of Lake Ontario to this hinterland region, may be attributed initially to contact between these Huron and the terminal prehistoric Border Iroquoians in Jefferson County and later by these Huron being in contact with Border Iroquoians from both Jefferson and Grenville Counties. This hostility is reflected in Grenville County by the McKeown Site where formidable defensive works were in place and several village expansions took place to accommodate local populations in this fortified village. The ritualistic burial of complete vessels on the McKeown Site in a manner which suggests the subordination of the Huron in this village tends to support St. Lawrence-Huron hostility. Presumably this conflict resulted in the de-

struction of the Border Iroquoians in Jefferson and Grenville Counties in the late prehistoric era.

With one exception, the McKeown Site where a small fragment of an iron awl was excavated in a good archaeological context (J.V. Wright and D. Wright, personal communication 1990), European material has not been excavated on Border Iroquoian sites in either Jefferson or Grenville Counties. Hence, there is no reason to believe that significant numbers of Border Iroquoians survived into the protohistoric or the contact periods. As a result the St. Lawrence Iroquoian pottery excavated on protohistoric and contact Huron sites (e.g., the Benson Site in Victoria County [Emerson 1954; Ramsden 1977]) and protohistoric Petun sites (e.g., the Sidey McKay Site in Simcoe County [Wintemberg 1946]) cannot be attributed to first generation Border Iroquoian captives, although it may have been produced by subsequent captive generations. Nor can the pottery on Huron or Petun protohistoric or contact sites, which is now attributed to the St. Lawrence Iroquoians, be attributed to the Hochelagan Iroquoians during the period they lived in Glengarry County. No European material has been excavated on these Hochelagan Iroquoian sites to indicate that they were present in protohistoric or contact times. If indeed the Benson and coeval protohistoric Huron sites in Victoria County are contemporaneous with Border Iroquoian villages in Jefferson and Grenville Counties, or with the Hochelaga Iroquoian villages in Glengarry County, it is more likely that the European material on these Huron sites in Victoria County originated with eastern Iroquoian elements (Chapdelaine 1989b) and the Algonquians in the lower St. Lawrence Valley, including terminal Hochelagan Iroquoian villages (e.g., Hochelaga and Tutonaguy) than it is likely to have originated with the Iroquoians in Jefferson, Grenville, or Glengarry Counties.

Regrettably there is insufficient archaeological data regarding the Iroquoian sites in St. Lawrence County, New York, and Huntingdon County, Quebec, to assess their place in this hypothesis. At present some twenty of these sites are known in St. Lawrence County (Marjorie Burger, personal communication 1968), but only one, Pine Hill (Burger 1968), has been excavated. Burger has associated Pine Hill with the Salem Site, a middle period prehistoric Hochelaga Iroquoians village site in the Summerstown cluster, Glengarry County. Nevertheless, there remains the possibility that some of the sites northeast of Jefferson County in St. Lawrence County (e.g., Pine Hill) and Huntingdon County (e.g., St. Regis) may be associated with the element of Jefferson County Border Iroquoians who had moved to Grenville County. Regrettable too is the dearth of archaeological data regarding the Iroquoian manifestations in the Lake Champlain watershed which have been mentioned above (Pendergast 1990:99-123). It would seem prudent to refrain from placing these site clusters in the fabric of this hypothesis until detailed archaeological site reports become available.

Radiocarbon Dates

Several closely interwoven circumstances which characterize ^{14}C dating in the Iroquoian late prehistoric era. Not the least of these is the fact that there are few ^{14}C dates available for St. Lawrence Valley Iroquoian sites relative to the number of sites in this region. For instance, there are no ^{14}C dates available for the 60-70 Iroquoian sites known in Jefferson and St. Lawrence Counties. The ^{14}C dates available in the St. Lawrence Valley tend to cluster in both time and space, and sometimes several dates are available for one site. As a result of this uneven distribution of dates over the entire territory of St. Lawrence Valley Iroquoia, ^{14}C dates are not well suited to enhance attempts to characterize Iroquoian regionalism in the St. Lawrence Valley. Undue reliance on isolated ^{14}C dates has sometimes served to polarize hypotheses which have been proposed to explain events in these regions. Sites which the total archaeological assemblages suggest are contemporaneous or nearly so, can be artificially separated on the basis of ^{14}C dating, or alternatively, they can be favored for inclusion in a particular site sequence. An accommodating date can usually be found within the two *sigma* ^{14}C date range which often spans a period which exceeds by far that required to postulate conclusions at either end of this polarization. Nevertheless, the reality which impinges heavily on this work remains. At present ^{14}C dating data, including Klein and MASCA corrections, are not sufficiently precise to permit site sequences and chronologies in St. Lawrence Valley Iroquoia to be postulated by ordering ^{14}C dates sequentially. This limitation has also been noted in connection with Huron seriations (C.N. Ramsden 1989:66). Nevertheless ^{14}C dating data can continue to serve best as a component of the archaeological data to be weighed in the still largely judgmental conclusions regarding site sequences and chronologies in this region.

In 1979 Phillip Wright excavated middens on the Steward Site, a St. Lawrence Iroquoian fishing station near Morrisburg, Ontario, midway between the clusters of village sites in Grenville and Glengarry Counties. Bruce Jamieson has interpreted a presumed midden stratigraphy to indicate distinct occupations which he designates early, middle, and late. Cogently, he warns that this perceived stratigraphy "should not be mistaken for three separate occupations but are simply used here as a convenient way to subdivide the midden deposit in order to analyze change over time" (Jamieson 1982:35-37). Subsequently, he attributed dates to these three periods and, using his analysis of some 135 rimsherds from the Steward Site against which to assess the ceramics from eight other St. Lawrence Iroquoian sites reported upon by Pendergast (1962, 1964, 1966. 1967b, 1972), he proposed a new St. Lawrence Iroquoian chronology and site sequence which differs significantly from those suggested by MacNeish, Pendergast, Girouard, and Marois (Jamieson 1982:60, 66, 71). Later, Peter Timmins (1985) used the same ^{14}C adjustment techniques used

by Jamieson and Jamieson's interpretation of the stratigraphy perceived on the Steward Site to arrive at a St. Lawrence Iroquoian site sequence and chronology which is wholly congruent with Jamieson's suggestion. More recently, Claude Chapdelaine rejected Jamieson's thesis, thereby raising questions regarding the conclusions proposed by Jamieson and Timmins (Chapdelaine 1989a).

But problems arising from ^{14}C dating are not likely to be as critical to the hypothesis proposed here as is the absence of archaeological data from sites in these regions. Far more germane is the weighing of negative evidence, for certainly the absence of Iroquoian sites from the present archaeological inventory in this region is insufficient reason to conclude that they did not exist. The failure to locate the settlements noted by Jacques Cartier, which include Stadacona and Tutonaguy, serves as a constant reminder in this regard. Valuable as they might be, the current lack of ^{14}C dates and archaeological data in certain regions need not emasculate the hypothesis proposed here. In the fullness of time, when this and other data becomes available, these hypotheses can be adjusted, modified, or discarded to reflect the realities perceived at that time.

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Errata

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