

4 | New Dates for Owasco Pots

JANET K. SCHULENBERG

Introduction

THE IDEA THAT THE IROQUOIAN TRADITION is deeply rooted in a long sequence of continuous cultural development in the northeastern United States and southern Ontario has dominated reconstruction of Iroquoian prehistory for the past 50 years. The Iroquois were considered relative newcomers to the Northeast until the mid-1940s, when James B. Griffin (1944) suggested that archaeologists consider the possibility that the Iroquois were indigenous to the Northeast. Following a typological study of pottery from a number of supposed Iroquoian and pre-Iroquoian sites in Pennsylvania, New York, and Ontario, Richard S. MacNeish (1952) argued that the ceramic stylistic continuity he saw from pre-Iroquoian to Iroquoian periods indicated that the Iroquois culture developed in place, forming the core of the in situ model. According to the model, Iroquoian prehistory spans over 1,500 years (Starna and Funk 1994, 47). MacNeish (1952) put the temporal boundary between pre-Iroquoian and Iroquoian at about A.D. 1000, between the older Point Peninsula (pre-Iroquoian, foraging) tradition and the more recent Owasco (earliest Iroquoian, farming) tradition, but argued that there was ceramic continuity across this temporal boundary. Despite the fact that the cultural implications of the in situ model were never tested, the model has dominated the interpretation of archaeological remains in the Iroquoian region (Snow 1995a, 59 [chap. 1 in this volume]).

The issue of chronology is central to any discussion of Iroquoian origins and the development of social complexity in the Northeast. The competing scenarios of Iroquoian development have radically different implications for the social circumstances underlying the development of maize horticulture, village settlements, and

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matrilocal among the Iroquois. One obstacle to differentiating the models is the untested culture history underlying each model. The culture history of the Iroquoian region is in large part based on inferences made from the ceramic chronology developed in the 1940s. The basic chronology has not been substantially revised or tested either through excavation or direct dating of organic artifacts in unequivocal association with typed ceramics.

A reevaluation of radiocarbon dates from sites in Ontario has produced evidence for a 300-year overlap between Middle Woodland stage foragers and Late Woodland stage (Iroquoian) farmers (D. Smith 1997a). A similar overlap that is masked by the current confusion of cultural stages and temporal periods could have existed in New York. Many sites from the critical transitional period were excavated in the mid-twentieth century and have museum collections that may provide additional information about the Point Peninsula to Owasco transition. Absolute dates are not readily and reliably available from ceramic sherds themselves, but AMS dating is particularly useful for dating the encrusted food residues in direct association with the sherds. This method provides absolute dates in unequivocal association with ceramic sherds, thereby allowing a test of the absolute chronology assigned to ceramic typologies. A limited series of AMS dates from food residues encrusted on ceramic sherds belonging to Point Peninsula and Owasco types from the Kipp Island, Hunter's Home, and Levanna sites have offered an opportunity to reevaluate the ceramic and cultural chronology for the central region of New York.

Models of Iroquoian Development

Models of the development of the Iroquois have alternated between models of incursions and models of in situ development. Several of those models have been adequately refuted. Other models, however, play a major role in modern interpretations of Iroquoian and pre-Iroquoian archaeological remains. There are currently three models of the transition from Point Peninsula to Owasco cultures under debate. These are the punctuated in situ model (Ritchie 1969), the gradual in situ model (Chapdelaine 1993), and the incursion model (Snow 1995a [chap. 1]; 1996a [chap. 3]).

As discussed above, the original in situ model was developed by MacNeish as an explanation for the perceived continuity in ceramics from the Iroquoian region across the ca. A.D. 1000 Point Peninsula to Owasco transition. In his summary of the prehistory of New York State, William A. Ritchie (1969, 301–2) explicitly adopted the in situ model as an explanatory framework for culture change in the Iroquoian region, and attempted to place a mechanism for change into the in situ model. Based on the ceramic chronology, he suggested changes began around A.D. 1000 with the introduction of maize cultivation (Ritchie 1969, 301; Ritchie and Funk

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1973, 165). Ritchie (1969, 276) believed that once maize was introduced its benefits were immediately recognized and exploited by the indigenous hunting-gathering-fishing peoples. Ritchie suggested that changes in subsistence, community organization, household organization, and political organization accompanied the shift from Point Peninsula to Owasco periods (Ritchie 1969, 272–81). The changes in ceramics from Point Peninsula to Owasco styles presumably correspond with the general social changes taking place as village life and matrilineal residence brought female potters together.

During the mid-twentieth century, models of the inherent superiority of agriculture were prevalent. Archaeologists often assumed that maize horticulture would be adopted unless there was some obstacle to it, such as too few frost-free days (Hart 2001, 155). Horticulture was equated with formal village life and vice versa (e.g., Braidwood 1964; Childe 1951; MacNeish 1964; Sears 1971; Struever 1971). It was not until the mid-1970s—after Ritchie published his revisions to the *in situ* model—that Robert J. Braidwood (1974) published his work from Jarmo, MacNeish (1971) published the results of his Tehuacan Valley project, and archaeologists began to realize that domesticates were not necessarily adopted rapidly and completely.

In considering archaeological sites in Ontario, Claude Chapdelaine (1993) offered an alternative to Ritchie's punctuated model of *in situ* development, where he suggested that changes in settlement and social organization were taking place before the introduction of maize horticulture and that populations were gradually becoming increasingly sedentary. Because of the lack of evidence for a pre-maize horticultural system, he suggested the transition to maize horticulture required a period of experimentation. The introduction of maize augmented changes in settlement pattern and social organization, but these changes were part of a gradual continuum of change (Chapdelaine 1993, 201). Drawing on regional similarities in ceramic styles, Chapdelaine suggested matrilineages were developing before the adoption of maize horticulture, perhaps through the development of female work groups on seasonally reoccupied sites (Chapdelaine 1993, 198). He went further with this idea, suggesting that the development of these incipient matrilineages was a precondition for the successful adoption of the food-producing economy (Chapdelaine 1993, 198).

This model is similar to the archaeological pattern of settlement and subsistence change observed for Midwestern and Southeastern North America, although neither of these regions appears to have required the development of matrilineal residence to accommodate maize horticulture. Chapdelaine (1993, 174) specifically asserts that this process happened without the influx of new populations; however, a similar pattern of change could have resulted from the influx of enclaves of farming populations.

Dean R. Snow (Snow 1992a; 1994a; 1994b; 1995a [chap. 1]; 1996a [chap. 3]) offered an alternative to the *in situ* models where, rather than developing out of indigenous populations, the Iroquoian culture was initiated by Iroquoian migrants.

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Snow perceived a sharp discontinuity between Point Peninsula and Owasco pat-
terns of subsistence, settlement, and social organization (Snow 1995a, 70–72 [chap.
1]). In this model, the Iroquois intruded into southern Ontario and New York, car-
ried maize horticulture and village settlement patterns with them, and eventually
displaced, absorbed, or annihilated the indigenous Point Peninsula populations
(Snow 1995a, 76 [chap. 1]). Based on Divale's (1984) work on matrilineal residence,
matrilineal social structure is suggested as one of the outcomes of the migration
process (Snow 1995a, 71 [chap. 1]).

Snow did not believe this incursion happened in a single migration or a wave
of advance like that proposed by Albert J. Ammerman and Luigi L. Cavalli-Sforza
for Europe (1973; 1979). Rather, he suggested the incursion happened as a result of
several "branching and sequential" migrations in a fashion similar to the hiving off
of communities seen in later Iroquoian times (Snow 1995a, 75 [chap. 1]). Immi-
grants interacting with the surrounding indigenous population initiated pockets of
Owasco settlement in the Finger Lakes and Upper Susquehanna regions. Given evi-
dence that the Iroquoian pattern appeared in Ontario as early as A.D. 500 (Craw-
ford and Smith 1996), Snow (1996a [chap. 3]) revised his model to allow for
enclaves of horticultural Iroquoians to coexist with indigenous foragers from at
least A.D. 600–900 before the Iroquoian culture began to dominate the region.

The basic premise of the incursion model is consistent with the adoption of do-
mesticated plants and animals in other parts of the world. Most notably, the Iro-
quoian incursion model is similar to the adoption of domesticates throughout
Europe at the beginning of the Neolithic. In Europe, the transition from an econ-
omy based on foraging to one based primarily on domesticates was not sudden
(Bogucki 1995, 113). The transition began with the establishment of enclaves of
farming communities in areas already thinly occupied by foraging populations
(Bogucki and Grygiel 1993, 402). The coexistence of these two groups in close prox-
imity continued for more than a millennium (Bogucki 1995, 113). Peter Bogucki
suggests that foraging and farming populations in Europe at first interacted
through the adoption of escaped livestock, followed by exchange of domesticated
plants. At some point, the indigenous foragers adopted economies based on do-
mestic plants and animals, but only after a millennium of interaction with intrusive
farmers and their domesticates (Bogucki 1995, 108).

The gradual in situ model implies that changes in settlement, subsistence, and
social organization are disjointed, and are occurring at different rates (table 4.1).
Changes in settlement pattern begin before the introduction of maize horticulture,
and the shifting of social organization begins after its introduction. The punctuated
in situ model suggests that changes in subsistence, social organization, and settle-
ment are happening roughly in concert, but that maize is clearly the trigger for
those changes. This model predicts the appearance of maize before the changes in
social organization evident by multifamily longhouses appear. Finally, the migra-
tion model predicts that there is a tight correspondence between maize horticult-

Table 4.1

Key Components of the Three Models of Iroquoian Development

<i>Model</i>	<i>Ceramics</i>	<i>Chronology</i>	<i>Subsistence</i>	<i>Social Organization</i>	<i>Settlement</i>
Ritchie	Changes show continuity	Oswego follows Point Peninsula; no coexistence	Owasco people are farmers	Matrilocal residence accompanies adoption of maize (Owasco period)	Villages develop with adoption of maize (Owasco period)
Chapdelaine	Changes show continuity	Owasco and Point Peninsula are not readily differentiated	Both Owasco and Point Peninsula people are experimenting with maize	Matrilocal residence precedes adoption of maize (begins in Owasco or Point Peninsula period)	Villages develop with the adoption of maize (Iroquoian period)
Snow	Changes show discontinuity	Owasco and Point Peninsula are different and may coexist	Owasco people are farmers	Matrilocal residence accompanies Owasco people as a result of incursion	Villages accompany Owasco people

<i>Cultural Affiliation</i>	<i>Number of Sites</i>
Point Peninsula	1
	2
	1
Owasco	1
	1
	1
	1
	1
Unaffiliated	1

was obtained from Hunter's Home, eastern end of Cayuga Lake, during the Iroquoian period from A

ture, nucleated sedentary villages, and longhouse dwellings. According to the migration model, on any Iroquoian site, all these characteristics should co-occur.

The ceramic chronology becomes critical in this argument. The chronology developed for ceramics in New York State was created under a model of continuity. Recently, Snow (1994b, 16-19; 1995a, 65 [chap. 1]) has argued that this continuity is an artifact of the grouping of archaeological components, and the chronology does not reflect real historical continuity. It is not clear if the current ceramic chronology holds up to this separation. Empirical dates that would test whether or not Owasco types postdate Point Peninsula types have not been available. It is also not clear if Owasco ceramics are associated with Early Iroquoian style settlements and with evidence of maize horticulture as the incursion model suggests. The first step toward resolving these problems is to directly date typable ceramic sherds.

Sample Selection

As part of a larger project designed to address subsistence issues from the Point Peninsula-Owasco transition, a series of 12 AMS dates on carbonized food residues

Kipp Island Site

Kipp Island is located on the shore of the wetland construction. Du Cayuga Lake, representing Ritchie identity (155). Kipp Island burial mound dates to the Hunter's Home I dates from Ritchie spans about 600 years. Ritchie spent No. 4 (NYSM 208) station area. The e

Table 4.2
Ceramic Sherds AMS Dated

Cultural Affiliation	Number of Sherds	Ceramic Type	Site Name	Approximate Date Based on Ceramic Chronology (Ritchie and MacNeish 1949)
Point Peninsula	1	Wickham Incised	Kipp Island	A.D. 400–800
	2	Point Peninsula Corded	Kipp Island	A.D. 700–900
	1	Carpenter Brook Cord-on-Cord	Kipp Island	A.D. 950–1200
	1	Carpenter Brook Cord-on-Cord	Hunter's Home	A.D. 950–1200
Owasco	1	Levanna Cord-on-Cord	Hunter's Home	A.D. 950–1200
	1	Levanna Cord-on-Cord	Levanna	A.D. 950–1200
	1	Owasco Herringbone	Kipp Island	A.D. 1200–1350
	1	Owasco Corded Oblique	Kipp Island	A.D. 1200–1350
	1	Owasco Corded Horizontal	Kipp Island	A.D. 1200–1350
	1	Owasco Corded Horizontal	Hunter's Home	A.D. 1200–1350
Unaffiliated	1	Cordmarked	Kipp Island	

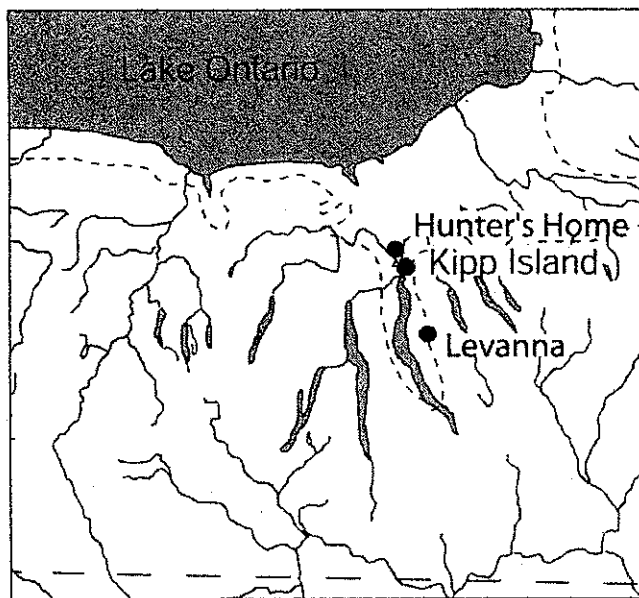
was obtained from the interior wall of ceramic sherds from the Kipp Island, Hunter's Home, and Levanna sites (table 4.2). These sites are located at the northern end of Cayuga Lake near the Montezuma marshlands, and represent the critical period from A.D. 600 to 1200 (fig. 4.1).

Kipp Island Site

Kipp Island is located in a marshy area at the confluence of the Seneca and Clyde Rivers near the Montezuma wetlands. The island is a drumlin near the old shore of the wetlands, which were drained in the last century for canal and road construction. During floods, the marsh fills to become a shallow extension of Cayuga Lake, replicating predrainage water levels.

Ritchie identified several components on Kipp Island (Ritchie and Funk 1973, 155). Kipp Island No. 1 is a small Middlesex cemetery, No. 2 is a small Hopewellian burial mound dating to the fourth century A.D., No. 3 is a major habitation component dated to the seventh century A.D., and No. 4 is a Late Point Peninsula/Hunter's Home habitation and cemetery component. Based on three radiocarbon dates from Ritchie's excavations at Kipp Island, the occupation of this drumlin spans about 600 years (table 4.3) (Ritchie and Funk 1973, 155).

Ritchie spent several weeks during the summer of 1963 excavating Kipp Island No. 4 (NYSM 2084), which includes a cemetery of over 125 individuals and a habitation area. The excavators found a small number of carbonized seeds in the habi-



----- Extent of prehistoric Lake Iroquois

Fig. 4.1. Location of the Kipp Island, Hunter's Home, and Levanna sites.

tation area, some of which Ritchie tentatively identified as *Chenopodium* (Ritchie 1969, 241; Ritchie and Funk 1973, 161). Based on the evidence for Hopewell corn production, Ritchie expected that the Hunter's Home people might also have corn, although he did not find evidence of maize at the site (Ritchie 1969, 241). According to Ritchie's publications (Ritchie 1969, 243) and the field notes kept by D. Barber (Rochester Museum and Science Center [RMSC] files), there is good evidence for use of aquatic foods such as mollusks, fish, turtles, and waterfowl. At Kipp Island the animal bone was found in refuse pits and middens that appear to have been formed over some period of time (Ritchie 1969, 242).

Table 4.3
Radiocarbon Dates from Kipp Island

Component	Radiocarbon Date	2- σ Calibrated Date*	Context
Kipp Island No. 2	A.D. 310 \pm 100	cal A.D. 134 (417) 638	Hearth with Point Peninsula Rocker Stamped pottery
Kipp Island No. 3	A.D. 630 \pm 100	cal A.D. 542 (683) 959	Earth oven with Kipp Island phase pottery
Kipp Island No. 4	A.D. 895 \pm 100	cal A.D. 725 (995) 1211	Cremated burial

Source: Ritchie 1973, 155.

*Calibrated with CALIB 4.3.

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Hunter's Home A is located on Hunter's Home Farm and was first excavated in 1948 by Harold Secor and Arthur Seeley (RMSC files). Their excavations indicated that the area contained two strata, one with remnants of Point Peninsula occupations and one of Owasco occupations. Based on Secor and Seeley's excavations, Ritchie initiated investigations at several locations on Hunter's Home Farm in 1960. Ritchie concentrated his 268 sq. ft (25 sq. m) trench over a refuse midden, which was named Hunter's Home A. This midden is located at the edge of a terrace that overlooked prehistoric Lake Iroquois (Ritchie 1969, 258). Ritchie's excavations at Hunter's Home A produced archaeological remains that he attributed to both the late Point Peninsula and the early Owasco periods. Ritchie used these remains to argue that the Hunter's Home A site indicated a smooth transition between Point Peninsula and Owasco occupations. However, his proposed continuity is based more on interpretations of ceramic stylistic change than on real stratigraphic continuity. Ritchie (1969, 258) describes the stratigraphy of the excavation unit as an 8-inch layer of sand containing Owasco-style sherds and decorated pipes, and a layer of darker sand containing Point Peninsula pottery with similarities to the later Owasco styles separated by a 20- to 40-inch-thick sterile deposit. A barn now covers Hunter's Home A, prohibiting new excavations at the exact location.

Levanna Site

Levanna (NYSM 2092) is a village and cemetery located on a hill overlooking Cayuga Lake in Cayuga County, New York. Arthur C. Parker conducted preliminary excavations at Levanna during 1923 (RMSC files). Based on the preliminary results, Parker returned to Levanna in 1927 with a junior assistant (Ritchie) to conduct formal excavations.

The habitation area is approximately 150 m long by 30 m wide, and is situated on a triangular, naturally fortified location (Ritchie 1928). Steep embankments protect the north and south sides of the site. The gullies on the north and south converge on the western edge of the site, forming a constricted neck facing the lake. The eastern edge of the site is bounded by a shallow gully, which was probably filled with water before modern land drainage. The site is located over a mile away from the lake. Water for the site was available from the springs located at the base of the gullies. The site is located on well-drained sandy soil.

The excavations exposed middens along the northern, eastern, and southern margins of the site, some approaching 30 m in length (Ritchie 1928). The most substantial midden was located on the southeastern margin of the site. The midden contained Owasco pottery, stone mortars, pipe fragments, and bone from deer, birds, and fish (Ritchie 1928).

Twenty-two possible structures, or "lodge sites," were identified by the excavations (Ritchie 1928). Unfortunately, it is not clear what evidence was used to

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identify these locations. Based on Ritchie's description of these houses, it seems that the basis was a concentration of darker soil and an increase in artifact density. No mention is made of post molds in any of the records of the excavations. The unpublished field map (RMSC files) shows "lodge sites" where there are multiple fire pits, so perhaps their locations are based on the location of hearths. The "lodges" appear to vary from 4 to 6 m in length, and would have encompassed roughly 30 sq. m. These structures are small compared to other early Owasco houses (table 4.4).

From 1932 to 1948, H. C. Follet and G. B. Selden, members of the original excavation party, continued excavating at Levanna and charged admission. Eventually they found several animal effigies, including a thunderbird. Parker campaigned against these excavations with little success. The RMSC file contains extensive correspondence by Parker concerning these excavations. The work destroyed the portion of the site not excavated by Parker.

AMS Testing

Seven food residues from sherds from Kipp Island, three from Hunter's Home, and one from Levanna were submitted to Geochron Laboratory for AMS dating (table 4.2). The sherds included in this analysis are housed in two collections. The sherds from Hunter's Home and Levanna are housed in the Rochester Museum and Science Center collection. The sherds from Kipp Island are from Breen's private collection of Kipp Island materials. The Breen collection is ideal for this project because the sherds were never cleaned and have retained substantial amounts of carbonized food residue (fig. 4.2). Because of the extraordinary condition of the Breen collection, the AMS dating focuses heavily on sherds from Kipp Island. The physical characteristics of each sherd are summarized in table 4.5.

Table 4.4
 Carpenter Brook Phase Houses in Central New York

Site	House Dimensions (m)	House Area (m ²)	Reference
Levanna	5 x 4-6	20-30	(Ritchie 1928)
White	6.9 x 11.4	78	(Prezzano 1992)
Port Dickinson	ca. 3-4 diameter	ca. 7-12.5	(Prezzano 1992)
Maxon-Derby	7 x 9-11	63-77	(Hart 2000a)
Boland	6 x ca. 14	ca. 84-85	(Prezzano 1992)
Bates	5.5 x ca. 15.5		
	6.7 x 11.6	78	(Hart 2000a)

Source: Adapted from Hart 2000a, 19; 2001, 175.

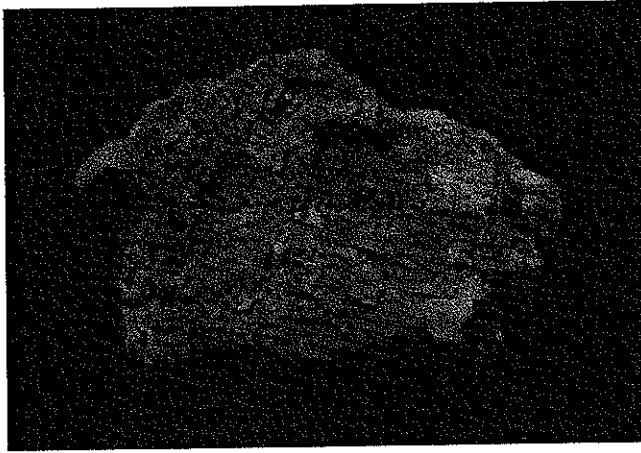


Fig. 4.2. Residue encrusted on interior of sherd no. 13.

Point Peninsula Sherds

Three sherds, all from Kipp Island, are Point Peninsula pottery types. These sherds represent ceramic types spanning the period from A.D. 400 to 900. One sherd is from a Wickham Incised vessel (No. 1, table 4.5; fig. 4.3), a Middle Point Peninsula type (Ritchie and MacNeish 1949, 104). The other two sherds (Nos. 12, 15, table 4.5; fig. 4.3) are Point Peninsula Corded-rim sherds. Point Peninsula Corded-type ceramics are common throughout the Point Peninsula period; but increase in frequency later in the period (Ritchie and MacNeish 1949, 102).

Early Owasco Sherds

Of the eight Owasco-type sherds, four are from Kipp Island, three are from Hunter's Home, and one is from Levanna. These sherds are from types common throughout all three phases of the Owasco period. The Owasco Herringbone rim sherd from the Kipp Island site (No. 6, table 4.5; fig. 4.4) is the only Owasco type that Ritchie and MacNeish (1949, 111) thought might also be present during the Late Point Peninsula period. According to the typology, this type increases in popularity until the Middle Owasco period (Ritchie and MacNeish 1949, 111). Two sherds—one from Kipp Island, the other from Hunter's Home—are Carpenter Brook Cord-on-Cord (Nos. 4, 137, table 4.5; fig. 4.4). Carpenter Brook Cord-on-Cord is common during the Early Owasco period (Ritchie and MacNeish 1949, 108). Levanna Cord-on-Cord is also an early Owasco-type ceramic (Ritchie and MacNeish 1949, 110). Residues from two Levanna Cord-on-Cord sherds (Nos. 40, 99, table 4.5; fig. 4.5) were collected from Hunter's Home and Levanna. An Owasco Corded Oblique rim sherd from Kipp Island (No. 7, table 4.5; fig. 4.4) is a type that was common throughout the Owasco period, but peaked in popularity during the Middle

Table 4.5
Physical Characteristics of Sherds Selected for Dating

Sherd No.	Ceramic Type	Temper	Thickness (mm)	Body Treatment	Decoration	Rim Diameter (cm)
1	Wickham Incised	Quartz (2 mm)	8	Smoothed	Incised horizontal lines,	42

Table 4.5
Physical Characteristics of Sherds Selected for Dating

Sherd No.	Ceramic Type	Temper	Thickness (mm)	Body Treatment	Decoration	Rim Diameter (cm)
1	Wickham Incised	Quartz (2 mm)	8	Smoothed over	Incised horizontal lines, crossed with incised lines at a 45° angle	42
4	Carpenter Brook Cord-on-Cord	Grit (1 mm)	6	Cordmarked	Horizontal cord impressed lines around neck	NA
6	Owasco Herringbone	Grit (1 mm)	9	Smooth	Herringbone of cord impressions, oblique cord impressions on rim interior	16
7	Owasco Corded Oblique	Grit (1-2 mm)	8	Smoothed over	Plats of oblique cord impressions, which continue over rim to interior	12
12	Point Peninsula Corded	Grit (1 mm)	9	Smooth	Cordwrapped stick impressions in horizontal lines around rim and neck	16
13	Untyped	Quartz (4 mm)	11	Cordmarked	NA	NA
15	Point Peninsula Corded	Grit (1 mm)	7	Cordmarked	Horizontal lines of cordwrapped stick impressions, series of vertical impressions along rim	22
23	Owasco Corded Horizontal	Grit (1 mm)	8	Smooth	Horizontal cord impressions, short oblique impressions around neck	20
40	Levanna Cord-on-Cord	Grit (4 mm)	7	Cordmarked	NA	16
99	Levanna Cord-on-Cord	Grit (2-4 mm)	8	Cordmarked	NA	28
107	Owasco Corded Horizontal	Grit (2-4 mm)	7	Cordmarked	Horizontal cord impressions around neck, continuing over rim to interior	14
137	Carpenter Brook Cord-on-Cord	Grit (1-2 mm)	11	Cordmarked	Horizontal lines of cord impressions along neck and rim	20

Fig. 4.2. Residue
encrusted on interior of
sherd no. 13.

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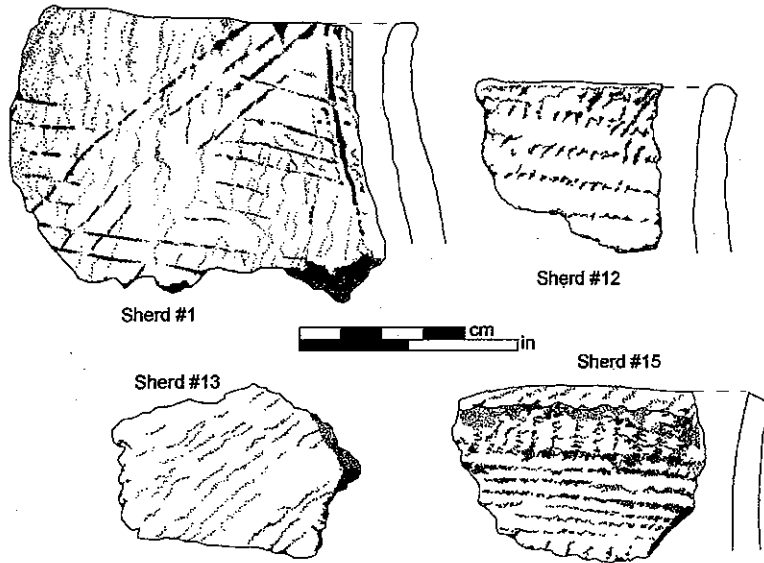


Fig. 4.3. Point Peninsula sherds nos. 1, 12, and 15; untyped sherd no. 13.

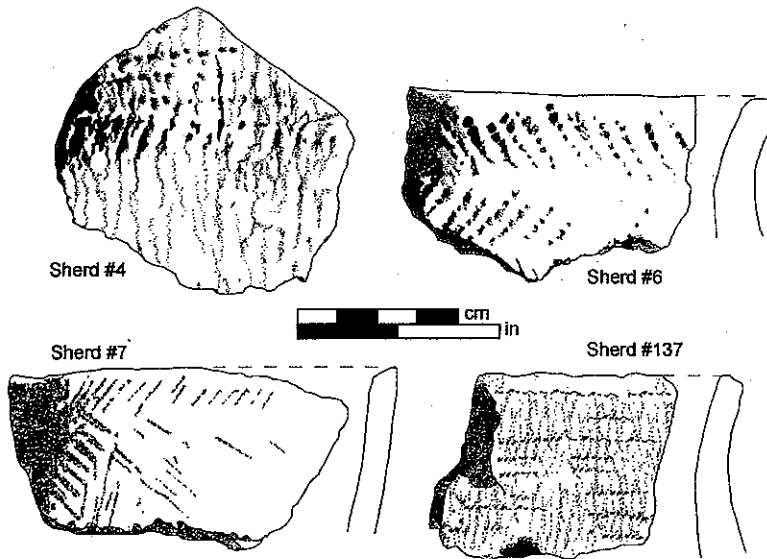


Fig. 4.4. Owasco sherds nos. 4, 6, 7, 137.

Owasco period (Ritchie and MacNeish 1949, 112). Two sherds are from Owasco Corded Horizontal vessels (Nos. 23, 107, table 4.5; fig. 4.5). Owasco Corded Horizontal appears during Early Owasco times and increases in popularity throughout the Owasco period (Ritchie and MacNeish 1949, 112).

Finally, the cordmarked body sherd is from Kipp Island and is not typable to any period or ceramic type (No. 13, table 4.5; fig. 4.3). It has a coil break, suggesting that it belonged to a Point Peninsula phase.



Fig. 4.5. Owasco sherds.

The residue was analyzed with a stainless steel foil and sent to the University of Arizona for radiocarbon dating.

Results

The AMS radiocarbon dates are listed in table 4.6 and show a clear Owasco development.

Point Peninsula Sequence

According to the radiocarbon dates, it is expected to predate the Point Peninsula phase. The lab returned a date of 1000 ± 100 B.P. (table 4.6).

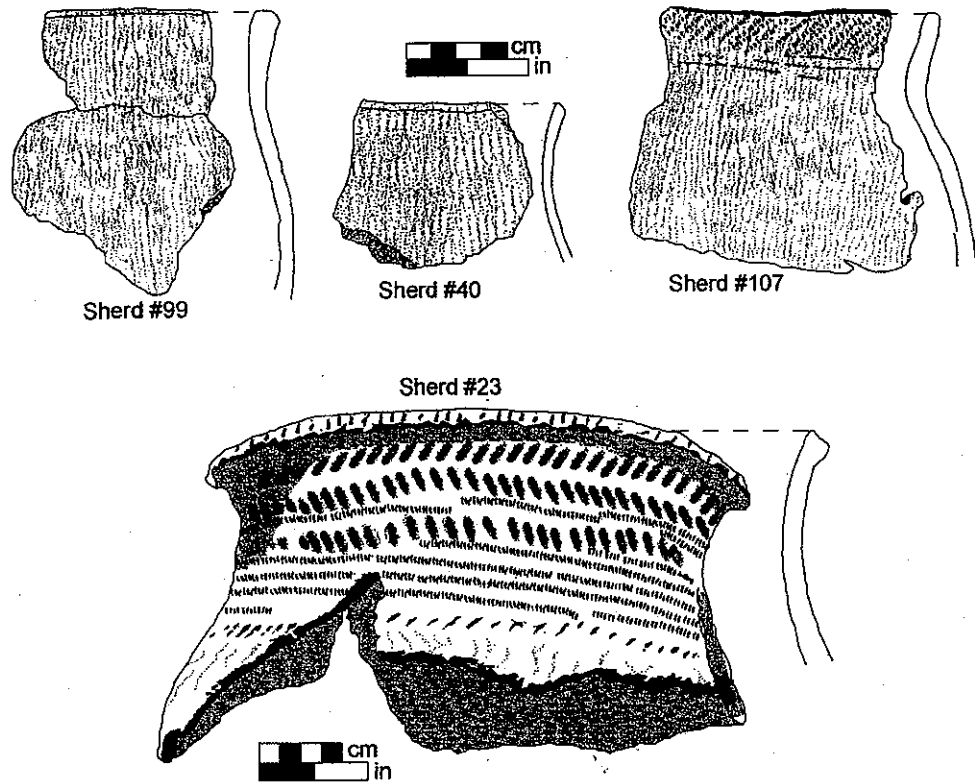


Fig. 4.5. Owasco sherds nos. 99, 40, 107, 23.

The residues encrusted on these sherds were removed under magnification with a stainless steel scalpel. Each sample of residue was wrapped in aluminum foil and sent to Geochron Laboratories, Inc., in Cambridge, Massachusetts, for AMS dating.

Results

The AMS radiocarbon dates returned on the residue samples are summarized in table 4.6 and fig. 4.6. The results bear importantly on the three models of Iroquoian development.

Point Peninsula Sherds

According to the classic typology, all three Point Peninsula sherds were expected to predate A.D. 950. The Wickham Incised sherd (No. 1) was expected to have an absolute date in the range of Middle Point Peninsula (ca. A.D. 400–800). The lab returned a date of 1280 ± 40 B.P., or a calibrated date in the seventh or eighth century A.D. (table 4.6; fig. 4.6). I expected the residues from the Point Peninsula

Table 4.6
AMS Dates and Calibrated Two-Sigma Ranges on Sherd Residues

Sherd No.	Site Name	Type	Lab Number	Uncalibrated		Calibrated Dates A.D.	
				Date B.P.		Two (intercepts) Sigma ^a	
1	Kipp Island	Wickham Incised	GX-26448-AMS	1280 ± 40		660 (693, 699, 715, 749, 764) 863	
4	Kipp Island	Carpenter Brook Cord-on-Cord	GX-26449-AMS	960 ± 40		999 (1034) 1186	
6	Kipp Island	Owasco Herringbone	GX-26450-AMS	1410 ± 40		563 (646) 681	
7	Kipp Island	Owasco Corded Oblique	GX-27558-AMS	1360 ± 40		619 (662) 766	
12	Kipp Island	Point Peninsula Corded	GX-26451-AMS	1240 ± 40		676 (776) 891	
13	Kipp Island	Cordmarked body	GX-26452-AMS	1170 ± 40		729 (887) 980	
15	Kipp Island	Point Peninsula Corded	GX-27559-AMS	1210 ± 40		689 (781, 793, 802) 956	
23	Kipp Island	Owasco Corded Horizontal	GX-26453-AMS	1220 ± 40		687 (779) 939	
40	Levanna	Levanna Cord-on-Cord	GX-28193-AMS	1090 ± 40		886 (979) 1020	
99	Hunter's Home	Levanna Cord-on-Cord	GX-27484-AMS	1180 ± 40		722 (885) 977	
107	Hunter's Home	Owasco Corded Horizontal	GX-27485-AMS	1280 ± 40		660 (693, 699, 715, 749, 764) 863	
137	Hunter's Home	Carpenter Brook Cord-on-Cord	GX-27486-AMS	1130 ± 40		780 (897, 922, 942) 998	

^aCalibrated with CALIB 4.3.

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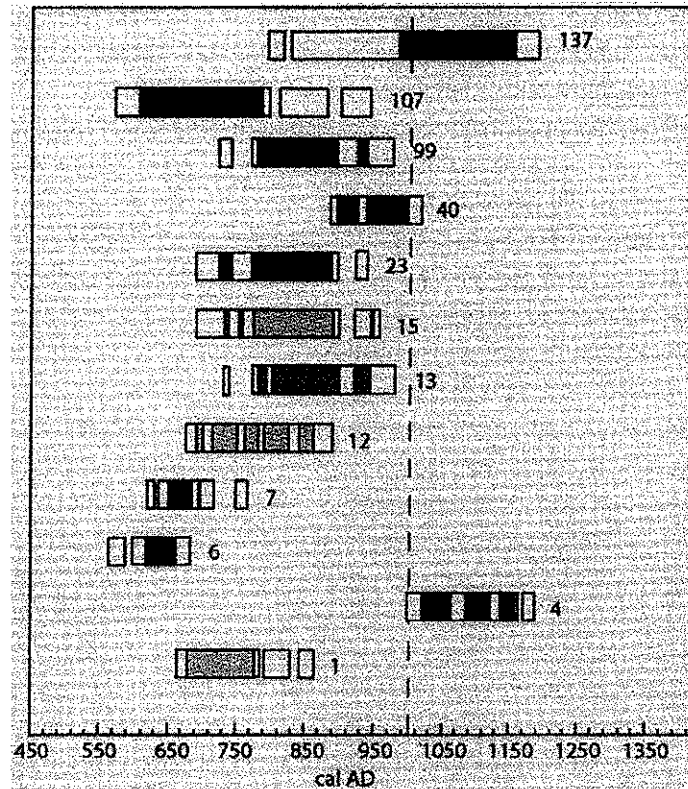


Fig. 4.6. 2- σ calibrated AMS dates and intercepts from encrusted residues. Owasco type sherds (nos. 137, 107, 99, 40, 23, 7, 6, 4) are shaded in black, Point Peninsula (nos. 15, 12, 1) in light gray. The dashed line delineates the classically defined break between the Point Peninsula and Owasco periods.

Cordoned sherds to date in the Middle to Late Point Peninsula periods (ca. A.D. 400–950). The Point Peninsula Corded sherds had dates of 1240 ± 40 B.P. or cal A.D. 776 (No. 12) and 1210 ± 40 B.P., which calibrates to the late eighth century A.D. (No. 15). All three of these calibrated dates are consistent with the expected results; each produced a solid Late Point Peninsula date.

Owasco Sherds

All of the Owasco-type sherds were expected to postdate A.D. 950 because this is the beginning of the Owasco period. As expected, the Carpenter Brook Cord-on-Cord sherds produced dates of 960 ± 40 B.P. or cal A.D. 1034 (No. 4) and 1130 ± 40 B.P. or the early tenth century A.D. (No. 137), and the Levanna Cord-on-Cord sherd from Levanna produced a date of 1090 ± 40 B.P. or cal A.D. 979 (No. 40). However,

these were the only Owasco sherds to date in the classically defined Owasco time range. The Owasco Herringbone sherd (No. 6) returned a date of 1410 ± 40 B.P. or cal A.D. 646. This was the earliest date of all the Owasco-type sherds, and can be considered consistent with the chronological placement of Owasco Herringbone in the ceramic chronology. However, the Owasco Corded Oblique sherd (No. 7) produced an almost equally early date of 1360 ± 40 B.P. or cal A.D. 662 (fig. 4.6). The remaining three dates from Owasco-type sherds (Nos. 23, 99, 107) fall between A.D. 660 and 977, and consistently predate the Late Woodland period. In all, five of the eight Owasco pottery types yielded AMS dates that are traditionally considered to be in the Point Peninsula period in central New York.

The cordmarked body sherd (No. 13) was dated to 1170 ± 40 B.P. or cal A.D. 877 (fig. 4.6). Although this date falls into the classically defined Point Peninsula periods, given the discrepancies between expected dates for the Owasco sherds and the actual dates, this untypable sherd cannot be affiliated with either the Point Peninsula or Owasco archaeological culture.

Discussion

Contrary to the pattern predicted by the current ceramic chronology, the oldest absolute date from these sites came from a classic Owasco-type sherd. While this was considered a possible outcome of this portion of the study, I did not expect the dates to be so drastically different from the accepted chronology. This is not the first study to produce absolute dates associated with Owasco material that date to the Middle Woodland period. Several dates from other Owasco components have been disregarded as too early (Snow 1996a, 793 [chap. 3]). These dates are from sites whose artifact assemblage and settlement characteristics place them within the Owasco tradition. Radiocarbon dates from Street, Chenango Point, and Boland calibrate to the seventh and eighth centuries A.D. (Funk 1993; Snow 1996a [chap. 3]; Wurst and Versaggi 1993), as do the dates from Kipp Island and Hunter's Home presented here. The existence of several dates in this early range from other sites suggests that the AMS dates on the Owasco ceramics from Kipp Island and Hunter's Home should be taken at face value. It is clear that the early dates are not the result of a systematic bias; none of the dates from Point Peninsula sherds is earlier than expected.

While the dates from Kipp Island and Hunter's Home suggest culture occupations that are traditionally considered Owasco during a Point Peninsula time range, the single AMS date from Levanna corresponds to the expected range of occupation. Unlike Kipp Island and Hunter's Home, Levanna appears to be an Owasco village with no Point Peninsula occupation.

Although the absolute dates push the appearance of Owasco-style ceramics several hundred years earlier than expected, they do not resolve the issue of how

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the dates are interpreted, that is, how the ceramic styles relate to ethnic groups. Does the overlap of Point Peninsula and Owasco ceramics at the two campsites indicate cultures in contact, or an emerging Owasco culture? It appears that the ceramic chronology developed in the 1940s and the cultural affiliations made on the basis of the ceramic chronology need revisions. The three latest dates, however, are all from Owasco ceramics, and Owasco-style ceramics are the only ceramics at Levanna, a village site. These dates seem to suggest that Point Peninsula styles, and therefore Point Peninsula culture, had declined by the late tenth century A.D., and that by this time Owasco populations were establishing fairly substantial villages on higher ground.

The primary difference between these sites is the probable subsistence system being practiced at each site. The Levanna site is well situated for maize farming, and is occupied during a cultural period in which maize horticulture is supposed to have been practiced. Kipp Island and Hunter's Home, on the other hand, are not located on soils conducive for maize farming (although they are near good agricultural land). In addition, the Kipp Island and Hunter's Home sites are occupied during a period of cultural transition. Owasco ceramics have traditionally been interpreted as indicating the presence of Iroquoians. However, at these two sites, the Iroquoian and pre-Iroquoian populations appear to coexist. Consequently, the validity of considering Point Peninsula and Owasco ceramics as indicators of different ethnic groups is questionable.

Conclusion

These 12 dates in combination with other known early dates from Owasco sites suggest that the Owasco culture may have its origins well before A.D. 900. If ceramic types indeed indicate different cultures, these dates also suggest that Point Peninsula and Owasco cultures overlapped in central New York, perhaps much like Middle and Late Woodland cultures overlapped in southern Ontario (D. Smith 1997a). Both Chapdelaine's *in situ* model and Snow's incursion model allow for an overlap between Point Peninsula and Owasco cultural traditions, while Ritchie's *in situ* model does not. The *in situ* models suggest that the Iroquoian pattern developed either gradually or rapidly from a Point Peninsula base. While the overlap in Point Peninsula-type and Owasco-type ceramics seems to support the gradual *in situ* model, that model remains unsatisfactory in several ways not addressed in this project. Neither of the *in situ* models explains why the Iroquoian language, a unique language in the Northeast, became dominant (Fiedel 1991), or why the Iroquois are genetically different from their Algonquian-speaking neighbors (Langdon 1995). Snow's (1996a [chap. 3]) revised incursion model allows for an overlap in Point Peninsula and Owasco ceramics and explains the appearance of a unique linguistic and biological population in the Northeast.

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The transition from a primarily foraging economy to one dominated by food production in other parts of the world may shed some light on these new data. Theoretical contributions made by Susan A. Gregg (1988; 1991) and Bogucki (1995) suggest that the transition to farming in Europe was often a long, multilayered process of interaction between foragers and farmers. With intensive radiocarbon dating, we now know that foragers and farmers in Europe coexisted for over 1,000 years (Bogucki 1995). A recent review of radiocarbon dates from Ontario also shows Middle Woodland foraging cultures overlapping with Late Woodland farming cultures for at least 300 years (D. Smith 1997a). It is likely that overlapping of subsistence adaptations also occurred in the Finger Lakes region. The possibility of this situation does not resolve the *in situ* versus migration debate, but it does suggest that the Iroquoian area of New York shares developmental similarities with other parts of the world.

Regardless of which model of Iroquoian origins one accepts, the AMS dates presented here indicate that the ceramic chronology developed in the 1940s and the cultural affiliations made on the basis of the ceramic chronology need revisions. Ceramic studies in the future need to address the issue of how strong the linkage is between ceramic types and ethnic groups or cultures. Given the data presented here, it appears the Iroquoian adaptation may have roots several hundred years earlier than is generally accepted.

Acknowledgments

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