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Cover Page Footnote
This article is dedicated to the memory of Charles L. Fisher, New York State Museum, in appreciation of his assistance with this article and his friendship over many years. I appreciate the support of Jerome Brubaker at Old Fort Niagara and Penelope Ballard Drooker at the New York State Museum. Thanks to Susan Maguire, Donald Smith, and Meredeth Lavelle for their assistance. Thanks also to the anonymous reviewers for their helpful suggestions. I am particularly grateful to Dan Kushel for contributing his radiographic expertise.

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Elizabeth S. Peña

The 18th-century French and British post at Fort Niagara was the site of numerous conferences and meetings in which wampum beads were exchanged between European powers and Native Americans. Considering the distance from shell sources and wampum production sites, this article explores the presence of wampum at Fort Niagara through an examination of the archaeological and documentary evidence. It is suggested that, via several intermediaries, the Fort Niagara wampum beads originated in Albany, an 18th-century hub of wampum production.

Le poste français et anglais du XVIIIè siècle au Fort Niagara a été le lieu de plusieurs rencontres et conférences pendant lesquelles des perles de wampum ont été échangées entre les Européens et les Autochtones. Compte tenu du fait que le Fort Niagara n'était pas à proximité des sources de coquillages et des sites de production du wampum, cet article explore la présence du wampum au Fort Niagara en examinant l'évidence archéologique et documentaire. Ces éléments suggèrent que les perles de wampums du Fort Niagara aient été originaires d'Albany, un centre important de production du wampum au XVIIIè siècle.

Introduction

To Europeans wrapped up in the aftermath of the War of Austrian Succession and ongoing Imperial rivalries, the collective will of Native Americans all the way across the Atlantic is likely to have been considered irrelevant, if it was even considered at all; however, the fragile and changing relationships between Native Americans and French and English colonial leaders formed part of the larger scope of the Seven Years War (1756–1763) (Farry 2005: 17; Fowler 2005). One measure of the efforts made by these European colonial powers to forge alliances with Native American groups is recorded in the documentary record, as both French and British leaders organized Native council meetings, expressed their wishes using Native oratory styles, and made commitments using wampum, the cylindrical shell beads valued by Eastern Woodland Indians (in what is now the northeastern United States and southeastern Canada) in ceremony and ritual. The exchange of wampum strings and belts between Europeans and Native Americans has been termed "wampum diplomacy," and exemplifies the cultural accommodations that constituted part of the diplomatic process.

Because of its pivotal position at the entrance to the Great Lakes system and the interior of the continent, Fort Niagara was contested ground in the 18th century (FIG. 1). Situated at the junction of Lake Ontario and the Niagara River, Fort Niagara was of strategic significance because it guarded the portage point around Niagara Falls, a drop of over 300 feet (100 m) from the top of the waterfall to the base of the lower rapids. Two 17th-century French attempts at settlement were abandoned after the winter of 1687, in which 88 out of 100 men perished. In 1726, the French returned to construct a more substantial outpost. This large stone building is now the oldest standing structure on the Great Lakes, and is often referred to by its 19th-century name, the "French Castle" (FIG. 2). The British took control of the fort following their successful siege in 1759; they held on to the property even after the Revolutionary War made the fort United States territory, finally relinquishing the fort in 1796. Fort Niagara traded hands several times in quick succession during the War of 1812. It was refurbished during the Civil War, and served as a recruitment center during both world wars, even housing German prisoners-of-war in World War II. Fort Niagara was finally decommissioned in 1963, and the historic site became known as Old Fort Niagara, with the more modern military features designated New Fort Niagara, all within Fort Niagara State Park. Today, Old Fort Niagara is a New York State Historic Site and a National Landmark.

Wampum at Fort Niagara

Marine shell beads have been recovered from sites in Western New York dating as far back as the Archaic Period, ca. 3000–1000 B.C., testifying to the region's role in a broad

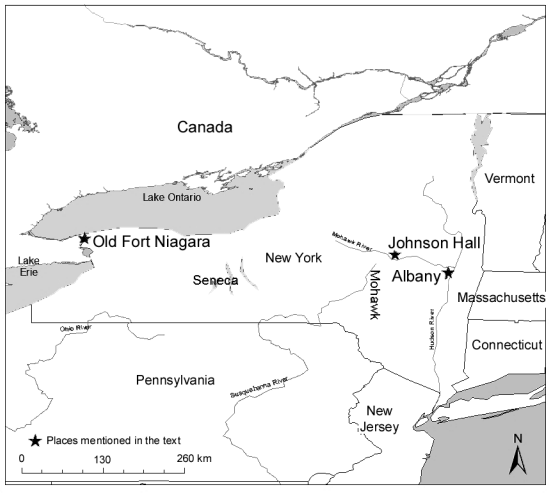

Figure 1. Regional map, with locations mentioned in text.

exchange network (Ceci 1988: 66), and to the significance of shell beads to the Native Americans who lived in the area. As early as the late 16th century, some shell beads exhibited straight bore holes, suggesting that they were bored with metal tools (Engelbrecht 2003: 132) and were part of the increased quantity of European-influenced goods that were traded to Western New York Indians, most likely Iroquoian groups such as the Neutral, Erie, or Wenro, by that time. Most of the Contact Period archaeological sites known from this region are located in the area south and east of Niagara, home to the Seneca Iroquois (FIG. 1). Archaeological evidence from these sites suggests that European trade may have increased by the turn of the 17th century, as glass trade beads have been found in large numbers on sites dating from this era. During the first half of the 17th century, however, the quantity of marine shell beads on Seneca sites appears to decline, then rebounds in the middle of the century, with up to 250,000 shell beads found at the Power House site (Sempowski 1988: 87). Purple wampum beads also make their appearance in the archaeological record at this time. The earliest known belt with purple wampum recovered from a Seneca site is dated to the first quarter of the 17th century (Engelbrecht 2003: 148, 156).

While the eastern regions of New York State are hundreds of miles from Seneca territory, the Seneca were linked to the easternmost of the Iroquois, the Mohawk (FIG. 1). The Seneca and the Mohawk were Iroquois "elder brothers," as doorkeepers of the Confederacy's western and eastern doors, respectively; the Mohawk may have contributed to the Seneca's 17th-century wampum supply (Sempowski 1988: 91). The archaeological and documentary records together suggest that toward the end of the 17th century, only wampum made with metal tools was present, and by the 18th-century, glass beads were predominant. Ceci (1988: 72) ties these changes to shifts in the wampum/fur exchange and the collapse of Native exchange networks caused by the European settlers' displacement of the Seneca, particularly after the French military campaign of 1687.

The increased availability of wampum across what is now New York State is likely to be due to its use among 17th-century European colonists and its mass production by Long Island Algonquians. With metal tools provided by the English, these coastal Indians produced large quantities of wampum beads for English trade. This activity was so pervasive that it has been considered a significant agent of culture change, leading to increased sedentism, population concentration, and shifts in the traditional seasonal cycle, as time previously

Figure 2. The Old Fort Niagara Castle, with the bakehouse to the left. Lake Ontario is in the background.

devoted to food production was given over to wampum making. When British involvement in the fur trade slackened around the turn of the 18th century, the British need for wampum decreased and Native American production became greatly reduced (Ceci 1977; Williams 1972; Williams and Flinn 1990: 21).

While wampum was used in the fur trade for a long stretch of the Atlantic coast, from British colonies in the north to Swedish settlements farther south (Williams and Flinn 1990: 16), it was the Hudson Valley Dutch, particularly those in the city of Albany, who relied upon wampum as a means of exchange within their own community, replacing scarce coinage. A 1650 Dutch description of Long Island notes the importance of retaining control of at least part of the island, "otherwise the trade will suffer great damage, because the English will retain all the wampum manufactures to themselves and we shall be obliged to eat oats out of English hands" (O'Callaghan 1856a: 459). By the 18th century, wampum was much less frequently used as "cash," but was of increasing importance in the fur trade. To gain control of the wampum supply and improve their profits, Dutch colonists oversaw their own wampum manufacturing businesses based in Albany, a Hudson Valley city whose origins lie in the 17th-century Dutch fur trade. Wampum making thrived as a cottage industry undertaken by part time craftsmen, soldiers on watch, and others seeking to supplement their wages. Several historical references from the mid-18th century mention wampum making by Europeans or Euro-Americans in the Albany area, including a 1755 mortgage book listing "John David of the City of Albany Wampum Maker (O'Callaghan 1856b: 126) and several sources referring to poor families in Albany making wampum (Peña 1990: 29). The documentary record also indicates that finished beads were used in the fur trade both north and west of Albany, potentially as far west as Fort Niagara.

At Niagara, Native networks were clearly disrupted by the presence of the fort and its dominance on the landscape. By the early years of the 18th century, the European fur trade in the Niagara region had become fairly well established, as New York Governor Robert Hunter had licensed several traders and encouraged exchange with Indians who lived west of the Seneca's Finger Lakes homeland. Hunter also promoted good relationships between these western tribes and the Iroquois, in an effort to set up a smooth chain of trade (Norton 1974: 159). In 1720, the French reestablished themselves in the area through a trading post on the Niagara River at the escarpment that marked the northern end of the Niagara Falls portage. This was followed by an unsuccessful British attempt to get the Iroquois to destroy the post, then by British efforts to capture Iroquois loyalty by setting up blacksmiths in the area (Norton 1974: 161), since one of the Indians' greatest vulnerabilities was the need for the repair of weapons they had obtained through European trade. When Fort Niagara's Castle was built in 1726, the Seneca expressed their ties to the region with their protests that the French construction had taken place without specific consultation with the Seneca, but only with central Iroquois leaders. Whatever the strength of the Seneca may have been, Fort Niagara remained a gathering point for Native Americans of many different groups. As French Captain Pierre Pouchot, the Commandant of Fort Niagara, noted in 1759, the fort "was a very considerable one, because of its position and the large number of Indians who had dealings there & came from all parts to trade & form war parties…" (Pouchot 2004: 133). The role of Fort Niagara as a meeting place was significant because the Iroquois, along with neighboring Algonquian groups, were needed as allies in the Europeans' struggle for supremacy in the region, which was linked to broader conflicts in Europe.

In forging relationships with Native Americans, both French and British authorities at Fort Niagara mediated with wampum. Handing over strings of wampum beads or woven wampum belts as statements were pronounced gave authority and significance to the speeches, making them tangible and making participants accountable. Because wampum's meaning was tied to the symbolic significance of its shell material, it was a value-laden medium of exchange with "supplementary representational significance" (Murray 2000: 126). Colonial era documents contain plentiful references to wampum exchange across the Eastern Woodlands, including many specific to Fort Niagara.

In July of 1757, Pouchot reported that a great council was held at Fort Niagara, in which the Iroquois presented "a beautiful wampum belt" to representatives from the Huron, Miami, and Ottawa peoples to attest to Iroquois loyalty to the French (Pouchot 2004: 124). The wampum belt, however, was returned to the Iroquois the following day, painted with vermillion. With this, the belt was

transformed from a symbol of peace to one of war; the Iroquois were asked to prove their loyalty to the French by bringing English prisoners to the fort. When the Indians left Fort Niagara for Montreal, the fort had been emptied of trade goods because of equipment provided to the Indian warriors and gifts given to those who participated in the council (Pouchot 2004: 125).

In May of 1759, at another council held at Fort Niagara, Pouchot chided the Iroquois chiefs for sending wampum strings to other Native American nations in an attempt to alienate them from the French. In apologizing, the chiefs explain their confusion:

> The Frenchman solicits us from one quarter, the English from the other. We understand nothing of the claims of the English & the French. We are ignorant of their reasons for making war on one another. Our true intention is to remain neutral. You are both so strong that we consider ourselves crushed in spite of our own power" (Pouchot 2004: 192–193).

At this council, the Indians presented the French with strings of wampum, asking that in exchange, Indian implements be repaired (Pouchot 2004: 193).

As the British prepared for the siege of 1759, British Major General Jeffrey Amherst asked that Sir William Johnson, Superintendent of Indian Affairs, use his influence to convince the Iroquois to join the British cause. Johnson's background made him the perfect choice for such a role, as he was well connected in the Iroquois community through his common-law Iroquois Mohawk wife, Molly Brant, with whom he had eight children (Huey and Pulis 1997). Unlike most of the other European traders and military men, Johnson sought to understand the workings of Native society and to create compatible relationships of mutual accommodation and respect (O'Toole 2005). Johnson established his Mohawk Valley home, Johnson Hall (FIG. 1), as a central meeting place, and as such, he is likely to have maintained plentiful supplies of wampum beads, strings, and belts, as well as other trade materials. Johnson is recorded to have purchased more than 3,000 wampum beads at a time, along with leather and thread for stringing (Jacobs 1949: 599).

Several wampum belts specifically referred to Fort Niagara. In April of 1759, Johnson met with Iroquois representatives in the Mohawk Valley. From them, Johnson received a wampum belt and a message about the Indians' willingness to join with him in marching against the French at Niagara (O'Callaghan 1856c: 392). The belt is described as bearing "the Figure of Niagara at the end of it, & Sir William's name worked thereon." Johnson was to return the belt when he had an answer about the Niagara campaign. Five years later, another Niagara-specific belt was traded, this time at Fort Niagara. Johnson presented to the Chippewa sachem Wabbicomicot a belt showing "a Figure representing Niagara's large House, and Fort, with two Men holding it fast on each side, and a Road through it" (Hamilton 1953: 307). The ultimate disposition of either of the Niagara belts remains unknown.

When the 1759 siege was underway at Fort Niagara, many wampum strings and belts were exchanged as the French and the British endeavored to sway the Native Americans to one side or another (Dunnigan 1996). Pouchot attempted to win back some of the Seneca Iroquois who had gone over to the English side, combining eloquent speeches with a large wampum belt (Pouchot 2004: 214). While the Iroquois and the French were in conference, however, the British advanced their forces. Despite this setback, some Seneca did return the following day, promising to leave the English and return to the French camp, offering assurance in the form of a white wampum belt. Several belts followed, also related to these negotiations (Pouchot 2004: 216). All of these wampum exchanges took place at Fort Niagara.

At one point, Pouchot sent a message to another French captain via four Native American warriors; one, an Onondaga Iroquois, returned to Fort Niagara, claiming to be looking for some lost wampum: "it is the same thing as a European who has lost a jewel" (Pouchot 2004: 230). Pouchot suspected this individual of being a spy for the British; his excuse for returning to the fort, whether it was true or not, suggests that Fort Niagara was widely known as a place of wampum exchange.

After the British gained control of the fort in July of 1759, Sir William Johnson worked to ease the transition for local Indians. In early August, Johnson sent wampum strings and belts to the Chippewa, the Genesee, and the Onondaga (Hamilton 1963: 118). He included this wampum in his expense report to the British crown, valued at £10 18s (Sullivan 1921b: 175). Johnson held grand councils at Fort Niagara in 1761 and 1764, as well as many

smaller meetings. At most, if not all, of these meetings at Fort Niagara, wampum strings and belts were exchanged. Fenton notes that a 1791 letter from the Iroquois leader Red Jacket described how the British at Fort Niagara relied on wampum belts rather than documents for their Indian councils, and maintained a supply of wampum in order to do so (Fenton 1998: 231).

These examples represent only a sample of many historically documented instances in which wampum was exchanged at Fort Niagara between Native Americans and Europeans, both French and British. The accounts do not record where the councils took place. At the 1759 Fort Niagara council with Wabbicomicot and several other Indians, Johnson addressed the group, saying:

> Brethren…The many belts of Wampum and Calumets of peace which hang in this Room convince me of your, and of the Neighboring Nations good intentions, and the just sense which you all entertain of the blessings arising from peace, & our friendship (Sullivan 1921b: 454).

According to the editor and publisher of Johnson's papers, Johnson's note about this Room identified it as "The Command'rs Room in the Forts where conferences are held, & where all the belts which the Indians deliver are hung up" (Sullivan 1921b: 454). Evidently, a room was prepared for the council meeting, or a designated room was left with wampum belts and calumets on continual display. It has long been suspected that negotiations of various kinds took place within the Castle; in fact, in the early 20th century, a "trade room" was created within the building, complete with a shop counter. The Castle's ground floor also includes "The Johnson Room," configured to fulfill the interpretive need for an actual site where Fort ownership passed from French to British hands. According to Pouchot's memoirs, however, the letter from British Brigadier John Prideaux demanding that the French surrender was delivered in "the commandant's room" (Pouchot 2004: 208), probably referring to Pouchot's suite of rooms on the second floor of the Castle. Despite these few historical references and Colonial Revival constructions, little is known about Native American activity inside the Castle. It is certainly possible that trade took place outside the Castle, as most of the references to these gatherings place them in the summer months, potentially allowing for open air meetings. Outside meetings might also have alleviated some of the British concern of being overrun by Indians. In fact, a few days after the British took control in 1759, Sir William Johnson ordered Lieutenant Colonel William Farquhar of the 44th Regiment, "If the Indians should come in large bodies, you will not admit above twenty to come within the fort at a time" (Hamilton 1963: 158–159). While meeting outside may have seemed safer, Johnson's comment about wampum and calumets hanging in a room clearly indicates an indoor meeting space. The lengthy presentations and ceremonial offerings that were part of the Council process also suggest the practicality of an interior space, as even summer meetings at Fort Niagara might have needed shelter from rain, wind, and the evening chill. Because Pouchot's interactions with the Indians were very similar in nature to Sir William Johnson's, it is likely that Pouchot used a similar space or spaces. No documentary or archaeological evidence has yet come to light to suggest where the French and Indians met.

The Archaeological Record

As Einhorn (1974: 72) has commented,

> Those of us who are familiar with Colonial archival literature and "forest diplomacy," probably have wondered where the thousands of wampum strings and belts which were exchanged during the innumerable colonial-Indian negotiations of the seventeenth and eighteenth centuries have come to rest.

While wampum is abundant in the documentary record for both the French and British eras at Fort Niagara, archaeological finds of wampum are rather sparse. There are several reasons for this: the acidic soils of the Western New York region do not lend themselves to good preservation of organic materials; the likely loci for wampum exchange are difficult to identify archaeologically; and the activity has low archaeological visibility. While wampum beads might be considered easy to lose because of their small size, they were seldom exchanged loose, but were formed into larger objects, such as strings or belts. In addition, their inherent value meant that people might have made the effort to recover lost beads. Another significant reason for the paucity of wampum in Fort Niagara's archaeological record is because of the recursive nature of wampum itself—that is, strings and belts could be unstrung and re-woven to suit the needs of another day. Part of the utility and power of

wampum resided in the way in which people could alter its form to change its meaning and to express their views.

In excavations over the past 25 years, a total of 40 wampum beads has been found at Fort Niagara; 18 (or about 45%) of these beads were found in a trench excavated in front of the Castle (Test Unit 374) (FIG. 3); this trench had both a leaking water line as well as a high voltage electric line, necessarily limiting the ability of the archaeologists to achieve much in terms of stratigraphic control. The location of the trench immediately in front of the Castle is in itself important. If the Castle was the location of the Council meetings for both the French and the British, it would not be surprising to find assorted lost wampum beads just outside the front doors. Sir William Johnson's description of a room lined with wampum belts and calumets, the "Command'rs room," is likely to have been inside the Castle (see above). Two of the 18 wampum beads found in front of the Castle were broken; of the 16 that could be measured, the average length was 4.9 mm and the average diameter was 3 mm.

Nineteen beads (47.5% of the sample) were recovered from specific levels or features lying to the northern side of the parade ground. Of these 19 wampum beads, the greatest concentration is the five beads found in Test Unit 319 (fig. 3). Excavated in 1984 and 1985, Test Unit 319 was located just within the area circumscribed by the various 18th-century stockade lines (Scott and Scott 2003: 63, 71). Four of the five wampum beads came from Feature 4/6, identified as a builders' trench associated with a building that stood from the mid-18th century through the early-19th century, known as Structure 408 in today's military parlance. The fifth bead was from Feature 5, an associated context that represents a deposit at the edge of the builders' trench. The five beads had an average length of 5.6 mm and an average diameter of 3.2 mm; all were made from dark purple clam shell.

Feature 4/6 was identified archaeologically as a trench dug into glacial clay, filled with dark yellowish brown clayey silt with scattered bits of plaster (Scott and Scott: appendix B). Of the 14 ceramic sherds in the deposit, four were 18th-century tin glazed wares (two with blue decoration, one undecorated). Eight were undecorated creamware, one was white salt glaze stoneware, and there was a single unidentifiable burned sherd. Other finds from this builder's trench include 56 glass trade beads.

The soil above the builders' trench was classified as a separate feature, Feature 3, which appears to represent the definition of the builder's trench. While Feature 3 lacked wampum, it contained trade beads, including opaque black beads (Kidd type IIa7) found *in situ* as if strung, as well as a heart-shaped Jesuit ring (Scott and Scott 2003: appendix B). The seven ceramic sherds from Feature 3 included two blue decorated tin glazed pieces and one undecorated example, 1 sherd of Staffordshire combed and dotted buffware, and three small creamware sherds.

While the builder's trench had been considered part of the original French construction of structure 408, the presence of creamware provides a *terminus post quem* after the British conquest in 1759, in spite of the trade beads and Jesuit ring, that hint at earlier 18th-century French trade. Both the builder's trench and the feature above it appear to represent later 18th-century deposits with some evidence of trade activity.

Turning to the cartographic evidence, Structure 408, labeled as the "officers' quarters" on French maps from the mid-1750s, was enlarged by the British shortly after they arrived in 1759. It is possible that Sir William Johnson's "Command'rs room" was located here, rather than in the Castle. A 1768 British map suggests that the building was undergoing repairs. During the British era, the building was labeled, in succession, "The Officers & Soldiers Barracks," "The lodgings of the Doctor &tc," "officers' lodgings with 7 fireplaces (interior out of repair)," and "Soldiers' Barracks." After 1810, the structure no longer appears on maps and is likely to have been razed. The Feature 4/6 builder's trench may be associated with British enlargements and repairs during the 1760s.

In 2005, three 2 × 2 m excavation units (Units 21, 23, and 24) were placed in the area of Structure 408 with the aim of recovering additional segments of the builder's trench or related features (FIG. 3). Thirty-seven glass trade beads were recovered in 18th-century strata from these three units, most not in association with any structural features. Twenty-six of the beads (62.2%) were recovered from Unit 23. Of these 26 glass beads, 19 (73.1%) were white drawn beads that had been rounded, Kidd type IIa12. One example of an opaque black glass bead (IIa7), similar to those found in the Building 408 builders' trench (Unit 319),

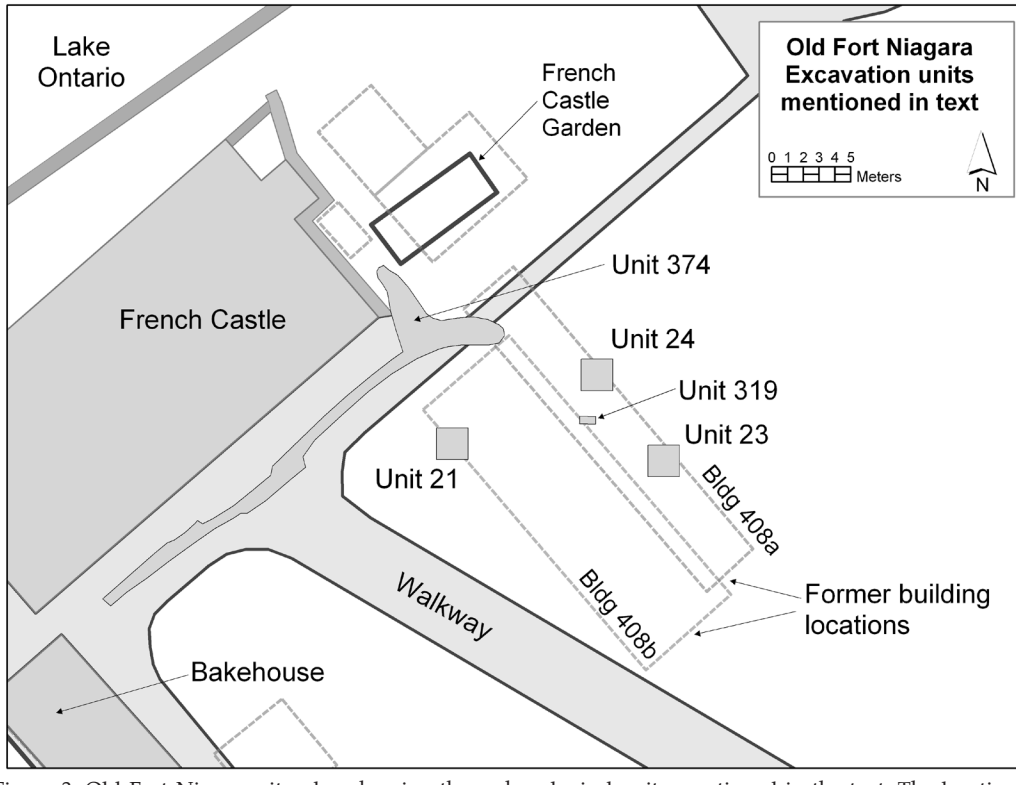

Figure 3. Old Fort Niagara site plan showing the archaeological units mentioned in the text. The location of Building 408a/b, the 18th-century officers quarters, is based on cartographic evidence.

was identified. While no wampum was found in any of the 2005 units, the recovery of glass trade beads hint at the trade activity that occurred in this area.

As an officers' quarters, perhaps Structure 408 was not an unlikely place for wampum exchange, a process in which the fort's commanding officer was always the speaker and negotiator for the European side. The location of the structure near the Castle also suggests that trade may have occurred outdoors, in the area between the two buildings, possibly relating to the 18 wampum beads found in the trench in front of the Castle. If the five beads from Unit 319 are related to British building improvements in the 1760s, they might have found their way into the archaeological record following the 1764 grand council or a similar meeting.

The 14 wampum beads found in other areas of the north parade ground averaged 5.3 mm in length and 3.2 in diameter. While the stratigraphic contexts of these beads is not as clear as the five beads associated with Building 408, their horizontal provenience on the north section of the parade ground ties them to the other wampum finds. Completing Fort Niagara's total of 40 wampum beads are three additional examples from excavations in other areas of the fort; they are not included in this discussion because they represent a small and disparate sample.

Origins of Fort Niagara Wampum

Wampum was clearly used at Fort Niagara, as indicated in the historical documents and the archaeological record. This far west, however, wampum was distant from its coastal origins on Long Island Sound, and had arrived at the fort through a number of intermediaries. The best known 18th-century wampum source, based on both documentary and archaeological evidence, is Albany. This is not to say that people in other areas did not make wampum; in fact, it is likely that some production occurred around the Long Island Sound area and into New Jersey, which became the site of a well known 19th-century factory that made wampum and other items for the western

trade (Williams and Flinn 1990). The evidence to date, however, draws the focus to Albany as the hub of the 18th-century wampum business.

It is clear that Albany-made beads were sent to Montreal, a business that continued during the Seven Years' War despite the prohibitions on trade. Prominent Albany merchants illicitly traded Albany wampum for Canadian furs (Norton 1974: 90, 126). During the French period at Fort Niagara, wampum could have been transported from Albany to Fort Niagara via Montreal.

Wampum associated with British contexts at Fort Niagara is also likely to have originated in Albany. Sir William Johnson's correspondence indicates that he was well aware of the Albany wampum trade by 1749, as he noted two men departing Albany for Canada, "to shew the French the art of making Wampum, which they never knew anything of before"(Lauber 1939: 51–52). In May of 1749, Johannes Vanderheyeden of Albany wrote to Johnson at Johnson Hall, "In my Last I Signafid: that: I had ye. finest parcel of wampen Ever I had before, wh. I Shall Save for you, accog. To my promise, at your Command" (Sullivan 1921a: 226). This passage illustrates that Johnson had agents in Albany who acquired wampum on his behalf. It seems likely that he maintained stores of wampum at his Mohawk Valley estate, and may have had it transported from there to Niagara or other locations.

In January 1759, Johnson requested reimbursement from the Crown for money he spent on "2M Black Wampum of Mr. Lansing" (Sullivan 1921b: 154). The Lansings had been a prominent family in Albany from its earliest days as a Dutch colony. Johnson may have been referring to Abraham Lansing, who was identified as an Indian Trader on the city's 1756 census. Two thousand beads would have represented a fairly small purchase, at £4 1s 6d. Later that year, Johnson's expense report included an entry for £10 5s, "To 4 Thous'd Wampum & 100 made into Belts at Oswego" (Sullivan 1921b: 175). It would appear that Johnson was acceding to a request from John Van Eps, stationed at Oswego, that Johnson send along a shipment of wampum (Sullivan 1921a: 230). Whether the Oswego wampum remained at that post or was intended for further distribution, it is evident that Johnson played an active role in the wampum supply of the British colonial frontier.

Once Fort Niagara was in British hands, it seems likely that Johnson would have ensured its wampum supply as well, particularly since Johnson himself became the British commanding officer following the death of Brigadier General John Prideaux during the 1759 siege. In September of 1759, Johnson tried to calm the fears of the Seneca that their trade in fur and skins would suffer: "I promised them that they should have their skins, &c., exchanged, and that some traders are gone to Albany for goods, some time ago for that purpose, and daily expected" (Hamilton 1963: 134). It does not seem unlikely that wampum might have appeared on the traders' list of goods to obtain while in Albany. Fifteen years later, shortly before his death, Johnson was still dealing with wampum, as noted in his accounts from 1774 (Flick 1933: 1095),

30 thousand grains of Black, &	
30 M White Wampum	£97.10
To making them up in proper Belts	6.12

These records do not, however, indicate who received these payments and how Johnson used the wampum. Considering the active nature of his negotiations with Indian groups, Johnson is likely to have had a ready supply of wampum, probably made up into the strings and belts most useful for trade (for Johnson's need for trade goods, see Burch 1990: 269).

Wampum manufacture

The wampum from Fort Niagara falls into the category of "true wampum" (Ceci 1988), that is, wampum made with small iron drills and whetstones, in contrast to larger tubular and discoidal shell beads made prior to European contact. Making wampum from clam shells required cutting the shell into squares, then knapping the squares into strips. The strips were then ground, smoothed, shortened, and drilled. The rough beads were strung for additional smoothing on a whetstone. Writing about his 1744 visit to Albany, traveler and diarist Dr. Alexander Hamilton wrote about seeing "manufactorys for wampum" where "They grind the beads to a shape upon a stone, and then with a well tempered needle dipt in wax and tallow, they drill a hole thro' each bead" (Bridenbaugh 1948: 73).

In Albany, a number of archaeological sites have been identified as wampum production loci. These sites are located in what is now the

city's business district and include the site of a Dutch Reformed Church almshouse, where some of Albany's more marginal residents may have generated ready cash by making wampum (Peña 2001) and a ca. 1758 demi-lune structure along the Hudson River where soldiers whiled away their time knapping wampum beads (Lesniak 2002). While both the archaeological and documentary records are mute on this point, it is likely that a middleman, perhaps the same one who had supplied the shell, sold the finished wampum beads to traders for use in fur trade and wampum diplomacy.

The beads are often described as being sold in strings or belts, but little is known about that process. Some belts must have been created for specific trading events, as it was important that they display particular messages. Other belts and strings may have been crafted in advance and used as needed. Louis Henry Morgan described the process of making a wampum belt in 1850. He noted that strands of slippery elm cord or bark were passed through strips of deerskin and secured to a bow. With a threaded needle, wampum beads were passed under the cord at right angles; the thread was then brought along the upper side of the cord and through each bead to secure it. Variations of this process, using different weaving materials and a double-thread method, were common (Orchard 1975: 122–123). Surviving wampum belts retain significance within present-day Indian communities as markers of cultural identity and cohesion and links to the past. The symbolism of the shell material, the pattern of the beads, and the notion that words were spoken over the belts all contribute to their contemporary cultural value. As items of cultural patrimony, many wampum belts are subject to repatriation under the Native American Grave Protection and Repatriation Act (NAGPRA) of 1990. The previous year, the New York State Museum had initiated the process of returning its wampum belts, which had been collected during the late 19th century, to descendant communities (Fenton 1971; Fenton 1989).

Wampum analysis

Wampum beads from three different sample groups were examined to explore the possibility that the Fort Niagara wampum had originated in Albany: 17th-century wampum from Albany was compared with 18th-century Albany-made wampum, and both were contrasted with Fort Niagara wampum from 18th-century contexts. Variables of size, color, and bore morphology were examined through measurement, visual assessment, and radiography. None of these methods of examination are new: in fact, Orchard's seminal publication *Beads and Beadwork of the American Indians*, first published in 1929, included x-ray photographs of wampum belts and strings, though greater resolution and clearer reproduction are possible today. The sample included nineteen 17th-century beads from Albany, three 18th-century beads from Albany (of which one was not measurable), five beads from Fort Niagara Building 408, fourteen additional beads from the fort's north parade ground, and eighteen beads from the trench in front of the castle (excluding two that were not measurable). The total sample consisted of 59 wampum beads, with 56 included in measurement comparisons. A comparison between Fort Niagara wampum and Albany wampum demonstrates similarities and differences in size, color, and manufacturing technique.

Size

Fort Niagara's total of 40 wampum beads average 5.3 mm in length and 3.2 mm in diameter, with 72.5% of the beads in the 5 to 6 mm range for length and 100% in the 3 to 4 mm range for diameter. Of the five beads from Structure 408, the average length was 5.6 mm, and the average diameter was 3.2 mm. The 14 beads from the north parade averaged 5.3 mm in length and 3.2 in diameter. For the 16 measurable beads from in front of the French Castle, the average length was 4.9 mm, with diameters averaging 3 mm.

The Albany wampum assemblages are problematic in that they contain abundant evidence of production in the form of debris and wasters, but very few, if any, examples of the finished product. The 22 wampum beads from the KeyCorp site, excavated by Hartgen Archaeological Associates in 1986, average 5.5 mm long and 3.8 mm in diameter. Nineteen of the beads, however, are associated with 17th-century contexts, a time period in which wampum was used at the site, but was not manufactured. Looking at the beads with 18th-century provenience, a period in which wampum was actually produced on site, there are only two examples, both measuring 5 mm long and 3 mm in diameter. These dimensions are nearly identical to the Fort Niagara 18th-century wampum beads, but such small

sample sizes preclude any conclusions based on lengths or diameters.

Color

The 17th-century Albany assemblage is heavily weighted toward white beads, with 18 out of 19 beads white in color (94.7%). Of the three 18th-century Albany beads, two were purple and one was white.

The 18th-century Fort Niagara wampum beads were fairly evenly divided, with 22 purple beads (55%) and 18 white examples (45%). The increase in purple beads in the archaeological record at 18th-century Fort Niagara compared with 17th-century Albany is interesting because purple beads were worth twice as much as the white ones, a ratio that persisted despite changing economic circumstances and policies. This may be attributable to dark beads' heftier symbolic weight, a greater need for such beads to create the desired designs, an increased effort required to carve them, or the limited supply of purple shell, which was limited to small areas of the shell's edge. Since the 18th century saw wampum production shift from Native American makers to proto-industrial production by Europeans, the quantity of available beads increased. Perhaps the increased percentage of purple wampum beads in the 18th-century archaeological record is indicative of this more plentiful supply.

Bore morphology

In considering how wampum beads were produced and supplied, it is helpful to look beyond size and color, particularly when working with such small sample sizes. To examine bore morphology, which could contain information about boring techniques and tools, radiology is an appropriate technique that allows for the examination of bore shape and size without causing any damage to the bead. Radiography relies upon electromagnetic waves to produce images on film. Because the waves are absorbed at different levels depending on an object's mass, light and dark shades are produced. Since a wampum bead is less dense along its hollow bore, x-rays should be expected to reveal the bead bore as a dark shade in comparison with the mass of the bead body. To compare the bore morphology of Fort Niagara beads and Albany beads, several x-ray images were produced.[1] A photographic image of each bead was placed immediately above its radiographic image.

Two 17th-century Albany wampum beads were subjected to radiography, revealing that each bead was bored from both ends, with the bore hole meeting slightly askew. In the case of A-87-5.244.15 (FIG. 4), the drill penetrated about two-thirds of the way from one side and one-third from the other; in the case of A87-5.226.9 (FIG. 5), the drilling met closer to the middle of the bore shaft. In both cases, the shape of the bores suggests the use of a conical drill, wider at the bead edge and narrower in the middle. The outer bore measures 1.5 mm in diameter, while the inner bore measures 1.05 mm in both examples.

The 18th-century Albany wampum and the Fort Niagara wampum, however, share a different bore pattern. They were drilled through smoothly from one end to the other, suggesting the use of a narrow, cylindrical drill. The shaft of the 18th-century Albany example, A87-5.224.17 (FIG. 6), measures 1.0 mm in diameter throughout its length. Similarly, the Fort Niagara bead that was radiographed (A. OFN.85.00/00213) has a bore shaft of that measures 0.96 mm at both ends and in the middle (FIG. 7). For all the 18th-century wampum beads, the bore shaft is straight.

The difference between the 17th- and 18th-century samples indicates a significant shift in manufacturing technique and the use of an 18th-century tool kit that included straight, narrow drills, capable of penetrating the entire length of the bead (approximately 6 mm) in a single drilling episode. This marked a significant alteration to the 17th-century method of drilling each bead from both sides using a wider, conical drill. This change is likely to be attributable to the shift from Native American wampum manufacture to production by Euro-Americans.

The similarity in morphology between the two 18th-century samples suggests that each was produced by the same manufacturing process. Because the documentary record suggests that Albany was the premier locus for wampum manufacturing in the second half of the 18th century, it is probable that the Fort Niagara wampum originated at an Albany production site. Connections between Albany and Fort Niagara are further strengthened by

[1] The beads were radiographed by Professor Dan Kushel in the Art Conservation Department at Buffalo State College with a Philips MCN 101 tube (Be window, no filtration, 1.5 mm focal spot) at 50kV, 1250mAS (50 seconds @25mA), film-focus distance 48 inches, Kodak Industrex SR film manually processed with Kodak Industrex developer.

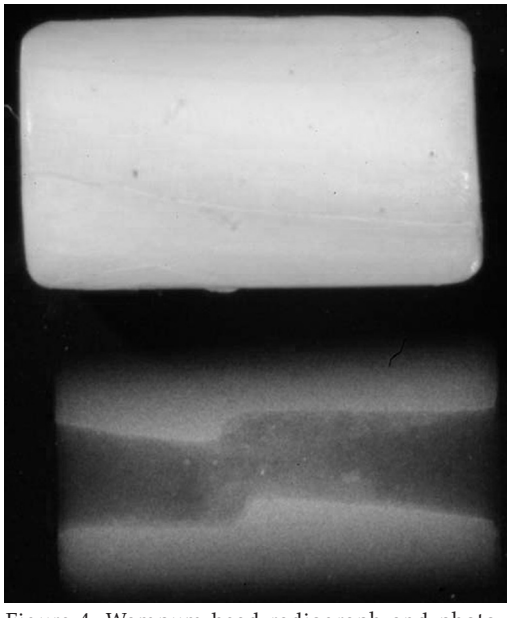

Figure 4. Wampum bead radiograph and photograph, courtesy of the New York State Museum, Albany, NY. This bead is from a 17th-century context from the KeyCorp site, Albany (A87-5.244.15). Note the bore, drilled from each end. Image by Dan Kushel. Bead length = 6 mm.

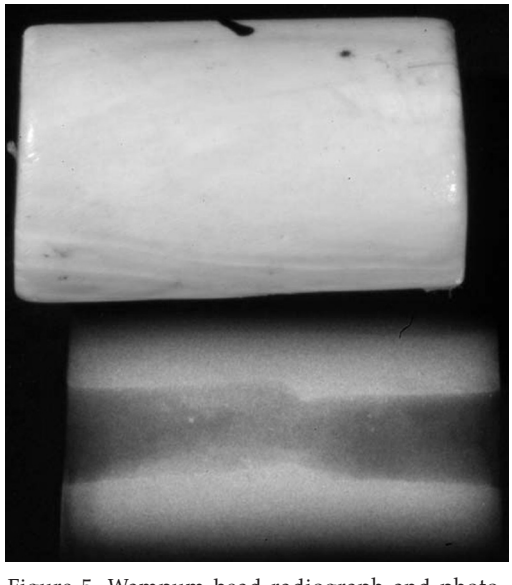

Figure 5. Wampum bead radiograph and photograph, courtesy of the New York State Museum, Albany, NY. This bead is from a 17th-century context from the KeyCorp site, Albany (A87-5.226.9). Note the bore, drilled from each end. Image by Dan Kushel. Bead length = 6 mm.

the Johnson connection. Sir William Johnson owned a house in Albany, had business connections there, and knew about the city's wampum business. Johnson maintained plentiful supplies of wampum at his home, Johnson Hall. He also supplied the British post at Oswego. Once the British had taken over Fort Niagara, with Johnson himself in charge, the wampum supply chain from Albany to Fort Niagara was completed.

Summary and Conclusions

In the Western New York region, wampum circulated by the late 16th century, following patterns established many centuries earlier, when marine shell beads comprised part of a wide prehistoric trade network. At 18th-century Fort Niagara, where Native Americans congregated to trade with European, wampum formed a very important aspect of the diplomatic process. Throughout both the French and British periods of occupation at Fort Niagara, wampum belts and strings were exchanged as tokens of goodwill, testaments to agreements, and expressions of unity and friendship. They served as material forms of communication: one party presented the other with a wampum belt whose pattern of dark and light beads took on the meaning of the words that had been spoken. The belt's message was considered carefully and was either kept or returned, demonstrating agreement or rejection. Wampum mediated between cultures that lacked other formal means of documenting their economic, political, and cultural exchanges.

When wampum diplomacy was at its peak at Fort Niagara, in the second half of the 18th century, wampum production was an important business in Albany. A comparison of wampum beads from 18th-century archaeological contexts at Fort Niagara and similar contexts from Albany indicates many similarities in size, color, and bore morphology. In particular, a radiographic examination of bore size and shape illustrates that 17th-century wampum, using an Albany sample, was made using a conical drill bored from both ends of the bead. Eighteenth-century wampum from both Albany and Fort Niagara demonstrate the use of a narrow, straight drill that bored all the way through the bead from one end to the other. The change in technique fits with the historical record that discusses wampum manufacture shifting from a Native American activity to a Euro-American cottage industry. Albany was the hub of the wampum manufac-

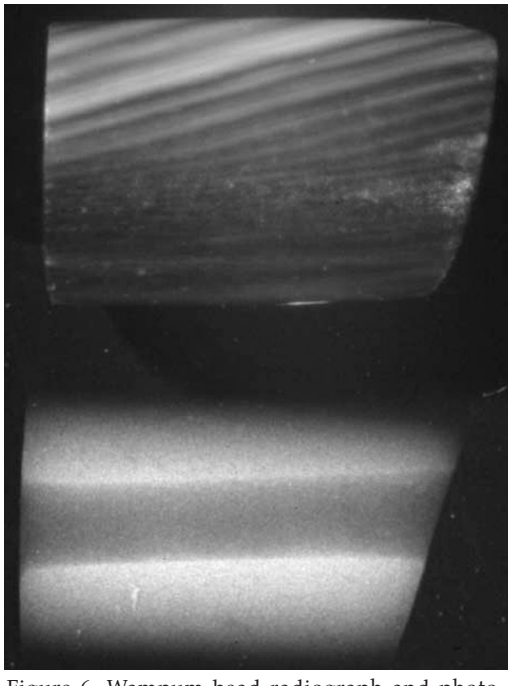

Figure 6. Wampum bead radiograph and photograph, courtesy of the New York State Museum, Albany, NY. This bead is from an 18th-century context from the KeyCorp site, Albany (A87-5.224.17). Note the bore, drilled straight through. Image by Dan Kushel. Bead length = 5 mm.

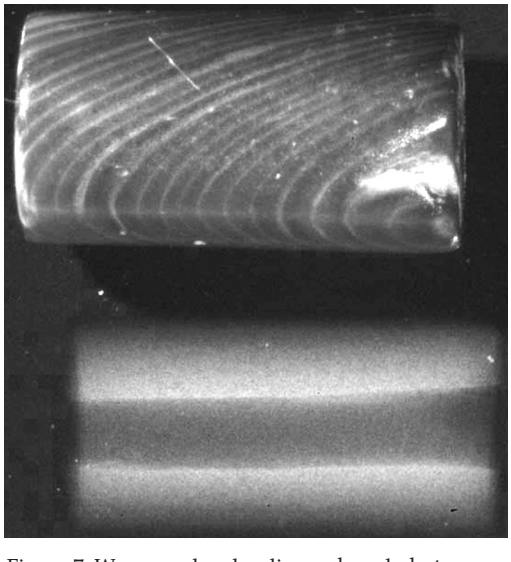

Figure 7. Wampum bead radiograph and photograph, courtesy of Old Fort Niagara State Historic Site. This bead is from an 18th-century context from Fort Niagara (A.OFN.85.00/00213). Note the bore, drilled straight through. Image by Dan Kushel. Bead length = 6 mm.

turing business, supplying wampum for trade to the north and west of the city.

The close similarity between 18th-century wampum beads from Albany and Fort Niagara archaeological contexts supports the notion that Fort Niagara's supply may have originated with Albany wampum makers. This evidence is strengthened by the link between Albany and Fort Niagara provided by prominent individuals such as Sir William Johnson. Johnson had a home and business contacts in Albany, he was aware of the Albany wampum makers, he used wampum in his own frequent councils with Indians at his Mohawk Valley base, and further, Johnson came to be in command of Fort Niagara when the British defeated the French at the siege of July 1759.

While the evidence is not conclusive, the archaeological data, the wampum beads themselves, and the historical record all point to the probability that the Fort Niagara wampum beads originated with Albany craftsmen, and that Albany-made beads were transported to the Niagara Frontier by British leaders like Sir William Johnson. The issue of wampum supply is an important one because of the significance of wampum beads to the diplomatic efforts that both the French and the British made with Native Americans. As European battles overflowed into the North American arena, and the colonial powers vied for Native allies, a distinctly non-European item, wampum, came to have special significance.

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References

Bridenbaugh, Carl
1948 *Gentleman's Progress: The Itinerarium of Dr. Alexander Hamilton*. University of North Carolina Press, Chapel Hill.

Burch, Wanda
1990 William Johnson's Cabinet of Curiosities.

New York History 71: 260–282.

Ceci, Lynn
1977 The Effect on European Contact and Trade on the Settlement Pattern of Indians in Coastal New York, 1524–1665: The Archaeological and Documentary Evidence. Ph.D. diss., City University of New York. University Microfilms International, Ann Arbor.
1988 Tracing Wampum's Origins: Shell Bead Evidence from Archaeological Sites in Western and Coastal New York. In *Proceedings of the 1986 Shell Bead Conference*, ed. by Charles F. Hayes III and Lynn Ceci, 63–80. Rochester Museum and Science Center Research Records 20.

Dunnigan, Brian Leigh
1996 *Siege—1759: The Campaign Against Niagara*. Old Fort Niagara Association, Youngstown, New York.

Engelbrecht, William
2003 *Iroquoia: The Development of a Native World*. Syracuse University Press, Syracuse.

Einhorn, Arthur
1974 Iroquois-Algonquin Wampum Exchanges and Preservation in the 20th Century: A Case for *in situ* Preservation. *Man in the Northeast* 7: 71-86.

Farry, Andrew
2005 Regulars and "Irregulars": British and Provincial Variability among Eighteenth-Century Military Frontiers. *Historical Archaeology* 92(2): 16–32.

Fenton, William
1971 The New York State Wampum Collection: The Case for the Integrity of Cultural Treasures. *Proceedings of the American Philosophical Society* 115: 247–459.
1989 Return of the Eleven Wampum Belts to the Six Nations Iroquois Confederacy on Grand River, Canada. *Ethnohistory* 36: 392–410.
1998 *The Great Law and the Longhouse: A Political History of the Iroquois Confederacy*. University of Oklahoma Press, Norman.

Flick, Alexander C., ed.
1933 *The Papers of Sir William Johnson*, Volume 7. State University of New York, Albany.

Fowler, William M., Jr.
2005 *Empires at War: The French and Indian War and the Struggle for North America*, 1754–1763. Walker & Company, New York.

Hamilton, Milton W., ed.
1953 *The Papers of Sir William Johnson*, Volume 11. State University of New York, Albany.
1963 *The Papers of Sir William Johnson*, Volume 13. State University of New York, Albany.

Huey, Lois M. and Bonnie Pulis
1997 *Molly Brant: A Legacy of Her Own*. Old Fort Niagara Association. Youngstown, New York.

Jacobs, Wilbur R.
1949 Wampum: The Protocol of Indian Diplomacy. *William and Mary Quarterly*, 3rd series 6(4): 596–604.

Lauber, Almon W., ed.
1939 *The Papers of Sir William Johnson*, Volume 9. State University of New York, Albany.

Lesniak, Matt
2002 "A Good Indian Commodity"—Wampum on the Waterfront. In At the River's Edge: Two-Hundred Fifty Years of Albany History, Data Retrieval, SUCF Parking Structure, Maiden Lane, Albany New York, Volume IA, Chapter 4. Hartgen Archeological Associates, Inc.

Murray, David
2000 *Indian Giving: Economies of Power in Indian-White Exchanges*. University of Massachusetts Press, Amherst.

Norton, Thomas Elliot
1974 *The Fur Trade in Colonial New York, 1686–1776*. The University of Wisconsin Press, Madison.

O'Callaghan, E.B., ed.
1856a *Documents Relative to the Colonial History of the State of New York* I. Weed, Parsons and Company, Printers, Albany.
1856b *Documents Relative to the Colonial History of the State of New York* IV. Weed, Parsons and Company, Printers, Albany.
1856c *Documents Relative to the Colonial History of the State of New York* IV. Weed, Parsons and Company, Printers, Albany.

Orchard, William C.
1975 *Beads and Beadwork of the American Indians*. Museum of the American Indian, Heye Foundation. Originally published 1929.

O'Toole, Fintan
2005 *White Savage: William Johnson and the Invention of America*. Farrar, Straus and Giroux, New York.

Peña, Elizabeth S.
1990 Wampum Production in New Netherland and Colonial New York: The Historical and Archaeological Context. Ph.D. diss., Boston University. University Microfilms International, Ann Arbor.
2001 The Role of Wampum Production at the Albany Almshouse. *International Journal of Historical Archaeology* 5(2): 155–174.

Pouchot, Pierre
2004 *Memoirs on the Late War in North America Between France and England*. Trans. by Michael Cardy, Ed. and annotated by Brian Leigh Dunnigan. Old Fort Niagara Association, Youngstown, New York. Originally published 1754–1760.

Sempowski, Martha L.
1988 The Use of Marine Shell at Seneca Iroquois Sites. In *Proceedings of the 1986 Shell Bead Conference*, , ed. by Charles F. Hayes III and Lynn Ceci, 81–96. Rochester Museum and Science Center Research Records 20, Rochester.

Scott, Stuart D. and Patricia Kay Scott
2003 An Archaeological View of Old Fort Niagara. Ms. on file at Old Fort Niagara State Historic Site library.

Sullivan, James, ed.
1921a *The Papers of Sir William Johnson*, Volume 1. State University of New York, Albany.
1921b *The Papers of Sir William Johnson*, Volume 3. State University of New York, Albany.

Williams, Lorraine E.
1972 Ft. Shantok and Ft. Corchaug: A Comparative Study of Seventeenth-century Culture Contact in the Long Island Sound Area. Ph.D. diss, New York University. University Microfilms International, Ann Arbor.

Williams, Lorraine E. and Karen A. Flinn
1990 *Trade Wampum: New Jersey to the Plains*. New Jersey State Museum.

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