

The Harrietsville Site (AfHf-10): An Earthwork Surrounded Neutral Village in Middlesex County

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The Harrietsville site is a pre-contact Neutral village located in North Dorchester Township, Middlesex County, Ontario (Figure 1). It is a part of a cluster of sites which Pearce (1996) terms the Whittaker Lake community. Pearce interprets this cluster as a single community with the villages representing movement through time. The site was visited and reported by David Boyle (1896) who documented the existence of an earthwork on the site and provided a sketch map of the earthwork (Figure 1). The site was relocated by the author in 1980 while conducting archaeological survey in the area (Keron 1981).

In the early 1980s excavations were undertaken at the site in order to obtain a representative sample of artifacts from the site and to document the extent of the cultural remains. This was a research project of the London Chapter of the Ontario Archaeological Society in conjunction with the ACOP program, then run by the Ministry of Culture and Recreation. The excavation was done under the author's license using volunteers from the London chapter with additional support from area universities. Bill Fox, then of the Ministry of Culture and Recreation, provided much needed and appreciated guidance and encouragement.

Several reports have documented this research. These include papers by Fecteau (1983), Henderson (1986, 2006) and Keron (1983, 1986). This report is an attempt to provide a more generally accessible summary of this work reporting the significant elements of the site. For more detail, the technical report (Keron 1986) should be consulted.

In 1895, the site was visited by David Boyle who documented the existence of earthworks. While they were mostly destroyed in the field east of the north/south fence-line, to the west the earthwork

was still undisturbed and was measured at "twelve to eighteen feet across and two to four feet high" (Boyle 1896:39). A map delineating the earthworks, fence-line and the "sinkholes" was later drawn by the landowners and sent to Boyle, who included it in his report (see Figure 1). After Boyle's visit, the site has not attracted significant professional attention. Apparently, Wilfred Jury did some work on the site in the mid-twentieth century (Ross 1967:7) and local oral tradition reports another dig on the site by people from Toronto. The site is widely known to the local residents among whom it is referred to as "Old Fort Mossley" or "Old Fort Dorchester". Numerous uncontrolled excavations

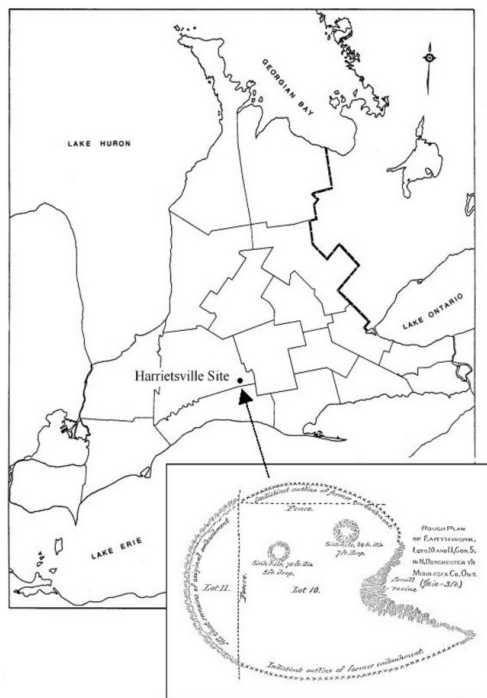


Figure 1. Harrietsville site location with Boyle's (1896) sketch map.

have occurred over the years resulting in considerable damage to the site. In the history of North Dorchester Township (Ross 1967:7) it is recorded "Mr. A. Jackson can remember digging for gold which was supposedly buried within the walls. At the time, some seventy five years ago, the Indian relics, for which people later dug, were given very little attention." Recent pot hunting of the site was evident at the time of the excavation.

Location and Topography

The site is located in the Kettle Creek drainage, high on the south slope of the Westminster Moraine. The physiographic features of this region, which Chapman and Putnam (1984) call the Mount Elgin Ridges, are a series of parallel recessional moraines of the Lake Erie ice lobe. Lowlands separating the moraines are generally poorly drained and swampy. The topography in the immediate vicinity of the site is typical of the moraines with higher rolling hills and not infrequent kettles creating small ponds or swamps. About two kilometres southeast of the village is a large kettle lake known as Whittaker Lake. Immediately southeast of the site is a deep ravine which contains a small tributary of Kettle Creek, while to the southwest is a small kettle which is situated on the periphery of the village. To the north and west there is a gentle slope away from the village, so that there is good drainage over the entire site. The vicinity is predominately clay soils (Huron clay loam), but in the area of the village this clay is overlain by two to four feet of lighter sandy soil. Located within the village are two small kettles (Boyle calls them "sink holes") which Boyle recorded (1896:39) as being "84 ft. across and seven feet deep and 70 feet across and five feet deep". The water table is less than one metre below the present day surface in these depressions.

The early survey records document a maple/beech climax forest cover. However, about 1 km to the west some pine was noted among the maple and beech (Finlay 1978). When the site proper was cleared it was covered with maple and beech. Boyle (1896: 39) reports "A few stumps of considerable size remain on the bank. One of maple near the south is two feet six inches in diameter and another

beece is two feet ten inches". Local recollections also confirm this. Ross (1967:7) reports a statement by Mr. A. Jackson, a former owner that "about 65 years ago he assisted in cutting the trees of a portion of the fort belonging to Mr. Sharp. Hard maples grew on the walls with many of the trees measuring two feet through at the stump". Finally, Fecteau's (1983) wood identifications document a similar forest cover during the period of village occupation.

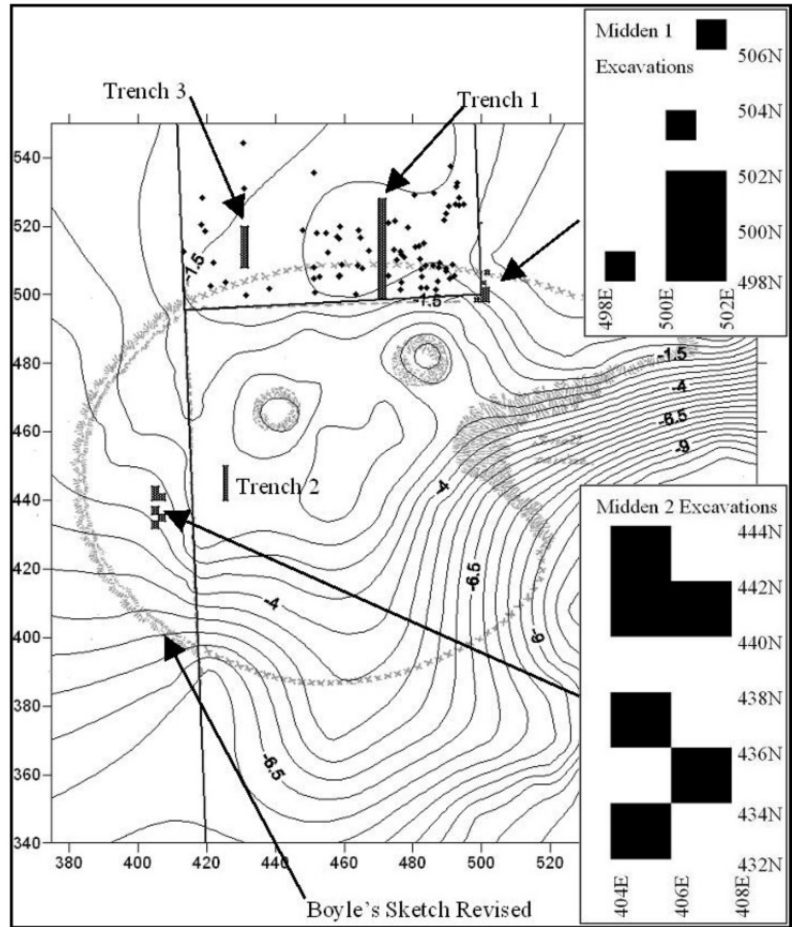
The Excavations and Other Work on the Site

In early August of 1981 the site was visited by the author and William Fox in order to pinpoint the most productive areas for testing. The two midden areas were identified by regular shovel testing of the site. Between the 1981 and 1983 excavations two two-metre squares and three one-metre squares were excavated in Midden 1 and six two-metre squares were excavated in Midden 2 (Figure 2).

In Midden 1, the first two-metre square was in an area of heavy disturbance from looting and contained little information of value. Indeed, after carefully mapping the planview of the disturbed soil, we subsequently discovered a beer bottle (a stubby with intact label) about 40 cm below the surface. After this disappointing start we adopted a strategy of using one-metre squares to sample an area before taking out a full two-metre square. Four such squares were then dug. The next square south of our first square contained an undisturbed layer and produced the bulk of the artifacts from Midden 1. A large sample of the undisturbed layer was recovered for flotation. Between 1981 and 1983, we subsequently put in six two-metre squares in Midden 2 located in the west field. This deposit was mostly within the plough-zone. Nevertheless, a number of diagnostic artifacts and some faunal material were recovered.

In order to locate the village boundary and community patterns, the excavation of a two-metre wide trench was undertaken in the north field (see Figure 2). This trench (Trench 1) was extended north from the fence for 19 metres in 1981 and a further ten metres in 1983. This uncovered only a few post moulds. A one-metre

Figure 2. Site map, contours, and areas excavated. Dots in north field are the CSP. Note that Boyle's map has been inverted and superimposed on the contour map.



trench (Trench 2) was placed between two rows of Christmas trees in the south field just to the east of the north-south fence. This trench uncovered what may be a house end. In 1983, a third trench (Trench 3) was dug in the North field further to the west. This uncovered a probable ditch feature and a row of post moulds running across the trench.

A controlled surface pick up (CSP) was done on the north field in 1981 and readings were taken for a contour map. In 2006, the site was again visited to gather data to complete the contour map for this report.

Settlement Patterns

Despite the limited excavation on the site, some comments are possible regarding the settlement

patterns. As it relates to site selection criteria, the village is bounded on one side by a steep ravine. However, the other three sides have almost level approaches unlike the Lawson site (Wintemberg 1939) where three sides are bounded by ravines. To the north and west of the site the topography slopes gradually away from the site, leading to good drainage on all sides. Another factor that made the site attractive was the layer of sand that covers the area. Most of the surrounding area is clay so the sand on the site reduced the amount of labour required to construct palisades, houses and earthworks.

Features virtually unique to Harrietsville are the two large depressions within the village boundary. While Boyle (1896) refers to them as “sink holes”, geologically, these depressions are properly called kettles and are caused by the melting of a block of

glacial ice that is left embedded in the till during recession of the glacial ice front. The inclusion of them within the village was certainly a conscious design decision since they significantly reduce the village area suitable for house construction. Testing of these kettles has shown the presence of ground water not far below the modern surface at the bottom of the kettle. Thus, the most reasonable explanation for their inclusion would be as an interior water source. It could also be reasonably inferred that this was not the primary source of water for the group but was only used during emergency situations when other more remote sources were unavailable. Given the fact that Midden 1 was placed on the very edge of the eastern kettle, that placement would almost certainly lead to contamination of the kettle as a source of potable water. Further, there would be a much better water source at a stream in the ravine immediately southeast of the site. So if this was not a source for potable water in the village, the most feasible explanation was that it was for emergency purposes, either for fire control or if access to the primary water source was blocked. An interior water source is not unique to the Harrietsville site, but is also found on the Southwold Earthworks (Smith 1977), another late pre contact Neutral village also surrounded by an earthwork. At Southwold, however, the village actually spans a small stream. Another village in the Lake Whittaker cluster, the Pine Tree site (AfHf-5) also has a water filled depression either adjacent to the site or within the boundary (Keron 2003a).

In the 1983 excavations, a two-metre by 10-metre trench (Trench 3) was excavated to subsoil in the north field (Figure 3). Near the north end of this trench is a feature that very likely represents a portion of the ditch surrounding the earthwork, as reported by Boyle (1896). This feature is not continuous across the trench but tends to follow the contours of the clay subsoil. Where the sand is deeper at the west side of the trench the ditch extends to a depth of 35 cm below the present surface. To the east the sand is not as deep and the ditch is shallower. This situation in all likelihood appears due to the difficulty of excavating the hard clay. There is a post mould in the clay just east of the feature but there was no

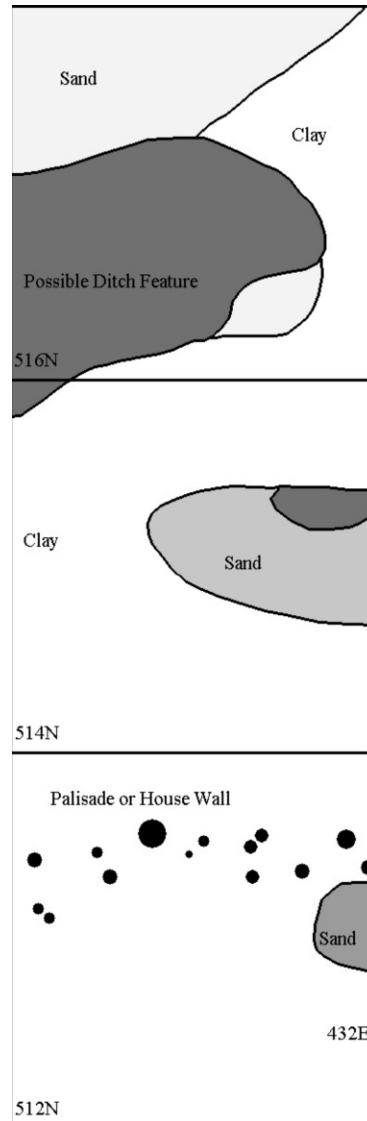


Figure 3. Trench 3 showing line of post moulds and ditch.

recurring series of post moulds in the ditch that could be interpreted as a palisade feature. Trench 3 did uncover a series of post moulds approximately four metres south of the ditch feature. As far as position goes, this would be not unreasonable for a palisade. However, most of the post moulds cluster in a range of 6 to 8 cm in diameter that is more suggestive of a house-wall. If this is a house-wall, no features were discovered in the interior of the house and a corresponding opposite house wall

was not located, although the opposite side of the house could easily have been outside the area trenched. It may be, despite the small diameters, that this was the palisade line. It would certainly be within the "12-18 foot" thickness that Boyle documented for the earthwork. These post moulds are embedded in the clay subsoil and, given the hardness of the clay, it may not have been possible to imbed the posts deeply in the ground. Instead, the earthwork may have been built up on both sides to improve the stability of the palisade. It is possible that there was not a palisade at the site but palisades and earthworks generally occur together. In all known western Neutral cases an earthwork is always accompanied by at least one palisade line and frequently several, as at the Southwold Earthworks (Smith 1977) and the Lawson site (Pearce 1996). At this point a palisade designation would be favoured but is problematic without further work. Note, though, that in Figure 2, the superimposed map by Boyle of the earthwork location runs somewhat south of this line of posts and the ditch. This contrast is most likely due to an error in his sketch map (see below). The CSP and the location of the post moulds in Trench 3 however, align nicely.

Trench 2, located east of Midden 2 and just to the east of the north south fence line, also contained a number of post moulds. These have tentatively been interpreted as a house end, thus confirming the presence of settlement pattern data on both sides of the depressions and within the boundaries, as illustrated by Boyle.

The only other indicator of the overall settlement pattern in the village is the surface distribution of material. Unfortunately, time and ground cover did not allow for a controlled surface pickup (CSP) of the entire village and only the north field was systematically collected. The field with the two kettles in it has not been ploughed in the last 30 years and the west field was not cultivated during our work on the site. The artifact locations in the north field are shown in Figure 2 plotted as diamonds. This plot is largely chert debitage and some chert artifacts. As noted above, this distribution coincides closely with the presumed ditch feature found in Trench 3.

The recent mapping and creation of the contour

map (Figure 2) indicates a likely error on Boyle's map (reproduced as part of Figure 1) with the northern and southern wings of the earthworks that extend to the east like two sides of a horseshoe. While the fence lines, the western intact earthwork, and the two kettles are in the proper relation to each other, the north and the south wings of the earthwork that extend to the east to the ravine can not possibly exist as drawn. As the ravine runs in a northeast-southwest direction it is impossible for the southern arm to extend further to the east than the northern arm and for both of these to terminate at the ravine as drawn. Boyle (1896: 39) notes that the map was developed by the landowner in his absence. In all likelihood, the measurements for the northern arm and the southern arm have been reversed, either by the landowners directly or by Boyle's misunderstanding of their documentation. To validate this idea, Boyle's map was scanned and the earthwork and ravine outline were flipped vertically and the kettles and fence lines were left as is. The resultant modification of Boyle's map was superimposed on the contour map of the site aligning the kettles and the fence lines (Figure 2). This revision to Boyle's map fits the current landforms much better and is more likely what was observed over a hundred years ago.

Artifacts

One of the interesting aspects of the Harrietsville site is the presence in not insignificant quantities of material derived from the Western Basin Tradition (Murphy and Ferris, 1990). This occurs at Harrietsville with both pottery (Parker Fестоoned decorative techniques and motifs) and projectile points. The people described archaeologically as the Western Basin Tradition are generally assumed to be Algonquian speakers and their sites differ from Iroquoians in both settlement patterns and artifact styles. Prior to Early Ontario Iroquoian times their sites are found as far east as the London area (Wilson et al. 2008) but by Late Ontario Iroquoian times they appear to have abandoned the area east of Chatham and were replaced by Iroquoian communities such as Harrietsville. A rough line joining Lakes Erie and Huron west of

London would represent the frontier between these two groups.

As far as analysis of the chipped stone goes, no attempt has been made in this study at the quantitative level to distinguish between primary source Onondaga chert and the numerous varieties of local till chert. Both Timmins (1997) and Lennox (1995) also decline to attempt to quantify the difference. In fact, Lennox (1995:94) claims that local till cherts are indistinguishable from primary source Onondaga. The difficulty in distinguishing Onondaga from till chert in the London area has also been demonstrated quantitatively through a comparative analysis where the same 200 flakes were analyzed by six different analysts (Keron 2003b). That study showed that there is reasonable agreement on identification of Kettle Point chert but the distinction between Onondaga and local till chert is highly variable from one analyst to the next. This problem arises because primary source Onondaga and local till chert in the London area occur in continuous shades of grey and brown, making macroscopic distinction a very error prone activity.

Projectile Points

A total of eighteen reasonably complete projectile points have been recovered from the site, the majority of which were found in Midden 2. Of these, fourteen relate to the Iroquoian occupation of the site and four predate this occupation. The earlier points may relate to earlier occupations or could represent the activity of fifteenth century collectors. The pre-Iroquoian points were found either in the north field or in Midden 1. These consist of two Otter Creek points (Ritchie 1971) (Figure 4d) having side notching and heavy grinding typical of this type and two more that are unidentified. One of these may possibly be a Meadowood point (Kenyon 1980), as it is very thin and appears to be side-notched. Unfortunately, it is broken across at the hafting point, making certain identification problematic.

The projectile points from the Iroquoian occupation are atypical of the normal assemblage found at Iroquoian sites in the area. William Fox (personal communication, 1984) once described the assemblage as unusual and more typical of

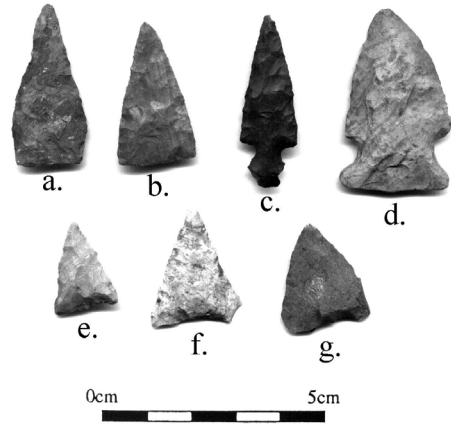


Figure 4. *Projectile points. a-c: Iroquoian; d: Otter Creek; e-g: Western Basin style.*

historic Neutral. Of the entire fourteen points, only one is side notched. All the rest are triangular. These projectile points fall into two main categories. The first category is characterized by width to length ratios of 0.5 or lower and, while not typical of the type description (Fox 1981b), are identified here as Nanticoke Triangular (Figure 4 a, b). In general, they are smaller than the more normal occurrences of this type. One point (Figure 4c) is a Nanticoke Notched specimen (Fox 1981a) and is typical of the artifact type. All of these points except one are made from Onondaga chert and are predominantly grey in colour. The exception is made from Kettle Point chert (Figure 4b).

The second variety is not assigned a type name. These are triangular Late Woodland projectile points and are characterized by width to length ratios in excess of 0.7 (Figure 4e-g). They generally have little or no grinding on either the base or shoulder and are made on Onondaga chert, but the predominant colour here is a light brown. This dichotomy in point types is similar to the situation that Fox (1980) describes for the Weiser site, a Western Basin Tradition site located near Lake St Clair, where two types of points characterized by differing width to length ratios were found. Fox interprets these two types as Iroquoian points (W/L ratio less than 0.5) and Western Basin points (W/L ratio greater than 0.7) and suggests that the Iroquoian points originated with Iroquoian peoples located further to the east. The interpretation for

Harrietsville is that the shorter wider points found here originated further west on the Western Basin Tradition sites. Of note is the low incidence of the use of Kettle Point chert for projectile point manufacture. Considering all of the Late Woodland points and fragments, the totals for chert types are one Kettle Point chert, eighteen Onondaga chert and four unidentifiable (burned). Thus, Kettle Point was used on 4.3% of the total or 5.3% of the projectile points in which the chert source is identifiable. However, most of the projectile points were found in Midden 2, which has a lower percentage of Kettle Point chert debitage than Midden 1.

Debitage

The chert debitage from the site, totaling 2649 pieces, is taken primarily from the excavated squares and the controlled surface pickup with a few pieces found in the trenches. The distribution of flakes found in the north field is shown in Figure 2. For more detailed analysis, a sample of 1145 pieces was selected from the two middens, taking care to make sure that all excavation units were represented. This material was analyzed for morphological characteristics and chert type. The percentages of the identified chert types have been calculated as the percentage of the identifiable flakes and not the percentage of all flakes. Burned and otherwise unidentifiable flakes are not included so as to eliminate skewing of results that would be caused by differential burning in the middens. Since one of the aims of this analysis was to look for differential intra-site distributions, this data was totaled for each of the two middens. In comparing the results of this analysis, the most startling difference between the middens is the frequency of Kettle Point chert. Midden 1 has 25.2% while Midden 2 has 3.6%. This same tendency occurs in each and every one of the squares excavated within each midden, so it is a real anomaly and not just the result of hitting one square with a high percentage of Kettle Point chert. Further supporting this trend is the fact that the controlled surface pickup that covered the area of the site that likely was responsible for creating Midden 1 also shows a high frequency of Kettle Point chert at 17.2%. This area also produced the

only Kettle Point chert artifact from the site, an unnotched projectile point. An examination of the morphological aspects of the chert seems to indicate no significant internal patterning in chert knapping.

The material classified as Onondaga is composed primarily of pebbles found in the local till. Most of the cortex found on these flakes consists of a water rolled surface. Some material is of good quality but much of it is low grade. It seems that almost any piece of chert discovered was likely to be brought back to the village and hammered to see what would happen. Much of this till-derived chert tends to fracture along lines of weakness creating much shatter.

In general, a large amount of the debitage seems to be burned making identification difficult. This may have derived from heat treating to improve quality, but this explanation is rejected as there seems to be no pattern to the distribution of this material and there is no observable improvement of the results. Another piece of evidence supporting this interpretation is the fact two decortication flakes of Kettle Point chert were identified that are undoubtedly from the same original block, as indicated by the pattern of banding. One of these is burned and the other is not. A possible explanation for this almost random burning of flakes is that they were burned after deposition in the midden. With the frequent dumping of ashes from the fires into the midden areas, fire would be frequently introduced to the midden area. Depending on the conditions in the midden at the time the burning coals were introduced, it is highly likely that it would occasionally catch fire. This would not be a blaze but more of a slow smudge that would not present any danger to the village and could conceivably reduce some of the smell associated with the rotting garbage. This slow fire in an oxygen deficient environment may have also created much of the charred seed remains that are frequently found in middens. Rudy Fecteau (personal communication, 1983) has stated that, despite several attempts to produce charred corn similar to that found on Iroquoian sites, he has been unable to do so. He notes that it would take a "reducing" (i.e. oxygen deficient) environment to create the charring.

Rim Sherds

The vessel counts and percentages by type are shown in Table 1. Most of these are the standard types defined by MacNeish (1952). Parker Festooned was originally defined by Lee (1958) and has been further refined by Abel (1999). The table also includes an unnamed type herein termed "Punctate". This table gives the total number as well as the breakdown by each midden. Several cross-mends and inferred cross-mends were found but none of these was between the two middens. Note that a pseudo type called "Neutral Fragments" has been included in Table 1. This category has been added to compensate for an over representation of Parker Festooned in the percentages caused by the fact that this type could be assigned from a much smaller rim fragment than would be required for assignment to MacNeish's (1952) types. Figure 5 shows typical Iroquoian pottery types and Figure 6 shows Parker Festooned.

While the samples from each midden are not large enough for statistically valid comparisons, several differences are suggested and require some comment. Three types are involved in trends that may be meaningful. The primary trend is the occurrence of a higher percentage of Parker Festooned in Midden 1. Fully 35 percent of Midden 1 is foreign material as opposed to 12 percent of Midden 2. The other trend is that Midden 1 has a much lower percentage of Lawson incised than does Midden 2. To some extent this is due to the presence of a higher frequency of Parker Festooned but, even if this were reduced to the same relative percentage, the percentage of Lawson

incised is still lower than Midden 2. Further to this trend, as demonstrated below under the attribute analysis, the existing Lawson incised rim sherds from Midden 1 have vertical incised lines while those of Midden 2 have oblique incised lines. However, none of these trends can be considered statistically significant.

When the material was first analyzed (Keron 1986) one of the enigmas was the occurrence of two rim sherds decorated with dentate stamping. Recently, the Parker Festooned rims from Harrietsville have been analyzed by Andrew Pawlowski (2005:24) who notes that these dentate stamped rims are actually a variant of Parker Festooned. He notes that Abel (1999) defines three subtypes of Parker Festooned pottery based on the design elements of dentate stamp, push-pull and trailing. Pawlowski (2005) notes that all three subtypes are found in the Harrietsville sample providing evidence that could be seen to refute Abel's assumption that the three sub-types have temporal significance. The presence of these three subtypes explains what had been initially assumed to be much variability within Parker Festooned at Harrietsville as opposed to Lawson (Keron 1986:123).

Another group of rim sherds is listed in Table 1 as simply "Punctate". This "type" is characterized by a single or double row of punctates around the exterior surface of the rim and it occurs as a decorative style on both collared and uncollared ware. It occurs in low frequencies on Neutral sites in the London area and is assumed to be of Neutral manufacture. Pearce and Smith have in the past used the term "Messenger Punctate" for this type

Type	Count			Percentage		
	M1	M2	Total	M1	M2	Total
Lawson Incised	3	11	14	31.7	55.6	49.8
Pound Necked	2	3	5	21.2	15.2	13.6
Lawson Opposed	-	1	1	-	5.1	4.5
Parker Festooned	4	4	8	23.5	12.1	16
Parker Festooned Dentate Variant (Punctate)	2	-	2	11.8	-	4
Untyped	1	3	4	5.9	9.1	8
(Neutral Fragments)	1	1	2	5.9	3	4
Total	4	10	14	*	*	*
	17	33	50	100	100.1	99.9

Table 1. *Harrietsville pottery types*

Figure 5. *Iroquoian pottery, Lawson Incised (a-d), and Pound Necked (e-g).*

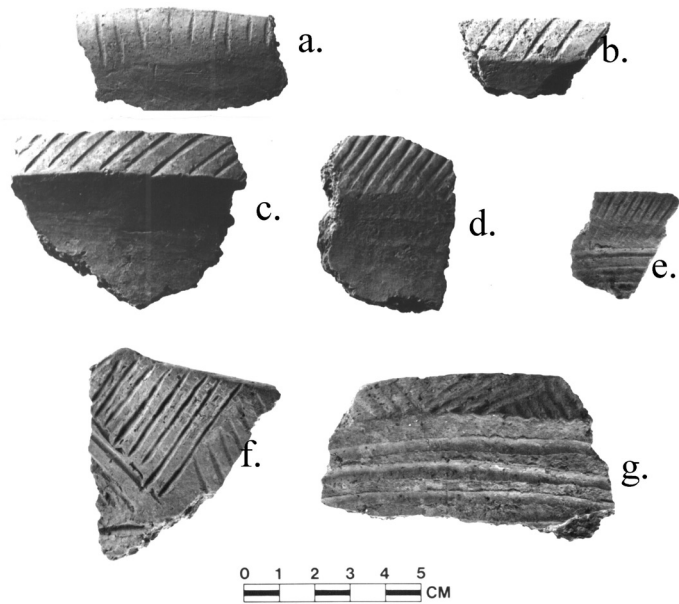
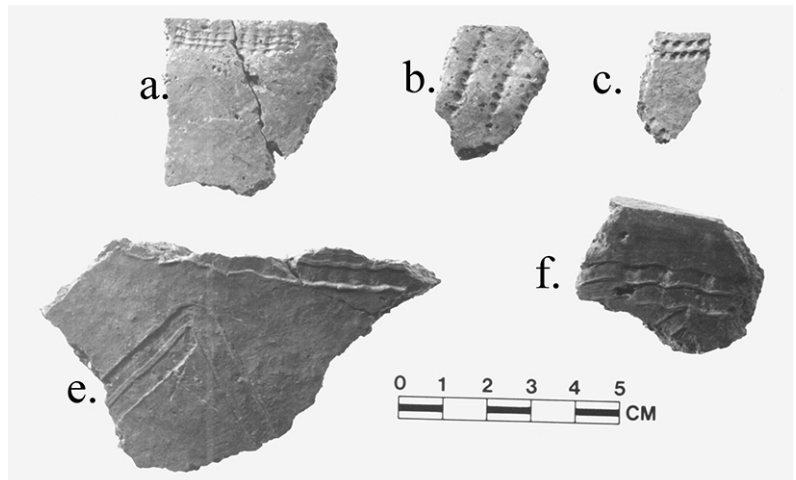


Figure 6. *Parker Festooned Pottery, Dentate Stamping on b.*



(see Pearce 1996:131) but the term has not been widely used. Smith (1983: 68-69) simply refers to the attribute as “Punctates”. This type occurs on the nearby Messenger Site and a few rims are also found on the Lawson site (Smith 1983).

Site Dating

Dating of the Harrietsville site has been approached with two common techniques, Carbon-14 dating and ceramic seriation. A single radiocarbon date

(Teledyne Isotopes I-12,477) was obtained from the site from fragments of carbonized wood in the undisturbed ash layer in Midden 1. The uncalibrated age of this date was 600 ± 75 years BP or 1350 ± 75 A.D. Applying the most recent calibration tables for the Northern hemisphere (Reimer et al, 2004) with the Oxcal V3.10 program (Bronk, 1995, 2001), the central date is unchanged at 1350 A.D. The one-sigma range is 60 years and two-sigma is 90 years. Thus there is a 95% chance that the date of the sample falls in the range 1270 to 1440 A.D.

In considering a seriation of the rim sherds, the small quantity of rim sherds would make this impossible or, more accurately, the various percentages would not be statistically significant. However, since, as archaeologists we tend to look at a sample of rims and do an intuitive seriation, it is felt that it would be best to actually run the mathematics so that the mental seriation is at least done accurately regardless of the statistical significance. Once a quantity of rims exceeds ten or twelve there is a tendency to assign a date to it based upon the types of rims present. Since this date assignment is nothing more than an intuitive seriation, it would seem preferable to perform an objective seriation rather than rely on these intuitive guesses. In order to do this, the seriation developed by David Smith (1983) was selected, as it was based on Iroquoian sites in close proximity to the Harrietsville site. In his thesis Smith (1983) developed a methodology and applied it to five Western Neutral sites (Southwold, Lawson, Nott, Messenger and Drumholm) and examined various seriations using attributes, attribute complexes and MacNeish's types. Table 2 represents the frequencies among the Harrietsville rim sherds for the various attribute complexes as developed by Smith and determined for Harrietsville. This table excludes the Western Basin material since Smith (1983) excluded it from his study, as it complicated the attribute analysis and did not amount to a significant percentage of the pottery on any of these sites. The sites were then ordered using a method known as the Double-Link method (Renfrew and Sterud 1969), which allows rapid and accurate ordering of units using Robinson-Brainerd coefficients of similarity (Smith 1983:35). For definitions of the attribute complexes see Smith (1983).

The results of this ordering are shown in Table 3 and indicate that the Harrietsville site seriates later than any of the sites in the sequence. From most recent to oldest the sequence is: Harrietsville -

Southwold - Lawson - Nott - Messenger - Drumholm.

The placement of Harrietsville later than any of the other sites was unexpected and indicates the need for an explicit seriation as opposed to the implicit seriation as occurs with date estimation based on informal analysis of the pottery types present. Some potential limitations with this placement include, first, the small size of the sample. The Harrietsville sample is, however, numerically close to both the Nott and Drumholm samples in Smith's study (1983). It should be noted, however, that the percentages were projected from slightly smaller samples as noted above to compensate for a potential over representation of Western Basin pottery, which was excluded from Smith's study. A second possibility that could lead to uncertainty in the seriation is the exclusion of the Western Basin pottery. With the significantly higher percentage of this type at Harrietsville something very different may be happening and the percentages of Iroquoian pottery may not be as meaningful as would normally be the case. A third reason could be that Smith's study included sites from at least three separate communities in the seriation and there may be significant differences between these communities. In sum, there may be more factors involved than simply the time dimension.

The 1350 AD date would place the site in the middle of Wright's Middle Ontario Iroquoian (MOI) stage and this is clearly not the case given the ceramics from the site. A later date for the site is preferred. Originally (Keron 1983), a date of 1425 was suggested, as it was still in the one-sigma range of the C-14 date and was more in accordance with the artifacts. Also arguing in favour of a later date is the presence of earthworks that are generally considered to be a late phenomenon. As well, William Fox has noted the similarity of the projectile points to a historic Neutral assemblage. Reviewing this data, it is now felt that the site is

Table 2. *Harrietsville Neutral attribute complex frequencies (after Smith 1983).*

CD	CD	CD	CD	CD	CD	CS	CS	CS	CS
SI+PL	SI+HO	OF+HO	OF+PL	PU+PL	SI+PU	OF/HO	SI/HO/SI	PU	PL
in+pl	in+in	in+in	in+pl	pu+pl	in+pu	in+in	in/in/in	pu	pl
54.40%	9.10%	4.50%	4.50%	2.80%	4.50%	4.50%	4.50%	8.30%	2.80%

Table 3. *Seriation matrix.*

	HVLL	SWLD	LAWS	NOTT	MESS	DRUM
HVLL	-	135.5	119.6	93.5	64.2	26.3
SWLD	133.5	-	170.9	139.3	79.8	65.3
LAWS	119.6	170.9	-	149.5	89.9	76
NOTT	93.5	139.3	149.5	-	91.7	78.5
MESS	64.2	79.8	89.9	91.7	-	128.7
DRUM	26.3	65.3	76	78.5	128.7	-

later in the regional Neutral sequence, perhaps in the 1450 to 1500 AD range. The Carbon-14 date may very well be accurate but derived from an older wood sample and thus entirely consistent with this placement. This clearly demonstrates the need for multiple carbon-14 dated samples.

Discussion

One of the objectives of the study was to examine any observable internal differences in distribution of material. As the vast majority of the artifacts came from the two distinct middens, this was a case of simple comparison of frequency differences between the middens. Throughout the analysis, most artifact categories with a reasonable number of occurrences were subtotaled by the midden in which they were found. Any differences between these middens should be attributable to intra-site cultural factors when the differences are statistically significant. The middens obviously belong to the same occupation since they both lie within the earthwork. Also, the middens are far enough apart (over 100 metres) and at opposite ends of the site so that there is little chance of inadvertent mixing of the deposits that would happen if they were located side by side. This is also borne out in the analysis, as there are no cross-mends of vessels between the middens. As middens are normally located not far from the ends of long houses and it is reasonable to infer that different middens would most likely be used by the closest long houses, differences in the middens can be attributed to intra-site differences between the occupants of the village.

The strongest difference between the middens turned out to be the percentage of Kettle Point chert. Midden 1 has 25.2% while Midden 2 has 3.6%. When the original technical report was

written (Keron 1986), this was interpreted as possible instance of the ethnographically recorded (e.g. Tooker 1991) lineage control of a trade routes. In this case it was inferred that a trade route existed that was involved in procuring Kettle Point chert from Neutral groups closer to the source to the west. It was suggested that different houses and consequently different lineages were responsible for depositing garbage in the two middens and the greater amount of Kettle Point chert in Midden 1 was deposited by the lineage that controlled the trade route. In a subsequent study (Keron 2003c, 2003d) five other Iroquoian sites from different stages (Early, Middle and Late) were examined for differential distribution of chert sources within the village and this pattern was confirmed for the sites dating from the Middleport Sub-stage onwards. An analysis of the distance decay pattern of Kettle Point chert from 42 Iroquoian sites in the London area indicates that a significant change in the pattern of chert acquisition occurred during the Middle Ontario Iroquoian (MOI) stage. Prior to that, various early groups could acquire chert directly from the source. During the MOI the pattern of acquisition evolved rapidly, with increasing social complexity to the system where lineages owned various trade routes and a down-the-line exchange system developed with the Harrietsville site people several steps removed from the source.

With the exception of the chert debitage, the artifact frequencies are too low for statistical significance, but several trends have been identified that indicate differences within the village. First, there seems to be a tendency for projectile points to be found in Midden 2 and not Midden 1. Second, Western Basin derived rim sherds seem to be more prevalent in Midden 1. Third, there are differences between the frequencies of decoration

on the Iroquoian rim sherds between the middens. Fourth, cord-malleated body sherds are found only in Midden 2. Fifth, pipe decoration between the two middens is different. Unfortunately, given the sample, it would be inappropriate to pursue these speculations further since most of the observations are only trends and are not statistically significant.

We are fortunate that Boyle (1896) described the intact portion of the earthwork in good detail since all traces have subsequently been obliterated. From the archaeological standpoint, the really important part of his description is noting the presence of a ditch around the earthwork. While ploughing of the site can obliterate the earthwork, the ditch feature would be preserved and consequently the presence of the ditch as uncovered in Trench 3 can be used in a broader context to infer the presence of an earthwork. One such site excavated recently was the Pincombe 1 site in south London (Jim Wilson, personal communication, 2004). There a ditch feature surrounded the village site and was used to infer the presence of an earthwork. While not ubiquitous, earthworks do occur at a number of other late Iroquoian sites in the Chatham to London area. The best documented are the Lawson Site (Pearce 1996) and the Southwold earthworks (Smith 1977). In the immediate vicinity, there is now the Pincombe 1 site and Pearce recently (2004) inferred the presence of another along the Thames River just southeast of London at Waubuno. Fox (personal communication, 1980) also notes that an earthwork had been reported a few miles west of the Harrietsville site near the village of Mapleton, but that site has not yet been relocated. While the picture is as yet incomplete, where good information exists these earthworks do tend to occur on the latest sites in the local sequence such as Lawson, Harrietsville and Southwold, and the deployment of earthworks seems to be largely confined to the Neutral in the London area and points further west. Earthworks are also found within the Western Basin Wolf Phase sites such as the Parker earthworks (Lee 1958). Fox's (1980) characterization of these features as occurring along the frontier villages between the Western Neutral and the Wolf Phase peoples is still accurate.

Since the excavations at Harrietsville, some more work has been done in the Lake Whittaker

community. There are five other village sites now registered in this community. These include, the Messenger site (AfHf-3), the Pine Tree site (AfHf-4), the Gravel Pit site (AfHf-7), Dyjack (AfHf-5) and the Whittaker-2 site (AfHf-26). Subsequent monitoring work has demonstrated that the Dyjack site is almost certainly a cabin site (Keron 2000) and, as such, is the first identified cabin site in the community. Material that was in the collection of the late George Conroy, along with visits to the site and discussion with Larry Messenger, have led to the conclusion (Keron 2003a) that the Pine Tree site is a village in the Lake Whittaker sequence, contrary to the original site registration description. Further, the proximity to Harrietsville, similarity in the topography, and the presence of two Parker Fестоoned sherds in a sample of only five potsherds recovered by the author suggests a similar high percentage of Western Basin pottery. This would seem to indicate that this village was very likely occupied adjacent to Harrietsville in the sequence. Given the late placement of Harrietsville, an educated guess would put Pine Tree immediately prior to Harrietsville in the sequence. Finally, a long suspected village has been located east of the Messenger site. This has been named the Whittaker-2 site (Keron, 2003a) and has been known in archaeological folklore as the Smith site. This is a village occupying several acres. However, to date no artifacts have been recovered from this site, so its position in the sequence is unknown. A large sample of rims from the Messenger site indicates that it is best classified as a Middleport Substage site and, as such, would be the earliest village in the sequence. The best assessment of the sequence at this point in time would put a community starting out at Messenger and then progressing through the Gravel Pit site and the Whittaker-2 site, in a yet to be determined sequence, before moving to the Pine Tree site and then to Harrietsville.

One of the significant aspects of the Harrietsville analysis is the presence of artifacts with a style similar to that seen in contemporary Western Basin Tradition sites. This situation occurs both with the pottery and in the projectile points. In the preliminary report (Keron 1983), warfare between

the Neutrals and the Assistaeronon or “Fire Nation”, who are now assumed to be the Algonquian speaking peoples of the Western Basin Tradition, was proffered as a possible explanation for the high percentages of Western Basin material on the site. The explanation in vogue 30 years ago was that the Parker Festooned pottery was made by Western Basin Tradition women who had been taken captive by Neutral peoples. Subsequently, Trigger et al (1984) conducted an analysis that showed that, for the Lawson Site, the Parker Festooned pottery was made from a different clay than the Neutral wares and consequently the pottery was imported from somewhere else. If this was the case at Harrietsville, then warfare as one of the possible causes of this pottery type is hard to justify. Trigger et al. (1984) note that their result rules out the captive women hypothesis, since the captives would be forced to use local clays after taking up residence at the site. The possibility that the pots were carried back after raiding Western Basin sites was also offered, but the large number of pots at Lawson was viewed to make this somewhat tentative. If 4% Western Basin material at Lawson (Pearce 1996) was questionable as loot carried off from the west, 16% at Harrietsville is simply too high to attribute to the spoils of war. Recently, Pawlowski (2005) conducted a detailed study of the presence of Parker Festooned primarily from three Neutral sites (Lawson, Brian and Harrietsville), concluding that the most likely explanation for the presence of western pottery on Neutral sites was through some form of exchange with Western Basin peoples. Elsewhere (Keron 2003d), I have argued that the impact of warfare between the Neutrals and the Western Basin peoples can be inferred from the changing patterns of lithic use through time, primarily through Kettle Point chert frequencies. While these separate conclusions would seem to be contradictory at first glance, reality is invariably more complex than our theories would like it to be. In all probability, both exchange and warfare coexisted between the Neutral and Western Basin peoples in pre-contact times. It is not a simple case of one or the other.

As Pawlowski (2005:88) notes, the warfare taking place in the 15th and 16th century would have been very different from that observed in the

17th century, primarily being much less intense. However, warfare is still evidently occurring in earlier time periods, given evidence of elaborate village defense systems of palisades and earthworks on the frontier between the Iroquoian and Algonkian speakers. While Fontaine (2004) has shown that the cut and burned human bone at the Lawson site, often cited as evidence of warfare, was primarily generated through secondary burial practices with only a small amount caused by interpersonal violence, the earlier Lafarge Man site (Wilson et al. 2008) clearly indicates interpersonal violence with Levanna like points embedded in a human skeleton. In post-contact times, Iroquoian warfare was basically the business of the lineage (Tooker 1991) and it seems not unreasonable that this would also be the case in pre-contact times as well. Also, historically, exchange was the business of the lineages and lineages were recognized as owning various trade routes. Elsewhere (Keron 2003d), I have argued that this pattern of lineage-owned trade routes developed rapidly during the MOI and was well established during Neutral times. The other aspect of this that should be considered is that the Neutral people and the Western Basin people should not be regarded as two separate political entities. In reality, each village was independent of the others. Thus, it is entirely conceivable that the Harrietsville people could well be exchanging goods with a Western Basin group with whom the Lawson people were warring. It is also not unreasonable, given the high frequency of Western Basin material at Harrietsville, that an exchange mechanism existed between the Western Basin people and the Harrietsville people that involved a flow of Parker Festooned pottery to Harrietsville. On the other hand, the pottery so obtained may have been exchanged through to the Lawson people who, on their part, could be involved in raiding the same Western Basin people. It is also conceivable, but less likely, that various lineages at Lawson could be trading and at war respectively with the same Western Basin group. This idea, of course, goes beyond the capability of the current data but is a hypothesis for future testing. In any event, there is a significant interaction between Harrietsville and the Western Basin groups, more than at any other Neutral site

in the immediate area. That this interaction involved exchange of goods is the conclusion that best fits the current data. The overall complexity of the sum total interaction between the Neutral people and the Western Basin people may take several more generations of archaeologists to determine.

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Finally, the presentation given at the 2006 OAS symposium session in honour of Mike Spence included a picture of him and his daughter Cassie

working at one of the screens. I have been fortunate over the years to have taken two courses from Mike and have developed a good deal of respect for his intellect and thoughtfulness applied to archaeology.

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