

Approaches to the Excavation of Plough-Disturbed Early Nineteenth-Century Domestic Sites in Southern Ontario

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Nineteenth-century homesteads are among the most common sites encountered in archaeological resource assessments in Ontario. Despite that, it is only in the past 25 years that assessments have come to include these sites as a matter of course. In addition, formal standards and guidelines for the assessment and excavation of nineteenth-century domestic sites have only recently been drafted (MCL 2004, 2006). As a result, there has been more variability in the approach to excavating these sites than other types of sites, such as lithic scatters and Iroquoian villages. This article describes the experience of one particular cultural resource management (CRM) firm in the assessment and excavation of plough-disturbed Euro-Canadian domestic sites. The sample comprises five early nineteenth-century sites in southcentral Ontario that collectively span a 35 year period, from circa 1810 to the mid-1840s. The paper examines the relative success of different excavation strategies, from partial Stage 3 test excavation to systematic test excavation and mechanical stripping. It also includes a discussion of the relative merits of Stage 4 block excavation.

Introduction

Most people who make a living as archaeologists in Ontario today do so in the field of cultural resource management (CRM). Despite that common bond, there are differences of opinion on many matters, from the best approach to take in assessing a site found by test pitting to the significance of early twentieth-century sites, and so on. Regardless of these differences, there is one thing all of us would agree on: there is no step in cultural resource management more irrevocable than the mechanical stripping of the topsoil on an archaeological site. This paper examines the issue of excavation strategies and mechanical stripping for one particular class of archaeological sites: the Euro-Canadian domestic site found in a ploughzone context. The sample comprises five early nineteenth-century sites in southcentral Ontario. Collectively, they span a period of 35 years, from circa 1810 to the mid-1840s.

Cultural resource management as practised in Ontario has evolved since its inception in the 1970s. The clearest evidence of this evolution is that in the first several years the focus was almost solely on First Nations sites. That can be illustrated by reference to several very large-scale survey and inventory projects carried out in the 1970s.

Among them were the Archaeological Inventory of the Metropolitan Toronto Planning Area (Konrad 1973) (the precursor of the Greater Toronto Area) and the survey of the 10,120 ha North Pickering Community Development Area (Konrad and Ross 1974). Two other large-scale projects were the survey of the Townsend Community Development Area in Haldimand-Norfolk Regional Municipality (Hamalainen 1977) and the survey of the 7,490 ha New Toronto International (or Pickering) Airport property (Poulton 1979, 1980; This Land Archaeology Inc. 2004). These four projects alone surveyed thousands of hectares and registered hundreds of archaeological sites. The projects differed somewhat in nature, but as a sign of their times the one thing they all had in common is that not one of the sites they recorded was Euro-Canadian.

By the early 1980s, CRM was being practised ever more widely, and a generation of archaeologists that had been trained in precontact archaeology was doing its best to master historical archaeology. That education process was helped greatly by the efforts of many researchers. Most notable among them was Ian Kenyon, of the southwest field office of what is now the Ontario Ministry of Culture, who produced a series of insightful published and unpublished papers on

nineteenth-century ceramics (Kenyon 1982, 1983, 1985, 1986, 1987, 1991, 1995). This research and other publications served as a bridge between the material culture of the historic Neutral, Huron, and Petun of the late sixteenth and seventeenth centuries and that of Euro-Canadians of the late eighteenth and nineteenth centuries. Professional organizations also played a part in raising the level of consciousness about the importance of nineteenth-century Euro-Canadian cultural resources. In 1991, the Ontario Association of Professional Archaeologists hosted a workshop entitled "An Introduction to English Ceramics for Archaeologists," which was well attended by the consulting community.

The explosive growth of CRM in the 1980s raised concerns among many practitioners about the lack of standards and guidelines for contract archaeology, and in 1985, several firms approached the Ministry of Citizenship and Culture on the matter. A conference was convened to discuss these issues, and further consultation followed over the next few years. The result was the publication of draft Stage 1–3 archaeological guidelines in 1988 (Fox 1988) and formal Stage 1–3 guidelines in 1993 (MCTR 1993). They covered background research (Stage 1); field survey (Stage 2); and site testing (Stage 3) but did not include guidelines for salvage excavation (Stage 4) or reporting.

The 1993 guidelines call for the test excavation of one-metre units to determine the nature of ploughzone and subsoil artifact deposits (MCTR 1993:6). Unfortunately, they do not explicitly mention Euro-Canadian domestic sites. Moreover, it was not until 2004 that the Ministry of Culture issued draft Stage 3 guidelines that included a consideration of strategies for testing Euro-Canadian domestic sites (MCL 2004). Finally, it was not until 2006 that the Ministry issued revised draft guidelines for the Stage 4 salvage excavation of sites (MCL 2006). In consequence, it is only now, a quarter-century or so after the inception of CRM in Ontario and after the excavation of scores of Euro-Canadian homesteads, that the archaeological community and the Ministry of Culture are coming to any sort of agreement about how those sites and others should be tested and salvaged.

In 1993, the Ministry of Culture instituted a requirement that consulting archaeologists submit a Contract Information Form (CIF) prior to initiating fieldwork on a project, and to await a CIF number before proceeding with the fieldwork. The form includes confirmation of the proposed use of heavy equipment. That measure has provided some theoretical checks and balances for the protection of sites, including plough-disturbed Iroquoian villages, where heavy equipment is used as a matter of course. However, there is no literature to demonstrate that ploughzone deposits are effectively sampled and mitigated on plough-disturbed Iroquoian sites, and the Ministry doesn't have sufficient staff to do the kind of post-mortems on assessments that would be required to test that. The problem is probably even worse for nineteenth-century Euro-Canadian homesteads in Ontario, as there has been no debate whatsoever about the extent of manual excavation that would be appropriate on sites of that kind and there has been little consistency in how consultants approach the test and salvage excavation of homestead sites in this province.

Past studies elsewhere in eastern North America have consistently demonstrated the interpretive value of material from the ploughzone. In addition, the studies all indicate that artifact deposits in the ploughzone have a value in enabling us to recognize variation within sites, and to interpret that variation. These findings are substantiated by the results of the present study, which also indicates that the ploughzone typically contains the majority of artifacts on plough-disturbed domestic sites of the early nineteenth century. The corollary of all these findings is that important information inevitably will be lost if ploughzone deposits on nineteenth-century homesteads in southern Ontario are not adequately sampled prior to mechanical stripping. That is the thesis of this paper.

The Sample

Five sites are included in the sample under consideration. All are located in southcentral Ontario (Figure 1), and all consist of relatively short-term occupations dating to the first half of

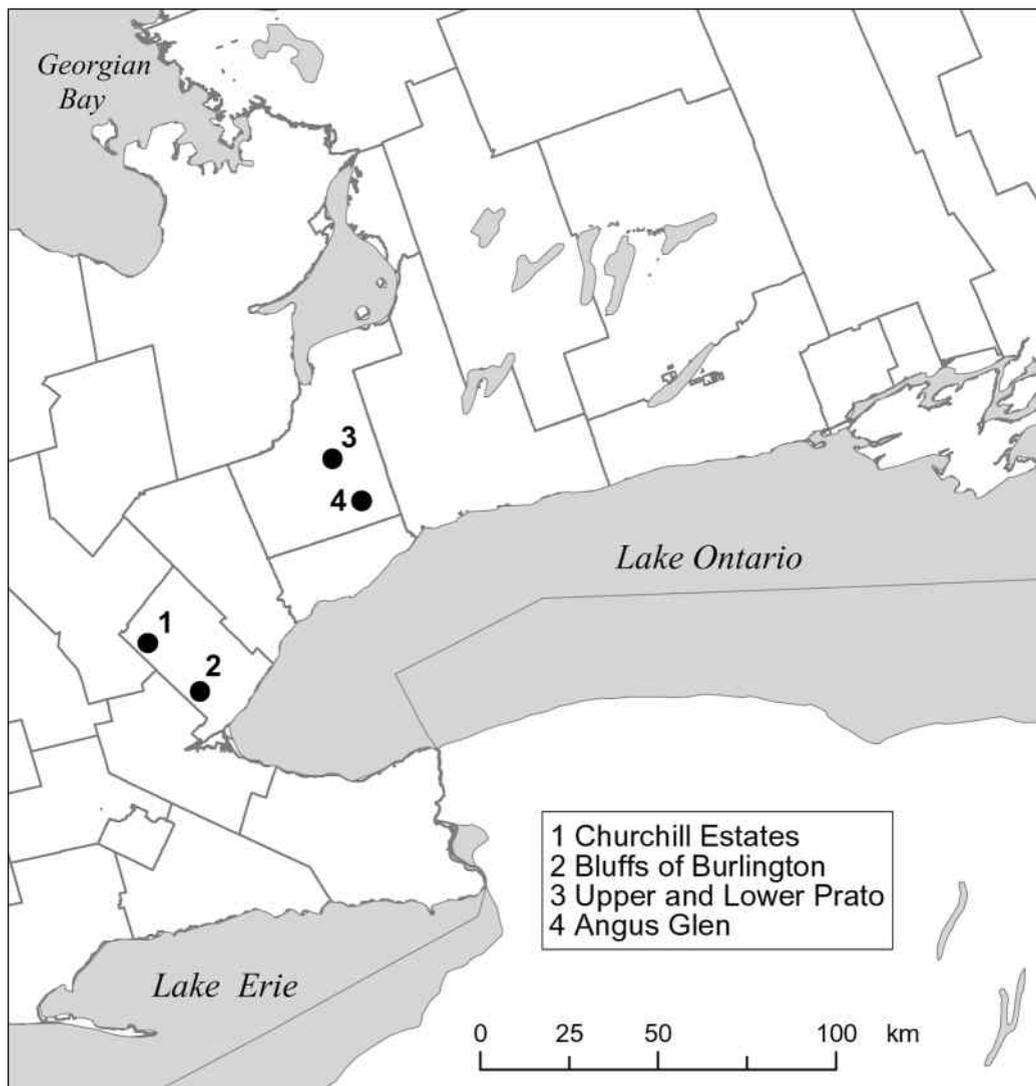


Figure 1. Location of the historic sites in the sample.

the nineteenth century. The excavations of these sites spanned a six-year period, from 1997 to 2002. Each was the subject of Stage 4 salvage involving topsoil stripping by Gradall or backhoe, followed by the recording and excavation of features. Beyond that, there were some differences in the specifics of the investigations.

Four of the five sites were discovered in the course of a five-metre interval pedestrian survey; the exception was found test pitting. On three of the sites the investigations consisted of an intensive controlled surface collection followed by the

excavation of one-metre test units in a checkerboard pattern at a systematic five-metre interval, followed by topsoil stripping and feature excavation. The sites in question were the Bluffs of Burlington site and the Upper Prato and Lower Prato sites. The remaining two sites in the sample involved the same basic technique but also included more extensive Stage 4 manual block excavation of artifact-rich ploughzone units. These sites were the Churchill Estates site and the Angus Glen site. Descriptions of the individual sites follow.

The Bluffs of Burlington Site (AiGx-216)

The Bluffs of Burlington site is located on Mount Nemo, to the north of the City of Hamilton, in Halton Region. It dates to the 1820s and 1830s. The site was discovered and excavated in 1997 (D.R. Poulton & Associates 1998). This site was found in the course of a pedestrian survey, and an intensive surface exam-

ination followed, with individual artifacts marked with pink survey flags. Sixty artifacts were surface-collected. Once the site limits had been identified, 31 one-metre test squares were excavated at a five-metre interval to obtain an artifact sample from the ploughzone (Figure 2). The test excavations recovered 694 artifacts. A backhoe was then used to strip the ploughzone.

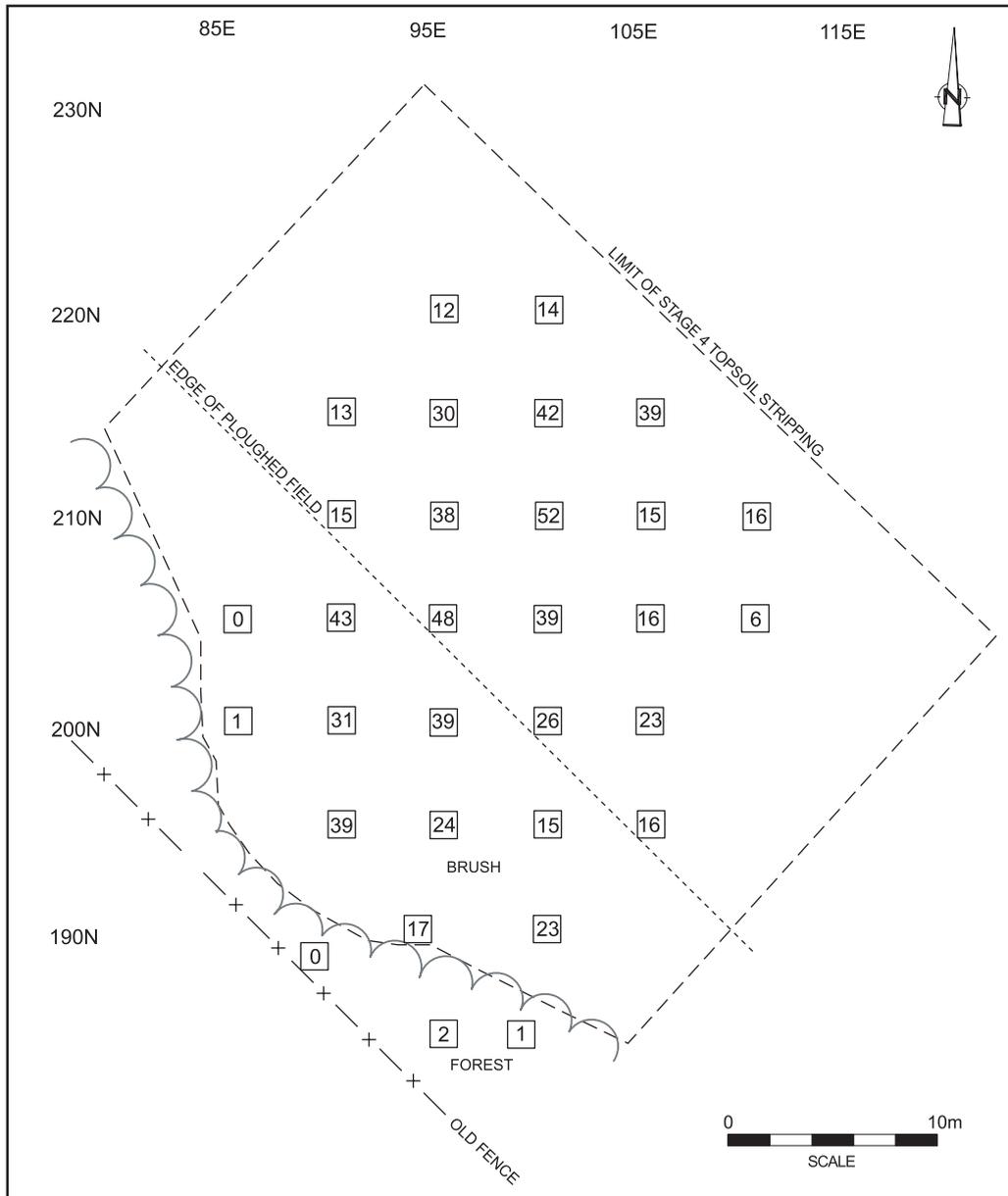


Figure 2. *The Bluffs of Burlington site: Stage 3 test excavations.*

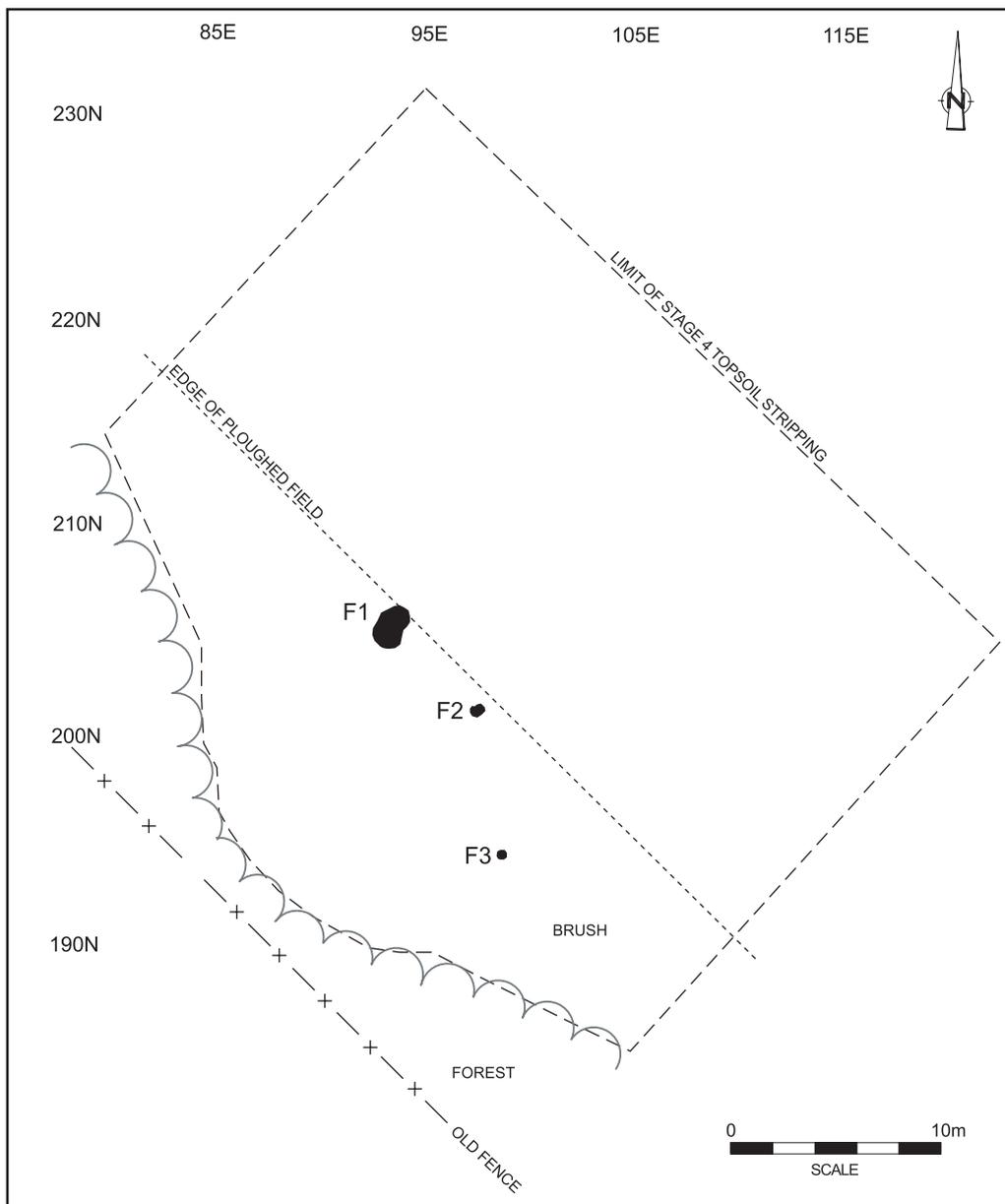


Figure 3. *The Bluffs of Burlington site: subsurface cultural features.*

The results revealed what we now recognize as a common problem on early nineteenth-century sites in southern Ontario: not all of them contain artifact-rich subsurface features. In this case, only three features were found (Figure 3), and they yielded only 156 artifacts.

Table 1 presents summary data on the cultural remains from this site. The total sample of 910

artifacts recovered from the Bluffs of Burlington site is modest but useful. It includes the usual range of teas and tablewares for this period (Figure 4). It also includes a reconstructed pearlware saucer with a blue-painted floral pattern made by Davenport (Figure 5).

Table 1. *Frequency of cultural remains from the Bluffs of Burlington site.*

Artifacts		CSP	Im Units	Features	Total	
					f	%
Tablewares	ceramic	42	517	84	643	70.7
	glass	0	0	0	0	0.0
	<i>subtotal</i>	<i>42</i>	<i>517</i>	<i>84</i>	<i>643</i>	<i>70.7</i>
Utilitarian Wares	ceramic	11	112	11	134	14.7
	glass	2	4	9	15	1.6
	<i>subtotal</i>	<i>13</i>	<i>116</i>	<i>20</i>	<i>149</i>	<i>16.4</i>
Utensils	knife	0	1	0	1	0.1
	<i>subtotal</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>0.1</i>
Personal Items	pipes	0	7	3	10	1.1
	<i>subtotal</i>	<i>0</i>	<i>7</i>	<i>3</i>	<i>10</i>	<i>1.1</i>
Apparel	buttons	3	0	0	3	0.3
	other	0	1	0	1	0.1
	<i>subtotal</i>	<i>3</i>	<i>1</i>	<i>0</i>	<i>4</i>	<i>0.4</i>
Hardware	nails	0	6	2	8	0.9
	horse equipment	0	1	0	1	0.1
	<i>subtotal</i>	<i>0</i>	<i>7</i>	<i>2</i>	<i>9</i>	<i>1.0</i>
Architectural Items	mortar	0	0	6	6	0.7
	brick	1	10	4	15	1.6
	glass	1	11	3	15	1.6
	<i>subtotal</i>	<i>2</i>	<i>21</i>	<i>13</i>	<i>36</i>	<i>4.0</i>
Miscellaneous	metal	0	10	21	31	3.4
	glass	0	2	0	2	0.2
	<i>subtotal</i>	<i>0</i>	<i>12</i>	<i>21</i>	<i>33</i>	<i>3.6</i>
Faunal	mammal	0	12	13	25	2.7
	<i>subtotal</i>	<i>0</i>	<i>12</i>	<i>13</i>	<i>25</i>	<i>2.7</i>
Grand Total		60	694	156	910	100.0

The Upper and Lower Prato Sites (BaGu-88 and BaGu-89)

The Upper and Lower Prato sites are located on Bayview Avenue in the Town of Aurora. They are 140 m apart; both date from about 1810 to the early 1830s. The two Prato sites were discovered in the fall of 2001 in a Stage 2 survey by another firm, Archeoworks Inc. That firm then conducted Stage 3 surface collections and limited test excavations of one-metre squares, followed by topsoil stripping by Gradall to expose subsurface cultural features (Archeoworks 2001, 2002). In the spring of 2002, D.R. Poulton & Associates was contracted to conduct salvage excavations of the exposed features on the two sites. Several features were recorded on the two sites (D.R. Poulton & Associates 2003a). The most notable on the Upper Prato site was a root cellar, designated Feature 2 (Figure 6). It produced two-thirds of all of the remains recovered by the salvage excavations of the site. The Lower

Prato site also contained a root cellar, designated Feature 5 (Figure 7). Once again, the root cellar produced almost two-thirds of the artifacts recovered from the excavation of that site.

Considering the number of features present, the 2002 salvage excavations of the two Prato sites recovered relatively modest artifact samples—1,617 specimens from Upper Prato and 1,951 from Lower Prato. The majority of the latter (90 percent) came from features; the balance (10 percent) came from screening baulks around the 2001 grid stakes.

With the addition of the samples from the 2001 investigations, the Upper Prato site yielded a total sample of 2,648 specimens and the Lower Prato site yielded a total of 2,331 specimens. Tables 2 and 3 present summary data on the cultural remains recovered by the 2001–2002 investigations of the two sites. The material recovered from Upper Prato includes a range of teas and tablewares. They include examples of Rococo

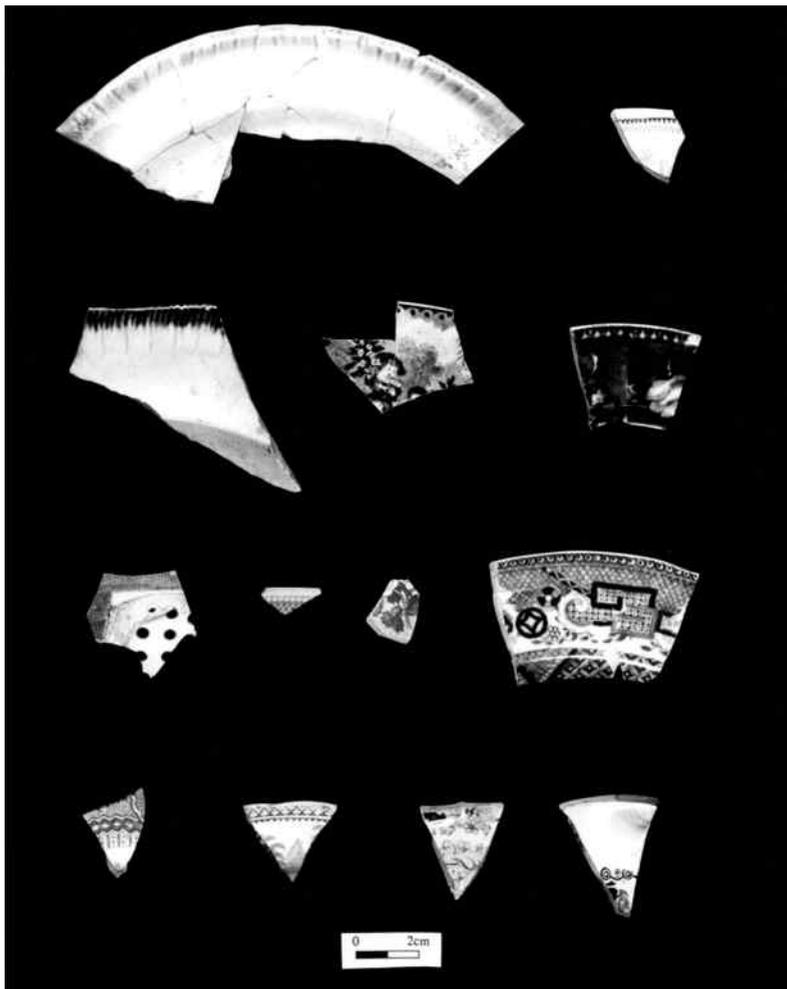


Figure 4. *The Bluffs of Burlington site: miscellaneous teacups and tablewares.*



Figure 5. *The Bluffs of Burlington site: painted Davenport saucer.*

Figure 6. *The Upper Prato site: subsurface cultural features.*

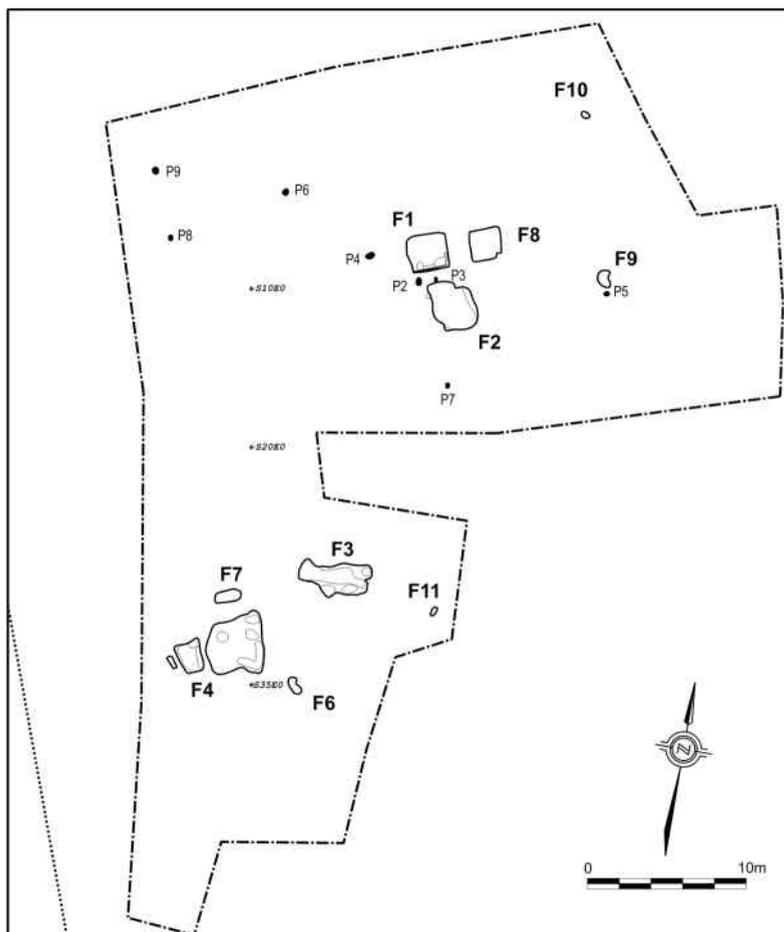


Figure 7. *The Lower Prato site: subsurface cultural features.*

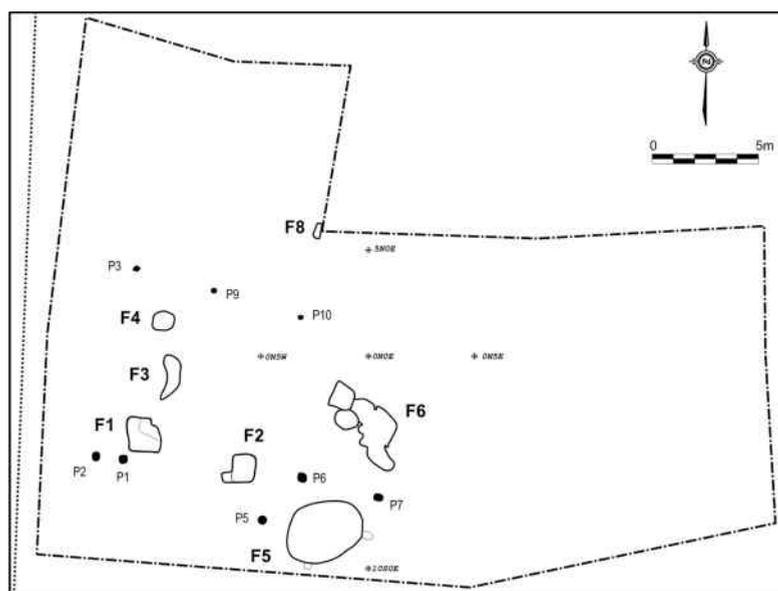


Table 2. *Frequency of cultural remains from the Upper Prato site.*

Artifacts		CSP*	1m Units*	Features	Total	
					f	%
Tablewares	ceramic	134	298	357	789	29.8
	glass	0	0	2	2	0.1
	<i>subtotal</i>	<i>134</i>	<i>298</i>	<i>359</i>	<i>791</i>	<i>29.9</i>
Utilitarian Wares	ceramic	6	94	81	181	6.8
	glass	1	5	8	14	0.5
	metal		9	1	10	0.4
	<i>subtotal</i>	<i>7</i>	<i>108</i>	<i>90</i>	<i>205</i>	<i>7.7</i>
Utensils	knife	0	1	0	1	0.0
	spoon	0	0	4	4	0.2
	<i>subtotal</i>	<i>0</i>	<i>1</i>	<i>4</i>	<i>5</i>	<i>0.2</i>
Personal Items	pipes	6	2	6	14	0.5
	coins/tokens			2	2	0.1
	other	1	1	3	5	0.2
	<i>subtotal</i>	<i>7</i>	<i>3</i>	<i>11</i>	<i>21</i>	<i>0.8</i>
Apparel	buttons	0	3	10	13	0.5
	<i>subtotal</i>	<i>0</i>	<i>3</i>	<i>10</i>	<i>13</i>	<i>0.5</i>
Weapons	gunflint	0	0	1	1	0.0
	shell casing	0	1	0	1	0.0
	<i>subtotal</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>0.1</i>
Hardware	nails/spikes	1	40	581	622	23.5
	other	0	1	8	9	0.3
	horse equipment	0	2	0	0	0.0
	<i>subtotal</i>	<i>1</i>	<i>43</i>	<i>589</i>	<i>633</i>	<i>23.9</i>
Architectural Items	mortar	0	0	15	15	0.6
	brick	27	312	61	400	15.1
	clay chinking	0	0	21	21	0.8
	glass	5	51	143	199	7.5
	<i>subtotal</i>	<i>32</i>	<i>363</i>	<i>240</i>	<i>635</i>	<i>24.0</i>
Miscellaneous	metal	0	11	18	29	1.1
	glass	0	1	25	26	1.0
	other	0	2	17	0	0.0
	<i>subtotal</i>	<i>0</i>	<i>14</i>	<i>60</i>	<i>74</i>	<i>2.8</i>
Faunal	mammal	7	7	226	240	9.1
	bird	0	1	24	25	0.9
	mollusc	1	0	0	1	0.0
	amphibian	0	0	3	3	0.1
	<i>subtotal</i>	<i>8</i>	<i>8</i>	<i>253</i>	<i>269</i>	<i>10.2</i>
Grand Total		189	842	1,617	2,648	100.0

*surface and ploughzone samples from 2001 investigations by Archeoworks (2002)

edgeware (Figure 8, top), which has a date range of 1780 to 1815 (Miller and Hunter 1990).

Specimens from the Lower Prato site include a near-complete pearlware saucer made by Davenport (Figure 9). They also include a hemispherical creamware bowl (Figure 10), a form that went out of fashion soon after the introduction of the London Shape in 1807 (Carpentier and Rickard 2001:121). They also include

creamware, pearlware, and refined white earthenware teas and tablewares. The teas include a moulded spiral pattern that dates from the 1790s to the 1820s (Figure 11, top left) as well as a variety of printed wares (Figure 12).

As usual, pipes, coins, and personal items were also recovered from Lower Prato. The most unexpected find was a late seventeenth-century glass trade bead (Figure 13, lower right). It is a round,

Table 3. Frequency of cultural remains from the Lower Prato site.

Artifacts		CSP*	1m Units*	Features	Total	%
Tablewares	ceramic	114	289	501	904	38.8
	glass	0	0	5	5	0.2
	<i>subtotal</i>	<i>114</i>	<i>289</i>	<i>506</i>	<i>909</i>	<i>39.0</i>
Utilitarian Wares	ceramic	9	29	41	79	3.4
	glass	1	2	10	13	0.6
	metal	0	0	3	3	0.1
	<i>subtotal</i>	<i>10</i>	<i>31</i>	<i>54</i>	<i>95</i>	<i>4.1</i>
Utensils	knife	0	1	1	2	0.1
	fork	0	0	0	0	0.0
	spoon	0	1	0	1	0.0
	handle	0	0	3	3	0.1
	<i>subtotal</i>	<i>0</i>	<i>2</i>	<i>4</i>	<i>6</i>	<i>0.2</i>
Personal Items	pipes	3	8	65	76	3.3
	jewelery/decorative	0	0	1	1	0.1
	hygiene	0	2	9	11	0.5
	sewing	0	0	11	11	0.5
	coins/tokens	2	0	4	6	0.3
	writing	0	0	4	4	0.2
<i>subtotal</i>	<i>6</i>	<i>10</i>	<i>94</i>	<i>110</i>	<i>4.9</i>	
Apparel	buttons	1	3	17	21	0.9
	other	0	0	1	1	0.1
	<i>subtotal</i>	<i>1</i>	<i>3</i>	<i>18</i>	<i>22</i>	<i>1.0</i>
Hardware	nails /spikes	3	22	196	221	9.5
	door hardware	0	1	2	3	0.1
	farm equipment	0	0	4	4	0.2
	horse equipment	0	0	1	1	0.1
	<i>subtotal</i>	<i>3</i>	<i>23</i>	<i>203</i>	<i>229</i>	<i>9.9</i>
Architectural Items	mortar	0	0	5	5	0.2
	brick	1	31	22	54	2.3
	clay chinking	4	0	12	16	0.7
	glass	1	21	52	74	3.2
	<i>subtotal</i>	<i>6</i>	<i>52</i>	<i>91</i>	<i>149</i>	<i>6.4</i>
Miscellaneous	metal	1	4	333	338	14.5
	glass	2	2	57	61	2.6
	other	0	1	4	5	0.2
	<i>subtotal</i>	<i>3</i>	<i>7</i>	<i>394</i>	<i>404</i>	<i>17.3</i>
Faunal	mammal	1	8	259	268	11.5
	bird	0	0	102	102	4.4
	fish	0	0	18	18	0.8
	mollusc	2	3	7	12	0.5
	amphibian	0	0	2	2	0.1
	unidentified	0	0	5	5	0.2
	<i>subtotal</i>	<i>3</i>	<i>11</i>	<i>393</i>	<i>407</i>	<i>17.5</i>
Grand Total	145	428	1,757	2,330	100.3	

*surface and ploughzone samples from 2001 investigations by Archeoworks (2002)

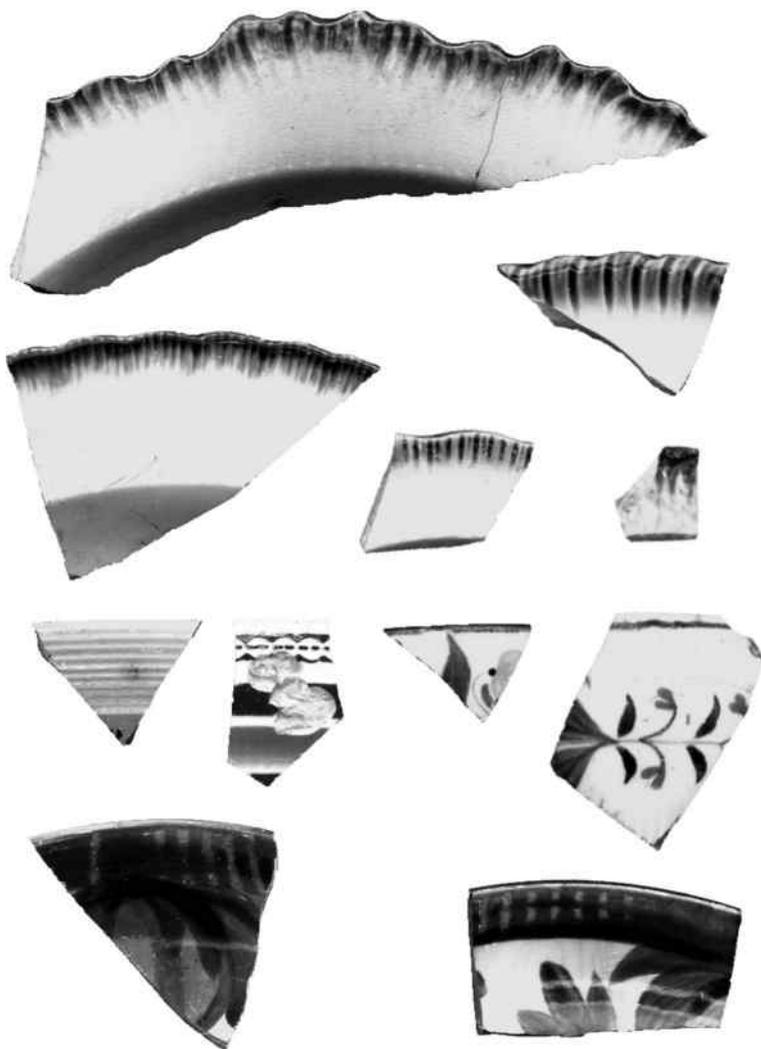


Figure 8. *The Upper Prato site: miscellaneous teas and tablewares.*



Figure 9. *The Lower Prato site: painted Davenport saucer.*



Figure 10. *The Lower Prato site: creamware bowl.*

Figure 11. *The Lower Prato site: miscellaneous teas and tablewares.*

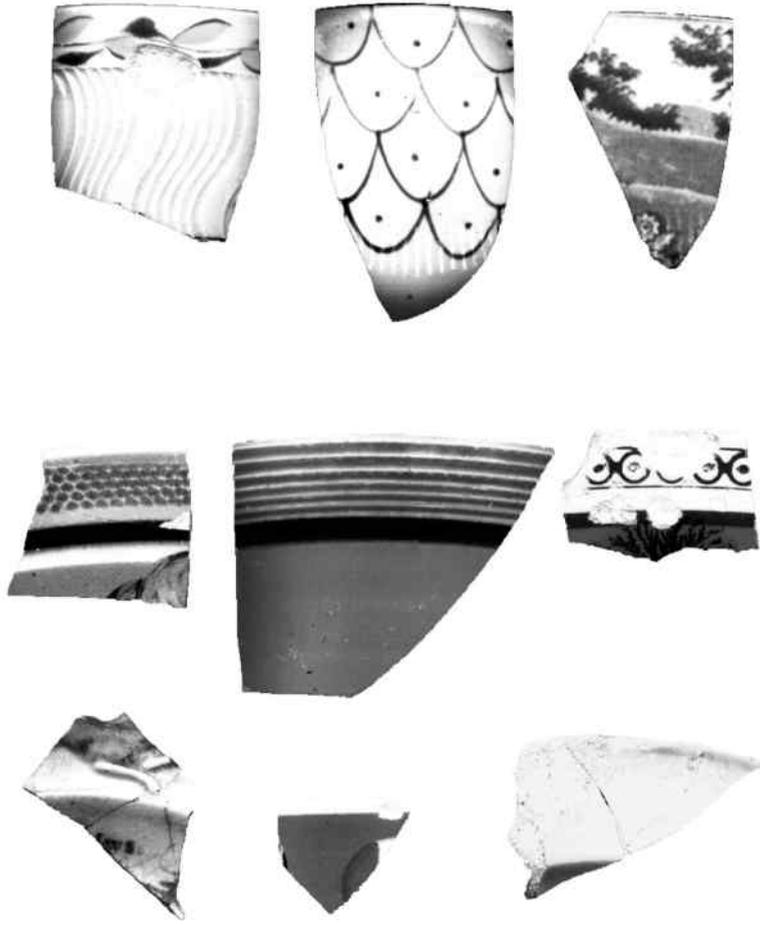


Figure 12. *The Lower Prato site: printed wares.*

pea-sized redwood cane bead with an apple green core of the type designated Iva5 (Kidd and Kidd 1983:230). This bead was recovered in a sealed context, beneath the floor of a possible privy, Feature 2, together with an 1831 William IV penny and an 1820 Bust and Harp token.

Trade beads of this type are common on late seventeenth-century Seneca sites (Wray 1983), including the villages that guarded the two branches of the historic trail network known as the *Passage du Toronto*: Teyaiagon on Baby Point, at the foot of the Humber Trail, and Bead Hill, at the foot of the Rouge Trail. The latter village has been interpreted as the probable site of Ganestiquiagon (Mayer, Poulton and Associates 1991). The presence of the trade bead at the Lower Prato site may well indicate that this site was located on or close to the historic Rouge Trail, the eastern of the two branches of the *Passage du Toronto*.



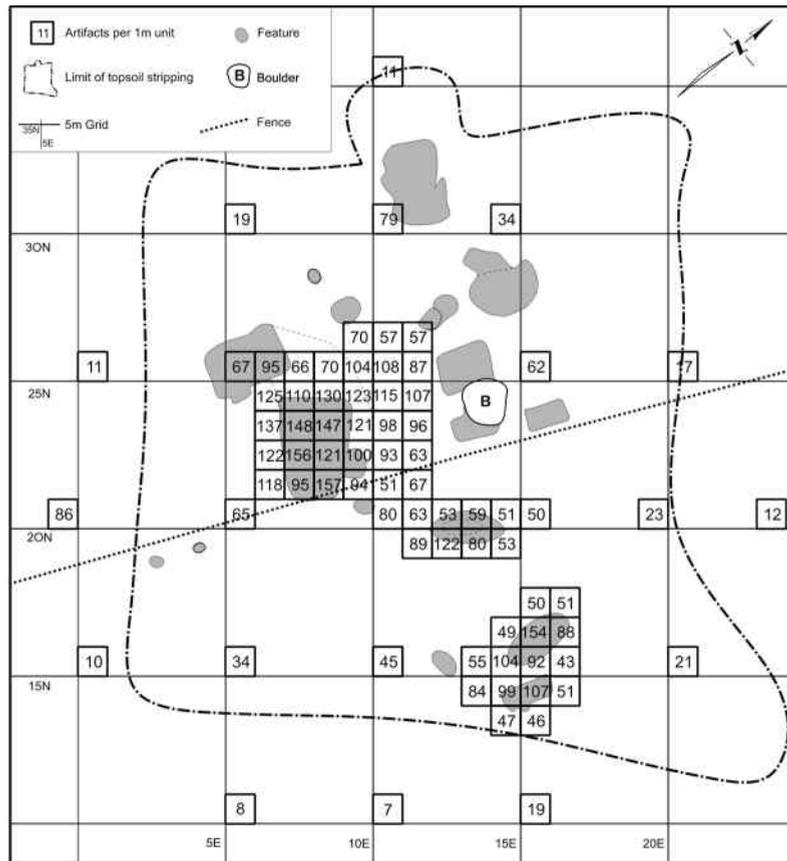
Figure 13. *The Lower Prato site: personal items.*

The Churchill Estates Site (AjHa-22)

Although we did not have the option of conducting manual block excavations on the two Prato sites, we did on two others: Churchill Estates and Angus Glen. The Churchill Estates site is located adjacent to an extensive wetland in the northwestern part of Halton Region. The site dates from the 1820s to the mid-1840s. It was discovered in 1998 and an intensive surface examination was conducted. Test and salvage excavations followed in 2001 (D.R. Poulton & Associates 2003b). The excavations included 23 test squares at a five-metre interval and a further 53 Stage 4 block units. Most of the block excavation units proved to be concentrated over a series of features that included the root cellar (Figure 14). A discrete cluster of units mitigated a nearby associated refuse deposit.

Table 4 presents summary data on the cultural remains recovered by the 1998 and 2001 investigations of the Churchill Estates site. The 8,018 artifacts from the site include a red earthenware crock (Figure 15). They also include utensils (Figure 16); a creamware chamber pot (Figure 17); plain and moulded creamware plates (Figure 18); pearlware cups and saucers (Figure 19); and other painted tea wares, including a moulded spiral pattern saucer that dates from the 1790s to the 1820s, like the tea cup from the Lower Prato site (compare Figure 11, upper left, and Figure 20, upper right). Still another specimen from Churchill Estates is a seven-inch diameter pearlware muffin plate of blue edgeware (Figure 21).

Figure 14. *The Churchill Estates site: manual excavations and subsurface cultural features.*



The Angus Glen Site (AlGt-253)

The second site in this sample to receive full block excavation is the Angus Glen site. It is located on the edge of the Rouge River Valley just north of Toronto, in the Town of Markham. The site dates from the 1810s to circa 1835. It was found in 1999 in the course of test pitting a small abandoned pasture. Contract ploughing and a controlled surface collection followed. Sixty-one artifacts were recovered by the test pitting and a further 154 by the surface collection. The test and salvage excavations of this site followed directly (D.R. Poulton & Associates 2003c). They were conducted in the same manner as described above for the Churchill Estates site.

In the case of Angus Glen, 20 test squares were initially excavated at a five-metre interval; a further 57 Stage 4 block units were then excavated to mitigate artifact-rich ploughzone deposits. Finally, a backhoe was used to expand the excavations in a

search for features. The results of this excavation were similar to that of the Bluffs of Burlington site in that only two features were found (Figure 22). Neither of these was significant. The larger of the two probably represented an old tree throw. The smaller was a hearth; it may relate to six precontact artifacts—a utilized flake and five pieces of chipped lithic debitage—that were also recovered from the site.

The 1999 investigations of the Angus Glen site recovered 13,266 artifacts. Summary data on the collection are presented in Table 5. The sample includes teas and tablewares of pearlware and creamware (Figure 23). It also includes a variety of printed and dipt wares (Figure 24). Other recoveries include miscellaneous artifacts, among them clay chinking from the log cabin or shanty (Figure 25, middle row, centre left). That material accounts for most of the architectural items from this site. Finally, Angus Glen produced a

Table 4. Frequency of cultural remains from the Churchill Estates site.

Artifacts		CSP	1m Units	Features	Total f	%
Tablewares	ceramic	26	4,810	1,320	6,156	76.8
	glass	0	0	0	0	0.0
	<i>subtotal</i>	26	4,810	1,320	6,156	76.8
Utilitarian Wares	ceramic	3	136	20	159	2.0
	glass	0	45	21	66	0.8
	metal	0	3	8	11	0.1
	<i>subtotal</i>	3	184	49	236	2.9
Utensils	knife	0	0	5	5	0.1
	fork	0	3	1	4	0.0
	spoon	0	1	10	11	0.1
	handle	0	3	1	4	0.0
	<i>subtotal</i>	0	7	17	24	0.3
Personal Items	pipes	0	21	8	29	0.4
	writing	0	0	2	2	0.0
	hygiene	0	3	3	6	0.1
	sewing	0	1	0	1	0.0
	coins/tokens	0	0	1	1	0.0
	jewelery	0	0	0	1	0.0
	<i>subtotal</i>	0	25	14	39	0.5
Apparel	buttons	0	5	8	13	0.2
	other	0	0	0	0	0.0
	<i>subtotal</i>	0	5	8	13	0.2
Hardware	nails/spikes	0	60	125	185	2.3
	fence wire	0	29	0	29	0.4
	tools	0	1	0	1	0.0
	other fasteners	0	7	5	12	0.1
	<i>subtotal</i>	0	97	130	227	2.8
Architectural Items	mortar	0	16	0	16	0.2
	clay chinking	0	24	30	54	0.7
	glass	0	198	212	410	5.1
	<i>subtotal</i>	0	238	242	480	6.0
Miscellaneous	metal	0	54	66	120	1.5
	glass	0	35	15	50	0.6
	ceramic	0	0	1	1	0.0
	slag	0	1	0	1	0.0
	slate	0	0	6	6	0.1
	<i>subtotal</i>	0	90	88	178	2.2
Faunal	mammal	1	350	252	603	7.5
	bird	0	4	32	38	0.5
	mollusc	0	24	0	24	0.3
	unidentified	0	1	1	2	0.0
	<i>subtotal</i>	1	379	285	665	8.3
Grand Total		30	5,835	2,153	8,018	100.0



Figure 15. *The Churchill Estates site: red earthenware crock.*

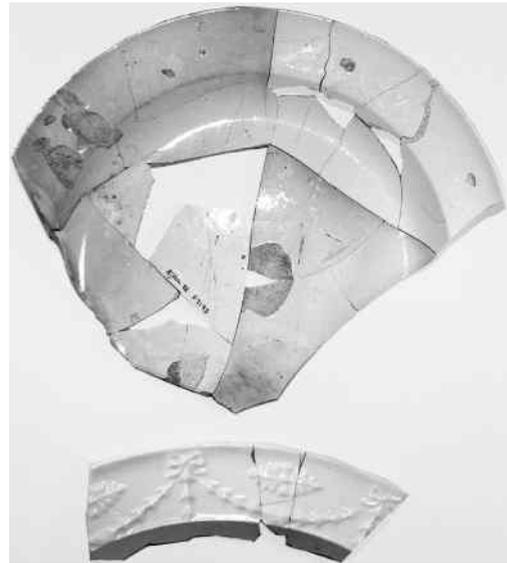


Figure 18. *The Churchill Estates site: creamware plates.*



Figure 16. *The Churchill Estates site: utensils.*



Figure 17. *The Churchill Estates site: creamware chamber pot.*



Figure 19. *The Churchill Estates site: painted pearlware cups and saucers.*

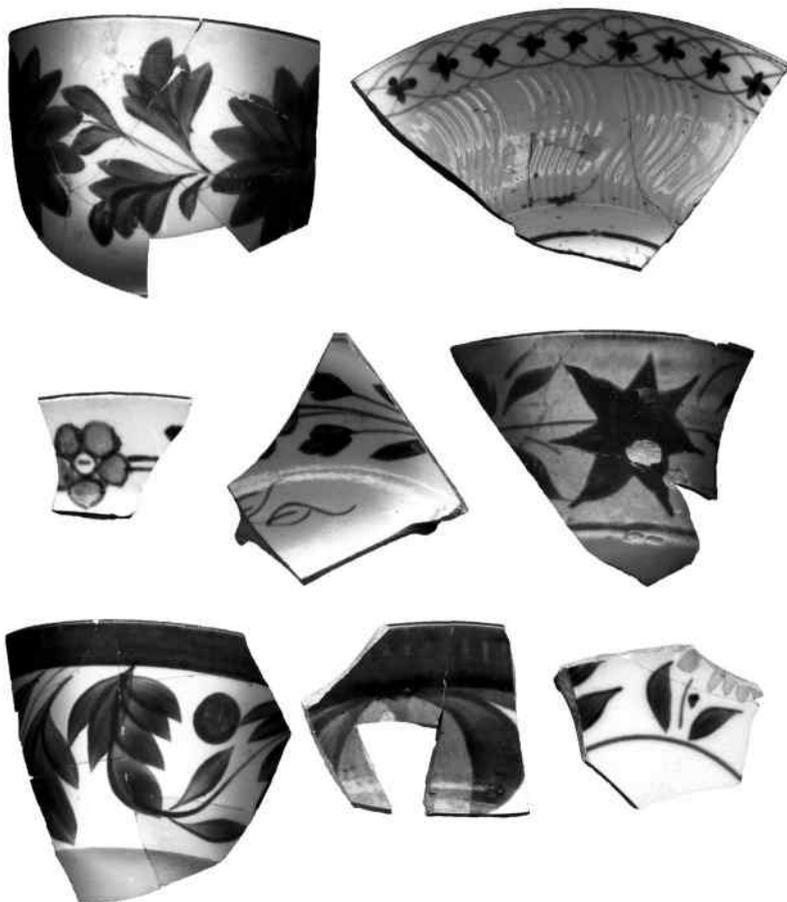


Figure 20. *The Churchill Estates site: miscellaneous teaware.*

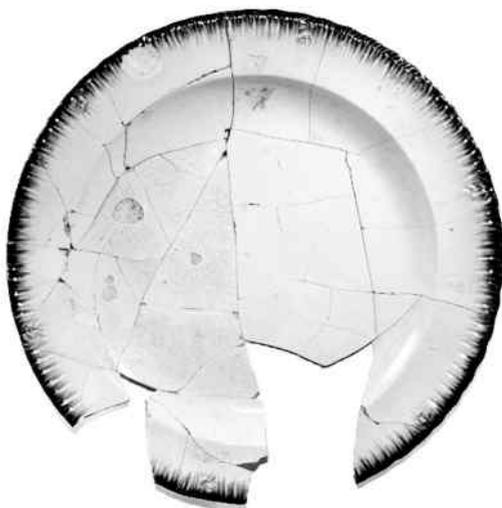


Figure 21. *The Churchill Estates site: seven-inch blue-edged muffin plate.*

range of apparel and personal items. The currency from this site ranges in date from the mid-1820s to 1833. The apparel includes one-piece, tin-coated buttons that were most popular in the late eighteenth century.

Discussion

Over the past few decades numerous studies have examined the relative integrity of ploughzone artifact deposits. The results have determined that artifacts suffer limited displacement from ploughing (King and Miller 1987; Pogue 1988; Riordan 1988). As noted by Riordan (1988:3), substantial features such as sheet middens and house sites retain “significant cohesion in the plow zone.” Although the vertical alignment may change, the horizontal displacement is generally less than 3 m,

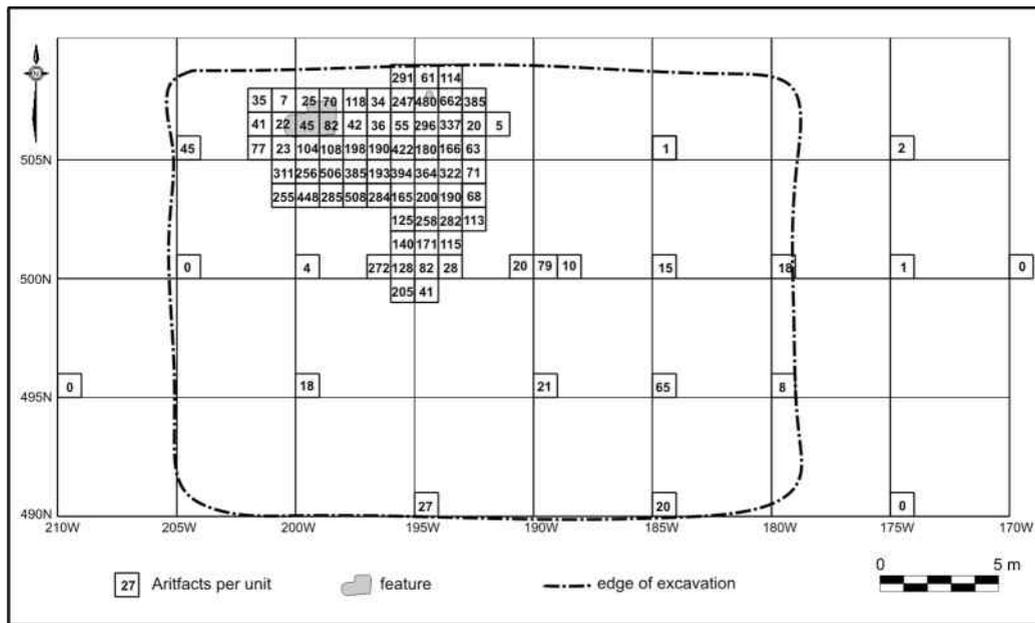


Figure 22. *The Angus Glen site: manual excavations and subsurface cultural features.*

with a median of between 1.9 and 1.6 m, depending on the study (Riordan 1988:3).

Other studies have focussed on the interpretive value of material from the ploughzone. It has been suggested that purposefully excavated trash or refuse pits were not as frequently used (King and Miller 1987:37). Rather, most of the rubbish discarded on pioneer sites was thrown in surface middens located around the house (King 1988:22), in particular in areas adjacent to doorways, which served as “avenues of disposal” (Pogue 1988:43).

Following artifact categories identified by South (1977), Eva MacDonald (1997) has also observed differences in the artifact samples recovered from the ploughzone compared to those from features, particularly the deep features. Based on those perceived differences, she has argued for the need to increase artifact samples from the ploughzone by excavating test squares on historic domestic sites before the topsoil is stripped to search for features (MacDonald 1997:76-77).

The results of these studies all indicate that artifact deposits in the ploughzone have a value in interpreting variation within sites. That observation, in turn, has obvious implications for the kind of information that might be lost by simply

bulldozing the ploughzone to get at the underlying features. As stated by Riordan (1988:9), “the relationship of a building to its activity area can only be seen in the plow zone. Stripping away the plow zone leaves an architectural fossil with little cultural information.” Along the same lines, King and Miller (1987:58) state that “removing the overlying plowed soils at historic sites without first sampling is highly destructive, and results in the loss of an important and irreplaceable component of America’s heritage.”

In order to address these issues, the present study includes an examination of three vertical subsets of the material from the sites in the sample: the surface, the ploughzone, and the features (Figure 26). Past studies have determined that somewhere between one percent and six percent of the site sample is recovered from the surface, the difference depending on the number of times the area has been ploughed (Riordan 1988). Our experience with surface collections in cultural resource management is that their main importance is that they represent the first line of defence in assessing the significance of historic sites in ploughed fields. Otherwise, they are statistically insignificant.

Table 5. Frequency of cultural remains from the Angus Glen site.*

Artifacts		Test Pits	CSP	1m Units	Features	Total	%
Tablewares	ceramic	30	90	5,320	222	5,662	42.7
	glass	0	0	4		4	0.0
	<i>subtotal</i>	<i>30</i>	<i>90</i>	<i>5,324</i>	<i>222</i>	<i>5,666</i>	<i>42.7</i>
Utilitarian Wares	ceramic	3	3	399	8	413	3.1
	glass	0	0	32	0	32	0.2
	<i>subtotal</i>	<i>3</i>	<i>3</i>	<i>431</i>	<i>9</i>	<i>445</i>	<i>3.4</i>
Utensils	knife	0	0	4	0	4	0.0
	fork	0	0	3	1	4	0.0
	spoon	0	0	2	1	3	0.0
	handle	0	0	12	2	14	0.1
	<i>subtotal</i>	<i>0</i>	<i>0</i>	<i>21</i>	<i>4</i>	<i>25</i>	<i>0.2</i>
Personal Items	pipes	0	2	139	3	144	1.1
	jewelry	0	0	18	1	19	0.1
	hygiene	0	0	9	0	9	0.1
	sewing	0	0	3	0	3	0.0
	coins/tokens	0	2	4	0	6	0.0
	toys/music	0	0	1	0	1	0.0
	<i>subtotal</i>	<i>0</i>	<i>4</i>	<i>174</i>	<i>4</i>	<i>182</i>	<i>1.4</i>
Apparel	buttons	1	0	50	5	56	0.4
	other	0	0	2	0	2	0.0
	<i>subtotal</i>	<i>1</i>	<i>0</i>	<i>52</i>	<i>5</i>	<i>58</i>	<i>0.4</i>
Weapons	gunflint	0	0	1	0	1	0.0
	shell casing	0	0	3	1	4	0.0
	<i>subtotal</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>1</i>	<i>5</i>	<i>0.0</i>
Hardware	nails	3	0	217	26	246	1.9
	door hardware	0	0	3	0	3	0.0
	tools	0	0	2	0	2	0.0
	other	0	0	2	0	2	0.0
	<i>subtotal</i>	<i>3</i>	<i>0</i>	<i>224</i>	<i>26</i>	<i>253</i>	<i>1.9</i>
Architectural Remains	mortar	0	0	68	24	92	0.7
	brick	2	0	77	0	79	0.6
	clay chinking	1	0	403	25	429	3.2
	glass	0	0	41	3	44	0.3
	<i>subtotal</i>	<i>3</i>	<i>0</i>	<i>589</i>	<i>52</i>	<i>644</i>	<i>4.9</i>
Miscellaneous	metal	3	3	237	6	249	1.9
	glass	1	0	48	2	51	0.4
	bone	0	0	3	0	3	0.0
	stone	0	0	3	0	3	0.0
	seed	1	0	0	0	1	0.0
	<i>subtotal</i>	<i>5</i>	<i>3</i>	<i>291</i>	<i>8</i>	<i>307</i>	<i>2.3</i>
Faunal Remains	mammal	16	53	5,237	147	5,453	41.1
	bird	0	1	33	4	38	0.3
	fish	0	0	8	0	8	0.1
	mollusc	0	0	52	0	52	0.4
	amphibian	0	0	0	2	2	0.0
	reptile	0	0	1	0	1	0.0
	unidentified	0	0	124	3	127	1.0
	<i>subtotal</i>	<i>16</i>	<i>54</i>	<i>5,455</i>	<i>156</i>	<i>5,681</i>	<i>42.8</i>
Grand Total	61	154	12,565	487	13,266	100.0	

* excluding six pieces of precontact lithic debitage.

Figure 23. *The Angus Glen site: miscellaneous teas and tablewares.*



Figure 24. *The Angus Glen site: printed and dipt tablewares.*





Figure 25. *The Angus Glen site: miscellaneous artefacts.*

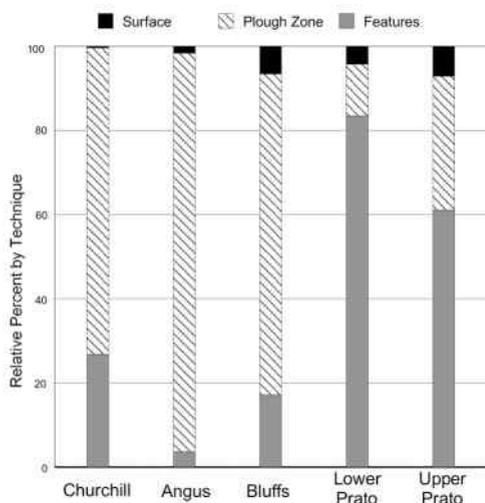


Figure 26. *Bar graph comparing artifact samples from surface, ploughzone and feature contexts.*

The relative proportions of artifacts from the surface, ploughzone, and features can be illustrated by reference to Angus Glen and Churchill Estates, the two sites in the sample where we conducted extensive excavations of ploughzone deposits. As Churchill Estates dates from the 1820s to the mid-1840s and Angus Glen dates from the 1810s to the

mid-1830s, the two sites are broadly contemporary. On Churchill Estates, the surface collection represented only 0.4 percent of the overall sample of 8,060 artifacts. Although the site contained several relatively productive features, only 27 percent of the total artifact sample came from features. Fully 73 percent of the sample derived from the ploughzone excavations. At Angus Glen, the surface collection represented only 1.6 percent of the overall sample of the 13,266 artifacts recovered. The two features at this site were insignificant, and they accounted for a mere five percent of the overall artifact sample. The vast majority of the Angus Glen sample—95 percent—came from the manual excavation of one-metre units in the ploughzone.

A similar pattern can be seen for the Bluffs of Burlington site in the bar graph presented in Figure 26, even though that site had no Stage 4 block excavations whatsoever. In that particular case, the relative frequencies reflect not only the absence of artifact-rich features on the site, but also the corresponding importance to our sample of the limited test excavations that were conducted.

Whether the proportions identified above for the different vertical subsets of the Angus Glen and Churchill Estates sites are at all typical of early nineteenth-century sites in this region remains to

be determined. Regardless, the figures do tend to underscore the importance of ploughzone excavations in obtaining anything like an adequate artifact sample from early nineteenth-century homestead sites.

The study of the surface, ploughzone, and feature artifacts from the five sites in the sample includes breakdowns for two key groups. One is the Architectural Group, which includes nails, window glass, clay chinking, and brick. The other is the Kitchen Group, which includes tablewares, teas, crockery, container glass, and utensils. Once again, the results of the distributional analyses are most instructive for Angus Glen and Churchill Estates, the two sites that had extensive excavations of ploughzone deposits.

For the purpose of examining the distribution of the Architectural Group, the Churchill Estates site is the most instructive of the limited sample of sites considered by this paper. The reason is that Churchill Estates had a root cellar and that the investigations of the site included relatively extensive excavation of artifact-rich ploughzone deposits. The analysis shows that the features on this site contained a disproportionate quantity of the Architectural Group (Figure 27), and that this was particularly true of the root cellar, which produced the majority of the remains.

This pattern is not altogether surprising, as the root cellar and the other major features were associated with the residential structure, and structures naturally produce most of the architectural remains. Eva MacDonald (1997:75) observed the same basic pattern in a sample of sites excavated by Archaeological Services Inc., where a high proportion of the Architecture Group artifacts were recovered from deep features such as root cellars and wells. In her case, she interpreted that pattern as evidence of the post-occupational dumping of the remains in convenient features that were no longer in use. MacDonald's hypothesis is not mutually exclusive with the explanation that deep structural features may be expected to have a higher proportion of Architecture Group artifacts in any event by the mere virtue of the presence of the structure.

The study of the Kitchen Group shows less variability between the three vertical subsets (Figure 28). As a rule, this group is represented between 87

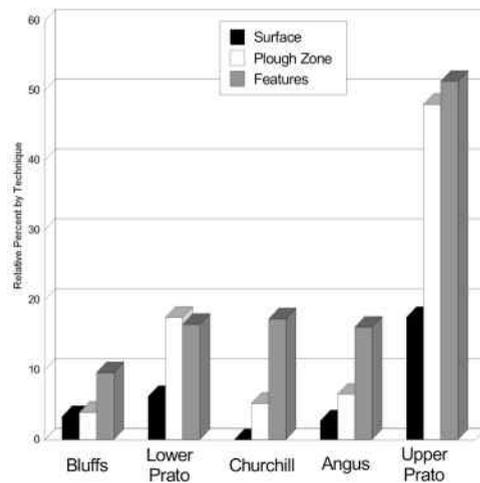


Figure 27. Vertical distribution of architecture group.

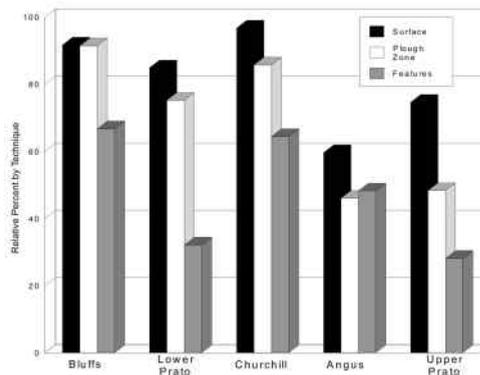


Figure 28. Vertical distribution of kitchen group.

percent and 97 percent of surface-collected material. In part, this predominance probably reflects sample bias, as ceramics are simply more visible on the surface than most other classes of historic material culture. Another source of bias is that we may be less inclined to bend down and pick up window glass, nails, and brick fragments than we are ceramics, which are universally acknowledged as our best means of dating sites.

The dominance noted above for the Kitchen Group in the surface sample from the Churchill Estates site was repeated at the Angus Glen site, though to a less extreme degree. The Kitchen Group at Angus Glen accounts for only 60 percent of the surface sample. This incidence reflects the

fact that faunal remains alone at Angus Glen account for a surprising 35 percent of the entire artifact sample.

The distributional analyses of the material recovered by the manual block excavations of Angus Glen and Churchill Estates also identified a number of patterns for each site. Those patterns, in turn, support the evidence of other studies cited earlier that artifact deposits in the ploughzone retain a considerable degree of integrity. In the interests of brevity, further site-specific observations in this paper will focus on the patterns noted in the horizontal distribution of material at the Churchill Estates site.

The ploughzone integrity can be amply demonstrated by the distribution of various artifact classes at Churchill Estates, including architectural remains. For example, clay chinking from the log cabin or shanty is wholly confined at this site to the immediate area of the root cellar, which obviously marks the location of the house (Figure 29). Flat glass has a wider distribution, including both the house area and the near-

by midden to the south (Figure 30), but once again it is clearly concentrated over the area of the house. Hardware, including nails, similarly has a relatively wide distribution, but again there is a concentration of the material in the immediate area of the house (Figure 31).

Faunal remains on the Churchill Estates site show a somewhat different distribution than architectural remains (Figure 32). As with flat glass and hardware, the faunal remains at this site were associated with the area of the house as well as the nearby midden. However, the highest faunal counts were in the refuse deposit. This presumably reflects a deliberate effort to dispose of food waste some distance from the residence.

Summary and Conclusions

In summary, nineteenth-century homesteads are among the most common archaeological sites encountered in southern Ontario. Despite that, formal guidelines detailing standards for the

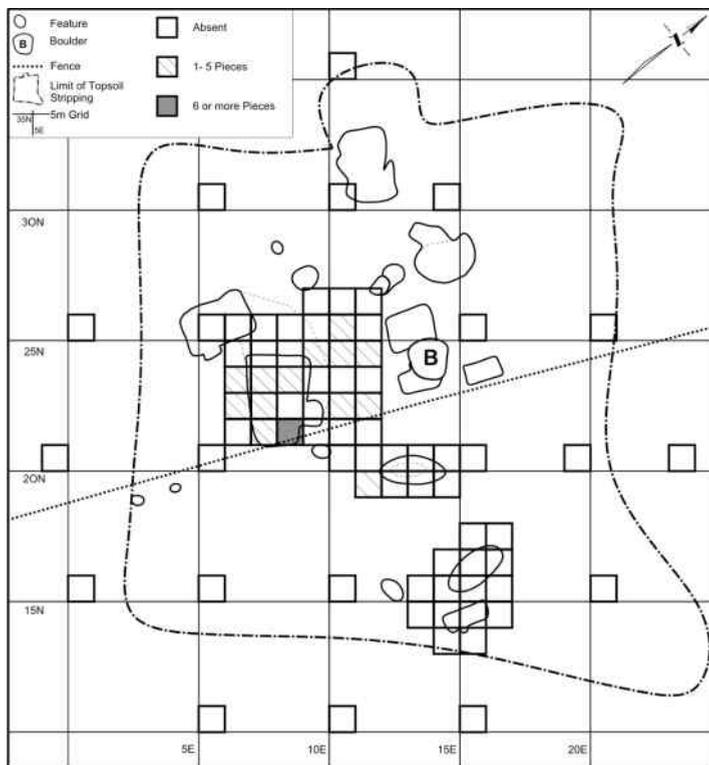


Figure 29. *The Churchill Estates site: distribution of clay chinking.*

Figure 30. *The Churchill Estates site: distribution of flat glass.*

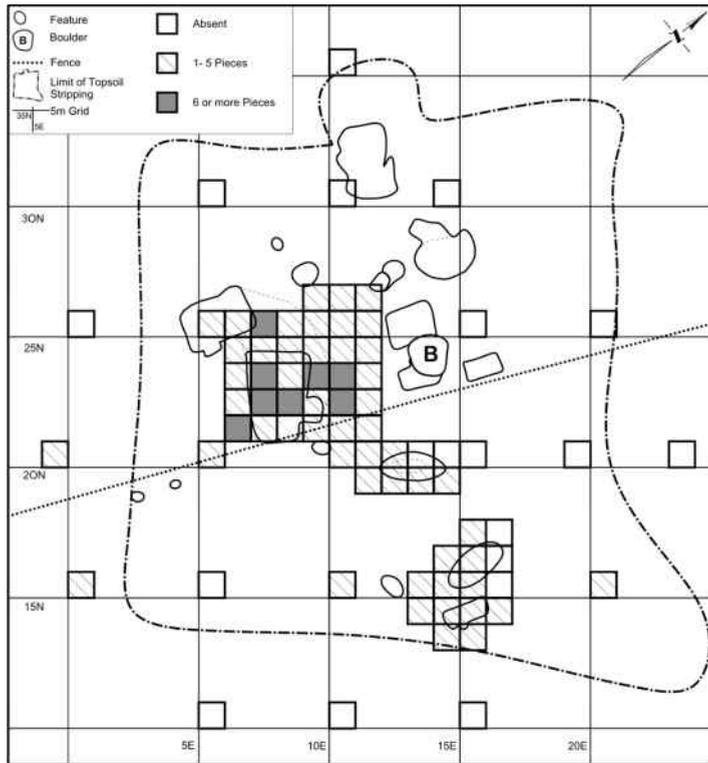
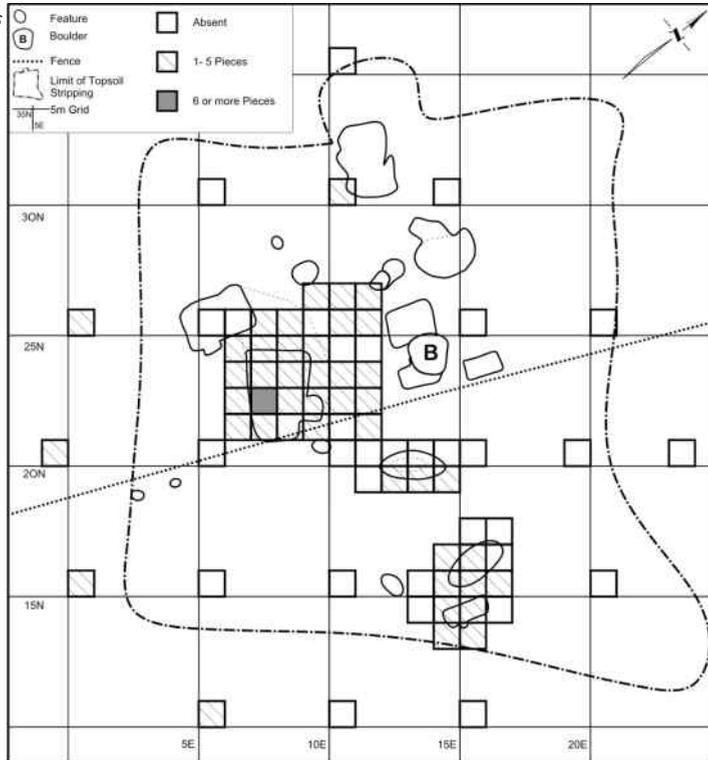


Figure 31. *The Churchill Estates site: distribution of hardware.*



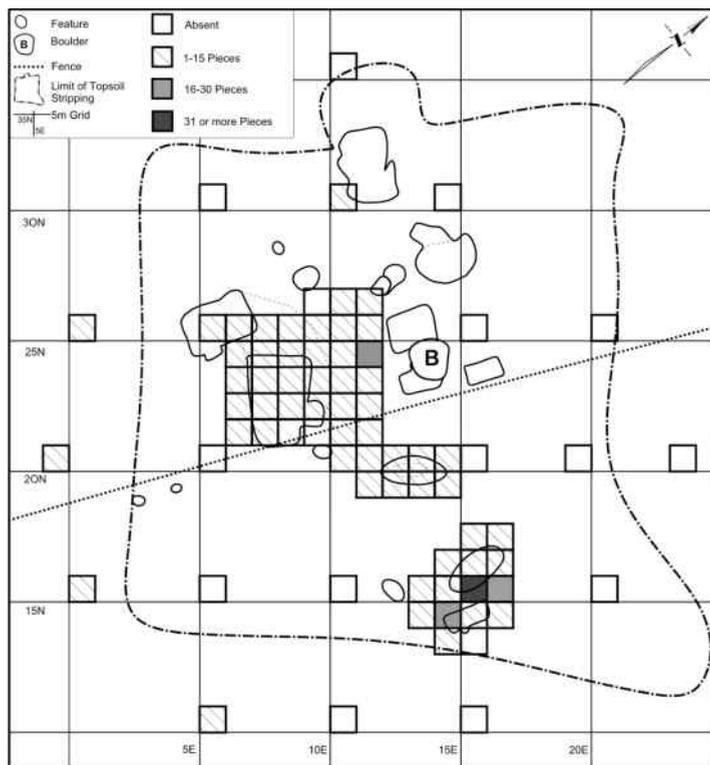


Figure 32. *The Churchill Estates site: distribution of faunal remains.*

excavation of these and other types of sites have only recently been drafted, and the latest version (MCL 2006) has yet to be formally adopted.

It has been some three decades since the advent of cultural resource management in Ontario, and the current archaeological guidelines, first published in draft form in 1988, have been in effect for a generation. During that time we have learned many lessons. The most obvious one in terms of the subject of this paper is that historical homesteads, whether they be Euro-Canadian or First Nations sites, are an important part of our collective cultural heritage. Another is that not all homestead sites contain artifact-rich features. A third is that artifact deposits in the ploughzone of these sites retain a considerable degree of integrity. A fourth is that artifact samples from the ploughzone of these sites provide different kinds of information than the samples from subsurface features.

In identifying the requirements of salvage excavations on nineteenth-century domestic sites, the latest draft guidelines differentiate between sites

that mostly pre-date the 1830s and those that post-date that benchmark, with a proviso that the date range be adjusted for areas of the province that were settled later (MCL 2006). More specifically, the draft guidelines provide for Stage 4 manual block excavation in the core areas of the earlier sites and for Stage 3 test excavations to sample a portion of the ploughzone on later sites.

A good argument could also be made for block excavation on sites that date to the 1830s and 1840s, as it is not until 1851 that the first detailed census was conducted in most counties in southern Ontario. There is further support for this argument in that for any sites that do predate 1851, our understanding of them usually depends almost wholly on what we can read into the artifacts we recover from them. Finally, the fact that artifact samples derived from features and those from the ploughzone provide different kinds of information could argue for more extensive block excavation on sites even as late as the 1850s and 1860s, a time span that currently marks the usual cut-off date for determining site

significance in this province. Whatever the next generation of CRM may bring in Ontario, it seems safe to assume that this subject will be one topic for discussion in the future, the next time the guidelines come to be reviewed and revised.

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Les propriétés familiales rurales du XIXe siècle font partie des sites les plus communs dans les évaluations des ressources archéologiques en Ontario. Par contre, ce n'est seulement que dans les derniers 25 ans qu'ils ont commencé à être régulièrement inclus dans les évaluations archéologiques. En plus, les standards et les normes formels pour l'évaluation et l'excavation des sites domestiques du XIXe siècle n'ont été développés que récemment (MCL 2004, 2006). Ceci veut dire qu'il y a eu beaucoup plus de variété d'approches dans l'excavation de ces sites que tout autres types de sites, tels les villages iroquoiens. Cet article décrit l'expérience d'une firme de gestion des ressources culturelles dans l'évaluation et l'excavation de sites domestiques euro-canadiens. L'échantillon comprend cinq sites datant du début du XIXe siècle au centre-sud de l'Ontario, qui s'étend collectivement sur une période de 35 ans, d'environ 1810 au milieu des années 1840s. On examine le succès relatif de différentes stratégies de fouille, d'excavation partielle d'étape 3 à d'excavation systématique et le relèvement du sol par machinerie. Le mérite des excavations de blocs d'étape 4 est aussi examiné.
