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## Wintering at Little Island Rock: A Fur Trade Site on Grand Island

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**ABSTRACT** Research conducted by Hiawatha National Forest personnel in 2000–2002 investigated the well-preserved archaeological remains of a circa 1820s fur trader's wintering post located on Grand Island, near the south shore of Lake Superior. The most likely occupant of this post was Henry A. Levake, a trader from Sault Sainte Marie (St. Mary's Falls) who was accompanied by his Native American wife. Both archaeological and historical information show that the Little Island Rock Post is an example of a specialized cold-climate adaptation developed in the boreal forests of North America and in the northern portion of the temperate forests to the south. Key elements of this adaptation include: location near a late fall or winter fishery, use of large amounts of clay for chimney construction, and the presence of ample storage facilities, especially pits. Features associated with this adaptation at the Little Island Rock Post also reflect the multiethnic occupational subculture of the fur trade. This site fills a large gap in the known distribution of wintering post archaeological sites across North America.

In 2000, the Hiawatha National Forest in Michigan's Upper Peninsula began an effort to locate archaeological sites related to the early nineteenth-century fur trade on Grand Island, a 13,500-acre National Recreation Area near the south shore of Lake Superior. Archaeological remains of small, short-term trading posts are rare in Michigan, but are of interest because of their ability to yield information on how traders adapted to local conditions and how multiethnic French-Canadian, Anglo-American, and Native American traditions influenced this adaptation. The interaction and mutual influence of different cultures define this period in Great Lakes history and archaeology (Cleland 1992; Gilman 1982; Peterson 1985). Important insights into these processes could be lost if fur trade sites on Grand Island, or at other locations, remained unidentified and/or were destroyed by shoreline erosion, development, or vandalism. Based on a review of historical documents, our investigations focused on the only "trading post" on Grand Island specifically noted on maps predating 1840 (Burr 1835; Peters 1983: Map 5). Shovel testing in this area by USDA Forest Service personnel followed by test excavation in 2001–2002 revealed early nineteenth-century artifacts associated with both subsurface features and surprisingly well preserved log structural remains (Figure 1). This report analyzes the significance of the Little Island Rock Post, (Forest Service

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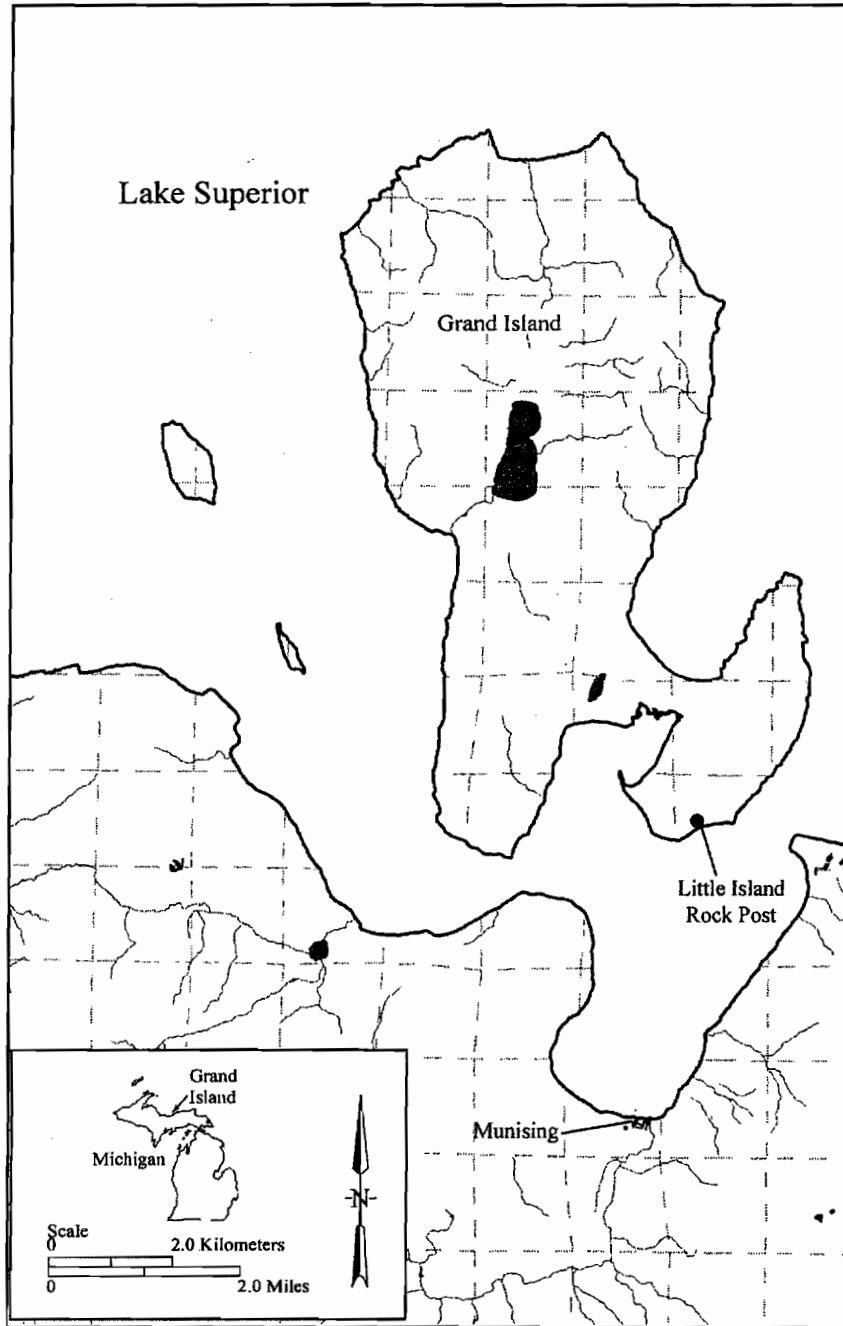


Figure 1. Location of Little Island Rock Post (FS site #09-10-03-762).



Site # 09-10-03-762, state site # 20AR345), within the larger cultural and historical context of the early nineteenth-century fur trade.

## Background

### *Historical Background*

The earliest references that relate to the Little Island Rock Post are found in accounts prepared by members of the 1840 Houghton expedition. Bela Hubbard (Peters 1983:45, 88) shows an “old trade post” on the southeast portion of Grand Island and mentions only one trader in his accompanying narrative: “It was on this Island that Mr. Levake had a trading post for a number of years, some 12 years since.” Another member of this expedition noted “H. A. Levake spent several winters here” (Carter and Rankin 1970:69). A newspaper article based on conversations with Bay Mills elder Charles Marshall, whose family once lived on Grand Island, mentions a Chippewa village there called “Little Island Rock” and a nearby trading post operated by an “Eastern Frenchman” named Henry “LeVeque” and his Native American wife (Cloverland Farmer 1918). There is a sandstone bedrock stack just offshore of Grand Island near 03-762 that is a likely candidate for the feature called “Little Island Rock.” Another possible reference to this site comes from an early map (Burr 1835) that depicts Grand Island in a distorted shape, but notes “Tr P” on the southeast side of the island (Figure 2).

As noted, the most likely occupants of this site were Henry Levake and his Native American wife. Henry Levake is listed in the 1820 census for Michilimackinac County, Michigan Territory, as “engaged in commerce” (Russel 1982). Confirmation of Levake’s involvement in the fur trade is provided by an 1822 letter from Indian Agent Henry Schoolcraft that mentions his “wintering station” on the south shore of Lake Superior (Thwaites 1911:279–280). The 1827 Michigan Territorial Census places his permanent residence at St. Mary’s (Sault Sainte Marie) (Russel 1982).

Henry Levake is listed as a witness in the 1826 and 1836 treaties between the United States and the Chippewa and Ottawa of northern Michigan, which also included benefits for “Fanny Levake, daughter of Meeshwaqua” and her children, and to the “Indian families” of several traders, including Levake (Kappler 1904:272, 454). Levake married Martha Davenport in 1837 (Smith n.d.), so his previous relationship apparently had ended. It was common practice for traders to enter into relationships with Native American women in order to enhance their chances for economic success, and some terminated these relationships later in life (Cleland 1992; Murphy 1998; Peterson 1985). Levake held some local government offices in Michilimackinac County during the 1820s and is listed as a Territorial and State Representative from Chippewa County in 1835–1836 and 1839 (Carter 1942; Michigan Historical Commission 1924). Martha Davenport married a man named Sylvester in



Figure 2. Detail from early map of Michigan (Burr 1835). Courtesy of William L. Clements Library, University of Michigan.

1842, so Levake may have died sometime between 1839 and 1842 (Smith n.d.). Further research is needed on Henry Levake's later life, but it is unlikely he occupied his post on Grand Island after about 1828 (Peters 1983:88).

Gilman (1982:46) characterizes most Great Lakes trading posts as "small temporary buildings, often abandoned after a year or two of use." The "shifting and intermittent nature" of trading posts on or near Grand Island makes it difficult to completely rule out the possibility that someone other than Henry Levake occupied this site (Roberts 1991:75). The earliest definite reference to a post on or near Grand Island is from 1816–1818 and is associated with the



Figure 2. Detail from early map of Michigan (Burr 1835). Courtesy of William L. Clements Library, University of Michigan.

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American Fur Company (Warren 1984:382). If there was an American Fur Company post or that of another operation circa 1816–1820s on the southeast part of the island, it could easily be confused archaeologically with Levake's post. For example, agents of independent trader John Johnston and his sons also traded along the south shore of Lake Superior during the 1820s and 1830s (Johnston 1822; Johnston 1903; Johnston 1910).

The Little Island Rock site was occupied during a period when the British in Canada were still considered a serious economic and military threat to American activities in northern Michigan, and United States authorities tried to restrict trading to certain locales where it could be monitored. In 1824, Indian Agent Henry Schoolcraft designated Grand Island and three other locations for trading along the south shore of Lake Superior (Thwaites 1911:343–344). He cites these as the places where most trading had occurred in the past and where it was most "suitable and convenient" for both traders and Indians. It is likely that the prior presence of an Ojibwe band is what attracted traders to Grand Island (Johnston 1960:157–158). Gilman (1994:324) points out that by the early nineteenth century, it seemed that "every group of Indians had its own trader," probably the result of encroaching Euro-American settlement on Indian lands and competition between traders. It is not known who Henry Levake worked for, but he is not mentioned in correspondence from the 1820s and 1830s relating to the American Fur Company's operations at Grand Island (Roberts 1991:77–90). Ledgers indicate that he had accounts in Sault Sainte Marie with both the American Fur Company store and John Hulbert, the sutler at Fort Brady, who also supplied traders (Roberts 1991:79). It is even possible that he was supplied by independent trader John Johnston, who also operated out of Sault Sainte Marie.

#### *Environmental Context*

By far the most significant aspect of the Little Island Rock Post site's setting is its presence on the shore of Grand Island, adjacent to the East Channel (Figure 1). The East Channel serves as a passage from the open waters of Lake Superior to the protected areas of Munising and Murray Bays, and ranges from 1.2 to 3.2 km wide with a maximum depth of over 60 m. The deep waters just offshore are known as a good place to catch whitefish through the ice (Walter Jurinen, personal communication 2002) and net sinkers have been recovered from nearby prehistoric sites (Drake and Dunham, this volume). Many firsthand accounts of late eighteenth- and early nineteenth-century wintering posts cite the need for a nearby fall/winter fishery to avoid starvation (Cameron 1960:292, 297–298; Johnston 1903:340–342; McKenzie 1960:27–28; Perrault 1910: 565–566, 588–589; Shaw 1960:31–32).

The terrace upon which the site is located is approximately 192 meters above sea level and about 9 m above the current level of Lake Superior. This terrace was probably created about 4,700 years ago during the Nipissing I stage of the Great Lakes (Anderton 1993, 1995). The site is protected from winds



associated with winter storms coming from the west, north, and northeast. Soils on the site have developed on lake-deposited sand (Veatch et al. 1929:27), and currently support a mixed forest dominated by northern white cedar, balsam fir, and red maple. Ground cover includes shining club moss (*Lycopodium lucidulum*), tree club moss (*Lycopodium obscurum*), wild sarsaparilla (*Aralia nudicaulis*), rattlesnake plantain (*Goodyera* spp.), and blue bead lily (*Clintonia borealis*).

## Material Culture

### *Methodology*

Field investigations took place during the fall in 2001 and 2002 and included shovel testing, test unit excavation, metal detector transects, and architectural recording of standing log walls. These procedures were designed to determine the extent of the site, as well as to evaluate the nature and integrity of the archaeological deposits. A metal detector was employed to help define the limits of the site and also to recover a larger sample of metal artifacts that might be vulnerable to relic hunters. Shovel/trowel tests at positive metal detector indications were approximately 30 cm in diameter. Eight 1 x 1 m units and one 1.5 x 1 m unit (test unit 9) were excavated to evaluate the historic component of the site. Test units were excavated in arbitrary 10 cm levels, except in test units 6 and 9 where features resulted in cultural strata that were excavated as separate units. All soil was sifted through one-quarter inch mesh screen. Soil samples were taken from some deposits for fine-mesh water screening, which resulted in the recovery of small items such as beads (Table 1). Botanical remains recovered during flotation of 3 liters of the gray-tan mottled sand layer from test unit 5 included a single elderberry seed and 7 trailing arbutus seeds, most likely incidental inclusions from natural processes (Katie Egan-Bruhy, personal communication 2002). Because only three fragments of bone were recovered, no specialized faunal analysis was conducted. At a maximum, these bones represent one beaver, one unidentified fish, and one additional small mammal (Table 1). Early nineteenth-century material at this site extends over an area of about 600 m<sup>2</sup> (Figure 3). Table 1 lists all historic period artifacts recovered during field investigations. Table 2 summarizes the deposits encountered in different parts of the site. Figures 4, 5, and 6 illustrate the most significant depositional sequences and feature profiles.

Material culture from the Little Island Rock Post was analyzed with the goal of testing the initial chronological and functional classification of the site as an early nineteenth-century trading post. This material was also examined to see if it supported historical evidence suggesting that the occupants were a French-Canadian and Native American couple. Some key environmental characteristics related to the fur trade, as well as many fur trade families and companies, ranged far to the north and west of the Great Lakes (Peterson 1985). Because of this, a special effort was made to compare





**Table 1. Historic Artifact Inventory.**

<i>Unit</i>	<i>Items</i>
T.U. 1, L1	1 wrought iron nail, 2 white clay pipe stem fragments, 5 fragments annular/mocha pearlware, 4 fragments plain pearlware, 1 unidentified metal fragment.
T.U. 1, L2	2 frags, blue transfer print pearlware, 1 frag plain pearlware.
T.U. 2, L1	2 frags, flat glass, 1 plain pearlware, 1 beaver tooth, 1 white clay pipe stem, 1 small cut nail.
T.U. 2, L2	2 frags, blue transfer print pearlware, 2 frags, annular/mocha pearlware, 1 frag. plain pearlware, 1 frag, flat glass, 1 clear curved glass frag.
T.U. 3, L1	1 frag, blue handpainted pearlware, 1 flat glass, 1 possible small chip from honey-colored gunflint.
T.U. 5, L1	Dark brown blade style gunflint 2.920 x 2.225 x .685 cm, pewter U.S. army infantry button (1.995 cm diameter), 1 flat glass, 1 hexagonal blue-green glass bead, 3.50 mm long and 3.30 mm diameter, 2 white seed beads, 1 unidentifiable nail.
T.U. 5, L1	Material from fine mesh water-screening of 13 liters of soil: 11 small (seed) white glass beads, 2 cut lead scraps, 1 silver-plated brass straight pin with wound wire head (1.335 cm long-tip missing), 1 flat glass.
T.U. 5, L1	Material from fine mesh water-screening of 10-liter soil sample: 7 white glass seed beads, 2 blue glass seed beads, 1 fragment of a light purple glass lampwound bead, 1 lead shot .34 cm diameter, 1 unident. nail frag.
T.U. 5, L2	6 blue transfer print pearlware, 1 flat glass.
T.U. 5, L2	Faceted amber glass bead from heavy fraction of 6-liter soil sample (5.5 mm long x 4.05 mm max. diameter).
T.U. 5, L3	Crushed lead band from clay lens in W. wall (4.3 cm long (est.), .095 cm thick, .720 cm wide).
T.U. 6, F1	1 unident. nail, 2 interlocked silver wire rings, 1.35 mm diameter wire, 2 pieces of wire are bent to form interlocked rings approximately 11.80 mm in diameter, ends overlap slightly to lock together, possible jewelry; also frags of burned mixture of clay, sand, ash (from brown sand and decomposed wood area).
T.U. 6, L3	Small mammal rib frag., 1 flat glass, 1 olive-colored curved glass, 1 dark brown flint chip—possibly from gunflint.
T.U. 7, L1	4 blue transfer print pearlware, 3 annular/mocha pearlware, 1 plain pearlware, 1 flat glass frag.
T.U. 7, L2	1 blue transfer print pearlware.
T.U. 9, L1	10 blue handpainted pearlware, 4 plain pearlware.
T.U. 9, L2	2 blue handpainted pearlware, 1 plain pearlware.
T.U. 9, L3	2 blue transfer print pearlware, 1 small fishbone.
T.U. 9, L3	Feature #1: 4 blue handpainted pearlware, 10 plain pearlware.
T.U. 9, L5	Brown clayey sand zone of feature 1: 2 cut nails, 1 corroded screw, 1 unident. iron implement 14.75 cm long, .90 cm diameter.
T.U. 9, L6	Feature #1: white clay pipe stem from brown clayey sand zone.

*continued*

Table 1. Historic Artifact Inventory. *Continued.*

<i>Unit</i>	<i>Items</i>
T.U. 9, L6	Feature #1: white clay pipe stem from brown clayey sand zone.
T.U. 9, L6	Heavy fraction from 7-liter soil sample of brown clayey sand: Burned clay and sandy clay fragments, chunks of a burned mixture of clay, ash, and sand, small amount of charcoal, 1 fire-cracked rock, 1 heavily corroded iron screw.
T.U. 9, L6	Heavy fraction from 10-liter soil sample of brown clayey sand: 2 fire-cracked rocks, small amount of charcoal, burned chunks of clay and sandy clay, burned chunks of clay-ash-sand mixture.
T.U. 9, L6	Heavy fraction from 5-liter soil sample of dark gray sand with roots: Burned fragment of glazed earthenware, 2 fragments unidentified charred substance (leather?), charred wood.
T.U. 9	Heavy fraction of .5-liter soil sample of zones 4 and 5 from wall profile: 3 small pieces possible sand and red ocher mixture.
M.D. 1	Case knife with brass inlay handle and iron blade; blade 15 cm long, 2.380 cm wide, .355 cm thick (corroded), handle 9.490 cm long, 2.120 cm wide (at heel), .820 cm thick (narrowest, uncorroded portion).
M.D. 2	Pewter ferrule 3.855 cm long, 1.140 cm diameter (outside at end).
M.D. 3	Cast iron pot frag.
M.D. 4	Cast iron pot frag. (not collected).
M.D. 5	Cast iron pot frag. (not collected).
M.D. 6	Brass cartridge casing "W.R.A. Co. 45-70 WHV"
M.D. 7	2 wrought iron nails.
M.D. 8	1 wrought iron nail.
M.D. 9	2 cutlery handles; "pistol grip" style with scored iron scales handle 7.630 cm long, 1.740 wide (at heel), .815 cm thick (at least corroded portion); pistol grip style with remnants of scales (possible horn), 8.175 cm long 2.150 cm wide (at heel).
M.D. 10	Cut nail.
M.D. 11	Wrought nail.
M.D. 12	Unidentified copper or copper alloy object, possible tag or ornament 2.525 cm long, 1.620 cm wide, .145 cm thick.
M.D. 13	Copper-alloy threaded lid for gunpowder container marked "MA... POWDE... ORK.."
M.D. 1, '02	1 blue transfer print pearlware, 1 pewter U.S. Army button marked with eagle and script "R", 2.03 cm diameter.
M.D. 2, '02	1 cut nail, 1 wrought nail.
M.D. 3, '02	Cast iron pot fragment.
M.D. 4, '02	Plain unmarked brass button, 1.25 cm diameter.
M.D. 5, '02	Corroded iron screw.
M.D. 6, '02	4 blue handpainted pearlware, 4 plain pearlware, 1 cut nail.
M.D. 7, '02	1 blue handpainted pearlware, basal sherd, probably from a bowl, 1 cut nail.
S.T. 13	1 wrought nail.
S.T. 14	1 plain pearlware, 1 flat glass.

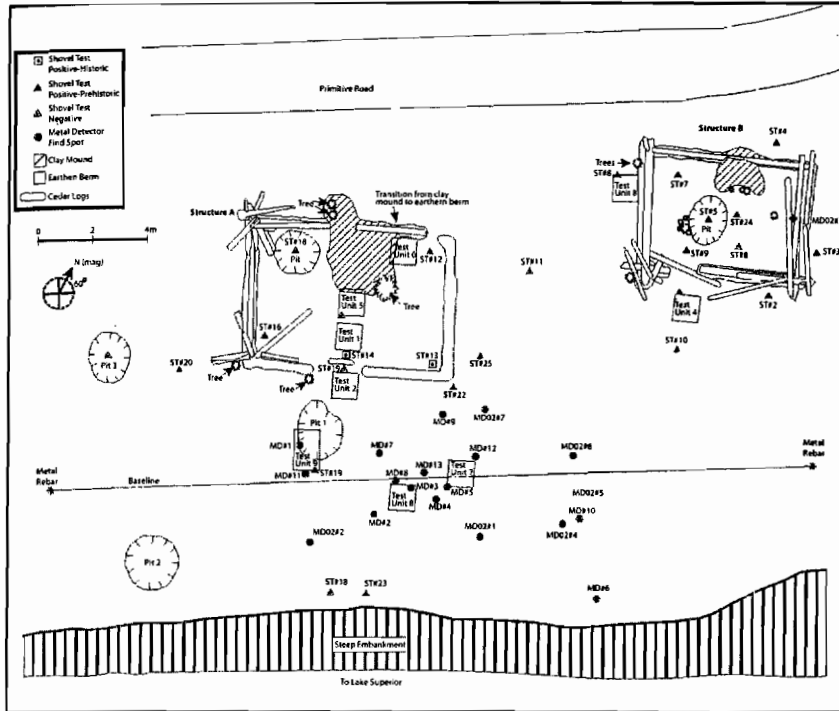


Figure 3. Map of Little Island Rock Post, FS site #09-10-03-762.

the Little Island Rock Post to archaeological sites and historical accounts from these same areas.

### Historic Artifacts

The following narrative discusses those artifacts that appear to have the greatest value in relation to addressing the above goals.

### Glass Beads

All glass beads recovered came from test unit 5. The 22 “small” beads recovered range from 2.15 to 3.15 mm in diameter and from 1.20 to 2.95 mm in length. These fall into the category “monochrome, cylindrical undecorated, hot-tumbled drawn beads” (Ross 2000:28–29). Specifically, the two small translucent blue beads match Variety 3 and the 20 opaque white beads match Variety 6 in the classification of nineteenth-century beads from Fort Union in North Dakota (Ross 2000). Two of the remaining three larger beads are potentially the most informative. A blue hexagonal bead from level 1 resembles variety 202 “multi-sided undecorated drawn beads with chopped ends” found in a pre-1833 context at Fort Union (Ross 2000:26, 144). The faceted amber bead from level 2 matches variety 258 at Fort Union (Ross 2000:26–27):

Table 2. Test Unit Summary.

<i>Unit</i>	<i>Depositional Sequence</i>	<i>Location</i>
1	4–5 cm of duff/sandy humus, 7–11 cm of gray-brown mottled sand that includes a large clay lens, 3–7 cm of decomposed wood, gray-tan sand	Within Structure A
2	5–8 cm of duff/sandy humus, 8–11 cm of gold-tan-gray mottled sand that includes a large pink sandy clay (7.5YR 7/4) lens with a maximum thickness of about 6 cm, 2–8 cm dark brown sandy humus (probably original ground surface), gray-tan sand	Just outside entrance to Structure A.
3	5–8 cm of duff and sandy humus that also contains lenses of pink sandy clay (7.5YR 7/4) up to 5 cm thick, 11–20 cm of gray-tan mottled sand with lots of root disturbance, gray-tan sand	Between Structure A and Lake Superior
4	Extremely variable. Probably disturbed by tree tip. No historic artifacts or clay.	Just outside entrance to Structure B
5	4–8 cm duff and sandy humus, 4–5 cm light brown sandy clay, 3–5 cm gray-tan mottled sand with an organic stain in the upper 2–3 cm, tan-gray sand.	Within Structure A.
6	Entire unit affected by clay fireplace—see feature discussion	Within Structure A.
7	4–7 cm of duff and sandy humus, 4–8 cm grayish brown sand that includes a large area of roots and decomposed wood, very pale brown (tan) sand	Between Structure A and Lake Superior
8	East wall of unit: 2–3 cm black organic sand and decomposed wood, 9–14 cm exposure of buried sill log, 1–2 cm very dark gray brown sand, very pale brown (tan) sand	Adjacent to west wall, exterior of Structure B
9	Entire unit affected by pit in front of Structure A—see feature discussion	Just outside entrance to Structure A

“Monochrome, multi-sided drawn beads with chopped ends and two rows of ground facets.” Ross (1990:38) indicates these are associated primarily with post-1820 sites. Similar faceted beads are found in an 1829–1860 context at Fort Vancouver (Ross 1990:37) and an 1828–1865 context at Fort Union (Ross 2000:26–27), but are also found at the circa 1790–1830 Cater site in Lower Michigan (Beld 2001:33–34, 36). Finally, a fragment was found from a transparent light purple “ovoidal to spheroidal undecorated, lamp wound” bead (Ross 2000:44–45).

#### Buttons (Figure 7)

A United States (U.S.) Army infantry pewter button found in test unit 5 exhibits a foliated script “I” above a small star surrounded by an oval (Figure 7). This style dates between 1812–1815 (Campbell 1965, cited by Martin 1985:112).



Figure 4. Test Unit 2, east wall profile.



Figure 5. Test Unit 6, south wall profile showing clay mound feature edge.



Figure 6. Test Unit 6, east wall profile showing pit feature.

Another pewter military button from a U.S. Army Regiment of Riflemen exhibits an eagle with a script “R” shield on the breast. This style was in official use from 1812 to 1814, and riflemen were apparently stationed at Fort Mackinac in 1815 (Wycoff 1984:54). The presence of military buttons at non-military sites, sometimes in large quantities, is noted by Martin (1985:110), who suggests that some parts of uniforms were retained by soldiers as personal property after their discharge. A published roster of pre-Civil War Michigan veterans does not include Levake or any of the other traders known to have operated on or near Grand Island (Barnett and Rosentreter 2003; Roberts 1991). However, military clothing could have been obtained through sales of surplus.

### Ceramics

All Euro-American ceramics from the site appear to be pearlware, although the greenish or blue cast considered diagnostic for this ware varies from pronounced to subtle. At least four vessels are represented (Figure 8). One is a blue hand-painted pearlware bowl decorated with a floral design. The two blue transfer print pearlware vessels are too fragmented to determine pattern or vessel shape, but at least one may be a bowl. The annular decorated pearlware vessel also represents a bowl, and it exhibits a band of green filled rouletted horizontal grooves (engine turned) just below the rim, a blue and a white band below this, and a “mocha” pattern below this. This small sample suggests the site was occupied around 1810–1830 (Lofstrom 1982:14; Price 1979:30–31).

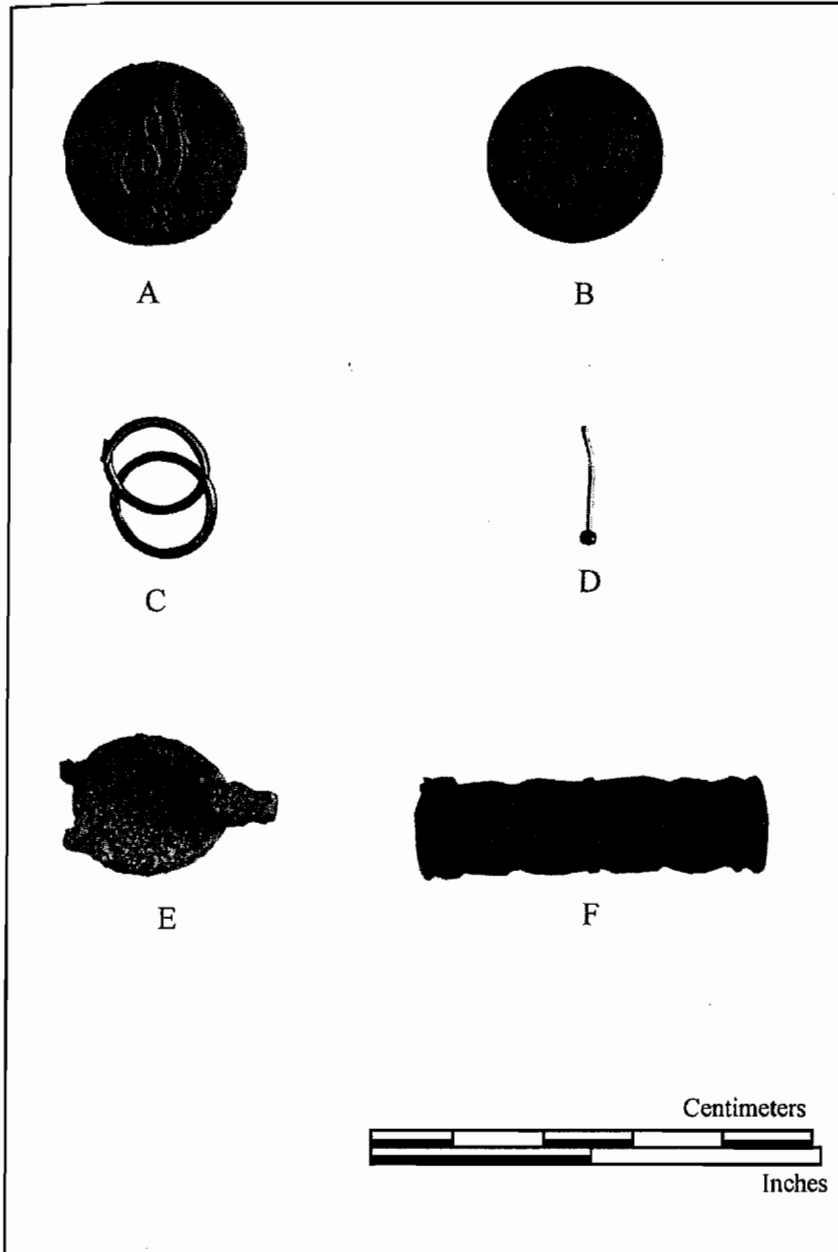


Figure 7. Metal artifacts, United States military buttons (A and B), silver rings (C), silver pin (D), unidentified copper object (E), and unidentified pewter tuber or ferrule (F).

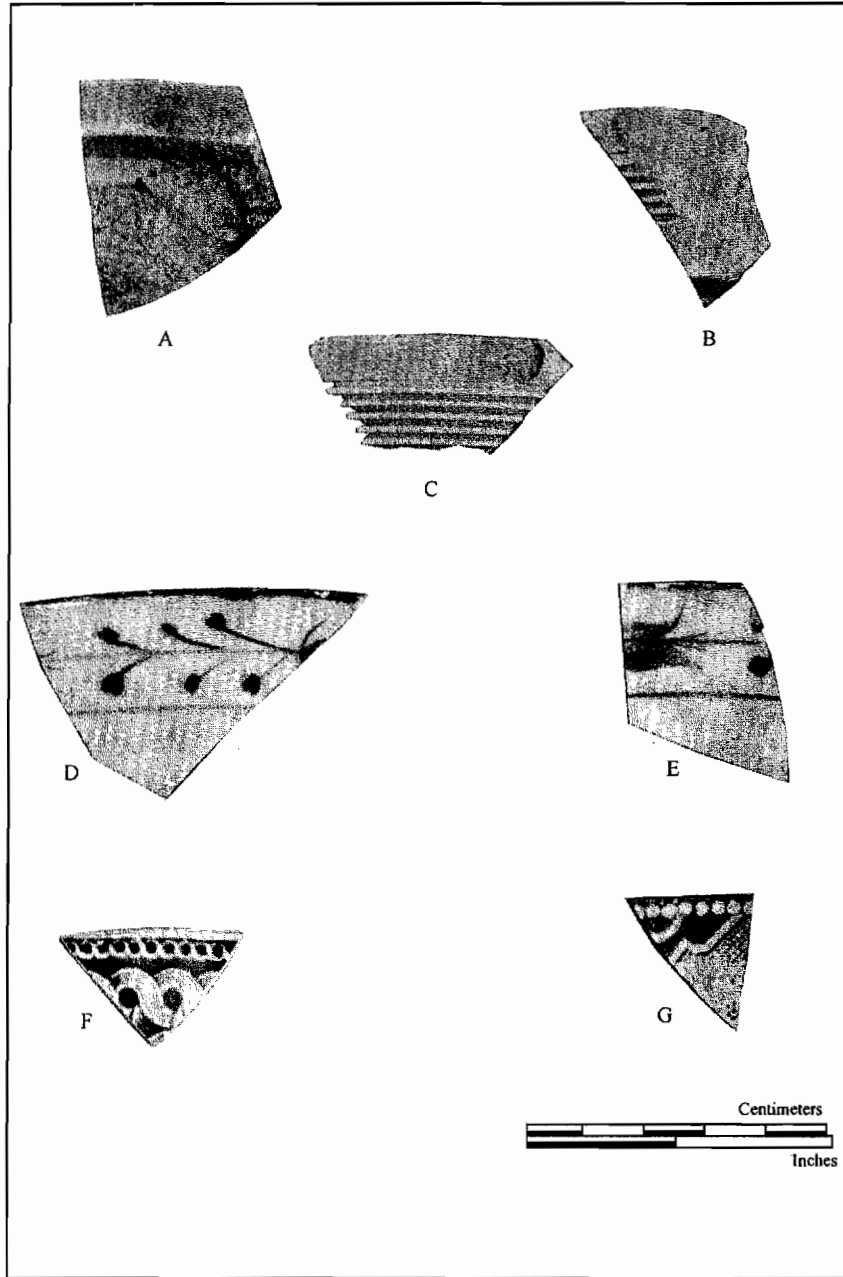


Figure 8. Ceramics (pearlware), annular decorated (A-C), blue handpainted (D and E), and blue transfer print (F and G).





At an early nineteenth-century wintering post in Wisconsin, Oerichbauer (1982:215) suggested that a small pearlware assemblage represented handleless cups. Among some Europeans, a tradition of drinking tea from “handleless bowls” continued through the nineteenth century (Chow and Kramer 1990:74). Later assemblages dominated by “cups or small bowls” from 1870s *métis* winter hunting sites in Saskatchewan are interpreted as evidence of tea drinking (Burley et al. 1992:114). The special role of tea at remote nineteenth-century fur trade sites was described by Alexander Henry in 1814 (1965:863): “This afternoon we took a dish of tea with sugar...it is a great and indeed the only luxury in the NW.”

### **Knives/Cutlery**

A case knife with a brass inlay handle is identical to examples found at many other sites around the Great Lakes. Included are the circa 1820–1850 Ada site (Herrick 1958:34), the circa 1790–1830 Cater site (Beld 2001:36), an 1802–1803 Northwest and XY company post in northern Wisconsin (Oerichbauer 1982:227), and the circa 1790–1850 Mill Creek site (Martin 1985:185). Two composite “pistol grip” style cutlery handles were also found (Dunning 2000). In general, pistol grip style composite cutlery handles are most characteristic of the mid- to late eighteenth century (Dunning 2000).

### **Other Artifacts**

There are a number of other artifacts recovered that are less temporally diagnostic than the beads, buttons, ceramics or cutlery. The most numerous of these other artifacts is the mix of hand-wrought (10), cut (6), and unidentified (5) nails. This ratio of wrought to cut nails is typical of the period from 1820 to 1840 (Adams 2002:70). Other items include a dark brown blade-style gunflint, two small translucent chert flakes (dark brown and tan/honey-colored) that may be from gunflints, two small interlocking silver wire rings, lead scrap, lead shot, white clay pipe fragments, flat glass, small fragments of curved glass, and a silver-plated brass straight pin (Figure 7). Only two items were recovered that appear to relate to later use of Grand Island: a brass cartridge casing marked “W.R.A. Co. 45-70 WHV” (M.D. 6) and a fragment of a brass lid marked “MA..., POWDE..., ..ORK,” from a can that once contained gunpowder probably produced by the Massachusetts Powder Works (Buttweiler 2001). The mean thickness of the 18 fragments of flat glass recovered is 1.34 mm. Although this is an extremely small sample, Moir’s (1987) regression formula [manufacture date =  $84.22 \times (\text{thickness in mm}) + 1712.7$ ] was tried and a date of 1825.6 was obtained. The handmade straight pin (Figure 7) has a spherical head created by soldering coiled wire to the shaft (Stone 1974: 162; Oerichbauer 1982: 206–208). Handmade pins became obsolete sometime after 1817 when a machine was invented to mass-produce pins (Longman and Loch 1911:21, cited in Brain 1979).



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Four artifacts were recovered that were not positively identified. A possible copper tag or ornament (Figure 7) was found that has short, folded over flanges. A pewter tube or ferrule (Figure 7) was recovered, but it lacked any way it could be loosened or tightened. A sheet-lead band was also found that is folded over and crushed. An unidentified iron rod from test unit 9 is from the fill of feature 1. It is 14.75 cm long, with a maximum diameter of 0.9 cm.

### Features

#### Log Architecture

The most obvious features at this site are the partially standing sections of log walls. These walls are part of two well-defined structures that include preserved segments of notched horizontal logs and distinctive earthen berms. Both structures are rectangular, with door openings facing Lake Superior and clay chimney mounds along the opposite walls. Test unit 8 was adjacent to the exterior of Structure B and included no traces of chinking or daubing, but revealed a sill log completely buried in an earthen berm. Structure A is approximately 7.4 by 5.1 m. Structure B is approximately 6.3 by 4.6 m, and segments of walls at its southeast corner are well preserved (Figures 9–10). At this corner the first 5 logs of the south and east walls are fairly intact and extend to a height of approximately 1.1 m. The southwest corner of Structure B is not as well preserved, but a segment of wall approximately 85 cm high is still



Figure 9. Structure B, southeast corner, looking southwest.



Figure 10. Structure B, southeast corner, notching detail.

visible. Ends of intact logs at Structure B range from 8 to 35 cm in diameter ( $n = 24$ ). Although some log fragments are preserved at the northwest and southwest corners of Structure A, they are very deteriorated and no longer in their original stacked configuration.

Several well-preserved joints are present at the southeast and southwest corners of Structure B. These consist of 80 to 115 degree V-notches on log bottoms and roughly matching surfaces hewn into the tops of logs beneath them to form locking joints. All notches and log ends appear to have been chopped rather than sawn. Structure B may also contain evidence of a roof in the form of three heavy split-cedar planks (Figure 11). These planks range from 12 to 19 cm wide and 4 to 9 cm thick, and there are several oval-shaped holes near the ends of two planks. American Fur Company trader Gurdon Hubbard (1969:54) describes the use of wooden pins to attach roof planks to the tops of log walls at a wintering post in Illinois occupied in 1818–1819.

All logs in these structures appear to be northern white cedar (*Thuja occidentalis*). Northern white cedar is the most decay-resistant species in the Upper Great Lakes because it contains a compound called thujaplicin that is toxic to microbes (Zabel and Morrell 1992:401). Although the survival of these logs after approximately 180 years is impressive, even older cedar logs and stumps have been documented in an Ontario dendroecology study where the decomposition limit extended back to 1770 (Kelly and Larson 1997:469). Although it is unlikely that the builders of the structures at site 03-762 were concerned about decay resistance, cedar also has the lowest density of any domestic softwood and is very easy to work with hand tools (Hoadley 1981).



Figure 11. Structure B, southeast corner, looking southeast from inside.

The use of round timbers and crude V-notching is described as one of the “most primitive” Midland American forms and it is associated with “pioneering and the frontier” (Jordan 1985:148). Midland American forms of log construction were derived from “Fenno-Scandian” roots, but were adopted by immigrants from many nations and spread throughout the eastern United States in the eighteenth and nineteenth centuries (Jordan 1985). This style contrasts with the *pièce-sur-pièce* French Canadian styles (Ennals 1992; Moogk 2000) that were found at many eighteenth- and early nineteenth-century trading posts from the Great Lakes to the Rocky Mountains (Wonders 1979). In this technique, hewn logs were set horizontally into vertical grooved posts that either rested on a sill log or were buried in the ground. Wonders (1979:196–198) documents the diffusion of this style from the St. Lawrence valley to the Pacific coast in close association with the fur trade, and how it was later replaced by the Fenno-Scandian notched style that moved north and west with Anglo-American influence. There was a growing Anglo-American influence in the Great Lakes during the early nineteenth century that might explain the presence of notched horizontal log construction, and this technique requires less time and skill than the *pièce-sur-pièce* style (Wonders 1979:205). In an 1832 letter from LaPointe (near present-day Ashland, Wisconsin), Sherman Hall (Nute 1955:158) describes the most common building technique there as “hewn logs inserted into grooved vertical posts” (*pièce-sur-pièce*). However, he adds that “a few buildings are reared nearly in the old Yankee



manner—that is of round timbers locked together at the ends” (Nute 1955:189).

### Clay Features

Clay chimneys are a defining characteristic of fur trade era architecture in remote areas from the Great Lakes to the Northern Rocky Mountains (Burley et al. 1996:87; Cameron 1960:297; Hubbard 1969:54–55; Kinzie 1932:393–394; Nute 1955:191; Oerichbauer 1982; Parker 1966:130). In fact, the lack of clay sometimes forced traders to reconsider their selection of building sites (Nelson 2002:57; Shaw 1960:31). Although one-sixth the surface area of Alger County (which includes Grand Island) is primarily clay (Brown 1924:397), no clay deposits are now visible along the shore near the site, but changing lake levels or erosion may expose or conceal shoreline deposits. The maximum distance to currently exposed clay sources is about 5 miles. As noted by Burley et al. (1992:106), “clay fireplaces and chimneys required continuous repair.” At métis wintering cabins in Saskatchewan, clay was stored in pits so it would be accessible even when the ground was frozen (Burley et al. 1992:106).

Test unit 6 was located within Structure A and it cut into the east edge of the clay mound marking the collapsed chimney and fireplace (Figure 5). The upper sequence in the west wall profile includes: 2–4 cm duff over 39–51 cm massive pink clay (7.5YR 7/3) that contains small inclusions of charred and decomposed wood, and a large inclusion (lens) of darker pink clay (5YR 7/4) that may be burned. Below the clay is 4–7 cm of light-tan loosely packed very pale brown (10YR 8/2) “beach sand” that appears confined to the area below the clay mound feature, underlain by 2–4 cm of gray sandy humus (7.5YR 5/1) that may represent the original ground surface. Historic artifacts from test unit 6 are relatively scarce and are not found in the massive clay deposit. The following wood species were identified from charcoal within the massive clay deposit: maple, beech, ash, and aspen; and a 3-liter sample from the strata just beneath the clay contained maple, red pine, white pine, and aspen charcoal (Katie Egan-Bruhy, personal communication 2002).

Historic accounts from a wide variety of sources provide a context for analyzing this feature. Kinzie (1932: 393–394) describes the construction of a clay chimney by “Frenchmen” in Wisconsin during the 1830s using four vertical corner poles and a mixture of clay and hay formed into “clay cats” and molded onto a wooden frame. A similar description from 1818–1819 specifies that horizontal crosspieces were attached to the vertical poles at 18 inch intervals (Hubbard 1969:54–55). An even more detailed account from the 1830s comes from Philander Prescott, a trader who wintered in what is now Minnesota (Parker 1966: 130):

We set up 4 poles, then would tie sticks across about a foot apart, then take mortar and some long grass and make slabs about 2 feet long, and lay it over

the cross piece and bring the two ends together at the bottom. Then we stuck them together and so go on until we go round the square, leaving a space in front for a fireplace. We make our chimneys narrow and burn our wood endwise, and we make a very hot fire in this way.

Given that the collapsed chimney mounds at site 03-762 are only about 2 m in maximum diameter, it is likely that the original fireplaces were relatively narrow to facilitate end-to-end burning of logs. This may have made it easier to burn wood that was wetter or greener than desirable. Cutting and drying firewood far enough in advance for optimum burning would be difficult at seasonal sites where the occupants might be uncertain whether or not they will return. The fur trade "clay cat" style of chimney construction contrasts with the "pen style" or "stick" chimney construction found in early nineteenth-century accounts of pioneer agricultural homesteads in Southern Michigan and areas to the south (Berry 1908; Longyear 1899; Nowlin 1876), and these accounts suggest "stick" style chimney construction used more wood than the "clay cat" style. The delineation of these two styles is interesting and potentially useful. Based on the relatively small diameter of the clay mounds at 03-762 and the relative scarcity of wood structural remains within the excavated portion of one mound (test unit 6), it appears most likely that these were the "clay cat" style. Prescott (Parker 1966:130) notes that the four wooden poles "generally burn out and the chimney stands by itself," which would explain the scarcity of wood in these features.

### **Pit Features**

There are five distinctive pit features associated with Structures A and B. These pits range from 1.5 to 2 m in diameter and from 25 to 45 cm deep. Often termed cache pits, they were used to store and/or conceal trade goods, alcohol, food, or even clay, and are present in many archaeological and historical accounts of late eighteenth- and early nineteenth-century wintering posts (Burley et al. 1992:100; Hubbard 1969; Nelson 2002: 135, 141; Oerichbauer 1982). Nelson (2002:135, 138) mentions pits both "before our door" and "near and far" from his early nineteenth-century wintering posts in Wisconsin.

Test unit 9 encompasses the southwest one-quarter of the pit feature just outside the entrance to Structure A. The diameter of this pit is approximately 1.6 m, and its original depth was approximately 83–87 cm below the surrounding ground surface. About 46 cm of fill has accumulated in the central (deepest) portion of this pit. In profile at the deepest part of the pit (feature 1), the following zones are visible (Figure 6): Zone 1: 20 cm very dark brown (10 YR 2/2) duff, sandy humus, decomposed wood and roots; Zone 2: 11 cm dark gray (10YR 4/1) sand with roots; Zone 3: 7 cm brown (7.5YR 4/4) to very dark brown (7.5YR 2.5/3) clayey sand with burned and unburned clay inclusions; Zone 4: 6–14 cm very dark gray-brown (10YR 3/2) sand with charcoal stains; Zone 5: 2–3 cm black (10YR 2/1) clayey sand with

rootlets. The two deeper zones (4 and 5) are only present within the pit feature. All historic artifacts appear to be associated with zones 2 and 3, and these zones also contain abundant charred wood. The following scenario could explain the creation of this feature. First, a pit was dug and used for a cache or source of earth for berms. The heavily organic zones 4 and 5 at the bottom of the pit result from remnants of the pit's lining, covering, contents, and/or other organic material left in or washed into the pit. Then brown clayey sand with charred wood and both burned and unburned clay (zone 3) was deposited during the cleaning and maintenance of the fireplace in Structure A. Finally, the upper sandy organic zones (1 and 2) accumulated during and after site abandonment.

#### **Other Features and Activity Areas**

Test excavation revealed very different levels of activity within this site. Outdoor activities occurred in the area between Structure A and Lake Superior, as would be expected given that the entrances to structures face this way and the fact that all travel was by water. In addition, artifact density was far higher both within and in front of Structure A, which was residential, as opposed to Structure B, which was probably used for storage or only rarely occupied. The lack of clay in test unit 4 suggests the clay fireplace in Structure B had little or no maintenance. The artifact scatter in front of Structure A appears to represent both refuse disposal and some resource processing or craft activities (knives, etc.). There are significant amounts of burned and unburned clay scattered over a wide area between Structure A and the lake that may represent clay storage, spillage during transport, and disposal of refuse from fireplace cleaning or repair. The nails present at some distance from Structure A may indicate that another less substantial structure was present closer to the water. The abundance of artifacts in test unit 5, the unit closest to the hearth in Structure A, follows a pattern described in firsthand narratives from New England, where heat and light from open fireplaces concentrated indoor activity (Nylander 1993). Beads and a straight pin found in this area may indicate sewing and beadwork, activities possibly performed by Levake's Native American wife.

#### **Conclusion**

In order to understand the location and characteristics of the Little Island Rock Post, it is important to remember that fur-bearing animals have richer, denser coats for longer periods where winters are longest and most severe, and that the fur trade was most productive in these areas (Catton and Montgomery 2000; Perrot 1996:114–115). Environmental factors may help explain the similarity of the Little Island Rock Post to historical and archaeological descriptions of sites farther north and west. The site is located in an ecological zone known as the Grand Marais Sandy End Moraine and Outwash (Albert 1995). Latitudinal and lake-effect climatic differences separate this zone from those to the south.



These differences include heavier snowfall, warmer falls, cooler springs, and colder winters, especially when Lake Superior is icebound (Albert 1995; Keen 1993). Grand Island is dominated by northern hardwood forest, but Albert (1995) notes that conditions in parts of northern Michigan are similar to those in the boreal forest transition. Although the 1820s may have been a time of extreme variability, some evidence suggests this period may have been significantly colder than the present (Keen 1993:109–110). Grand Island is located in one of Michigan's lake-effect snow belts, and offshore the deeper waters of Lake Superior remain about 4 degrees Celsius year round, with ice around the island often lingering into May (Keen 1993).

Surviving journals from wintering posts show that much of the activity at these sites involved subsistence and shelter, rather than trade (Burley et al. 1996:94). From this perspective, it makes sense to view such sites as sources of information on cultural adaptation and not just sources of fur trade history. Both archaeological and historical information show that the Little Island Rock Post is an example of a specialized adaptation developed in the boreal forests and the northern portions of temperate forests. Key elements of this adaptation include: location near a fall/winter fishery, use of large amounts of clay for chimney construction, and an abundance of ancillary storage facilities, especially pits.

The Little Island Rock Post and other wintering posts also highlight functional variation within the sometimes loosely defined "trading post" site type. Many trading posts described in the historical or archaeological literature are actually complex sites that included multiple functions like centralized commercial depots, military garrisons, missions, and agricultural operations. In addition, some smaller sites that may have started as trading posts later became more permanent agricultural and/or commercial sites. As Branstner (1999: 321) astutely points out, very little is known about trading posts in Michigan that were beyond "military and agricultural settlements." Rather than wintering posts, the most common sites during this period appear to be the larger and more permanent "trading hamlets" defined by Peterson (1985:60–61). Some examples of these trading hamlets include LaPoint, L'Anse, and Lac Vieux Desert (Peterson 1985:60). These hamlets were no doubt where most trading was taking place at this time, and the use of temporary wintering posts was probably more characteristic of earlier periods or more remote areas.

The integrity of this site is exceptional, including the presence of standing segments of log walls. Archaeological deposits are intact, unmixed with later materials, and undisturbed by relic hunters. It may be the best-preserved archaeological site of this type in Michigan. Although only 9.5 m<sup>2</sup>, or about 1.6 percent, of the site was excavated, combined archaeological and historical data revealed detailed information on architecture and spatial organization, as well as potential relationships between material culture, gender, and ethnicity. For example, features at the Little Island Rock Post may represent influences from three of the major groups included in the multiethnic occupational subculture of the fur trade (Cleland 1992; Gilman 1982; Peterson 1985). "Clay cat" style

wood and clay chimneys can be tentatively attributed to French Canadians (Kinzie 1932:393; Moogk 2000:28), notched horizontal log construction is often associated with Anglo-American influence (Wonders 1979), and storage pits or cache pits are part of traditional Great Lakes Native American adaptations based on seasonal movement to procure different resources (Dunham 2000). Although less dramatic than the feature evidence, artifacts suggest activities and a division of labor consistent with fur trading by a European man and a Native American woman. Small items associated with crafts such as sewing and beadwork were concentrated in front of the hearth while items such as knives, nails, and screws were more widely scattered. Disposed fragments of several small pearlware bowls may represent not only the use of European ceramics by a mixed-race household, but also the popularity of tea drinking, which is thought to be associated with the social integration of the fur trade's diverse participants (Burley et al. 1992:114).

In the future, a larger sample could be used to refine our estimate of the period of use and test some of the preliminary conclusions offered here. Much more detail could be obtained about the construction of the clay fireplaces, possibly including evidence of cycles of abandonment and repair. Our understanding of pit feature function could also be improved, as only one-quarter of one of the five pits was excavated. Additional documentation of above-ground remains is also planned. The site has already filled a large gap in the known geographic distribution of archaeological examples of wintering posts, and in conjunction with historical research, additional excavation could reveal much more about the people involved in the Upper Great Lakes fur trade during the early nineteenth century.

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