Archaeology at the Collier Lodge Site

Mark R. Schurr
University of Notre Dame

and the

Kankakee Valley Historical Society
www.kankakeevalleyhistoricalsociety.org
Abstract

During three field seasons in 2003 through 2005, geophysical surveys and archaeological excavations were conducted at the Collier Lodge site (12 Pr 36) in Porter County, Indiana. The investigations were conducted as a cooperative project between the University of Notre Dame and the Kankakee Valley Historical Society. Over the course of two years, more than 150 people participated in the project by assisting with field and laboratory work, and several hundred visited to the site to observe the activities.

The investigations at Collier Lodge have shown that the site contains intact stratified archaeological deposits and features dating back to at least 1,000 B.C. Prehistoric artifacts from the site include most time periods over the last three thousand years and historic artifacts span the full range of historic occupations in northwestern Indiana, perhaps beginning as early as the late seventeenth century, and extending up to the recent past. Prehistoric archaeological features documented at the site include two different types of roasting pits and small features whose functions are unknown. Historic features include the remains of a fireplace and post molds that mark the location of a previously undocumented structure, probably an early nineteenth century cabin. Based on the density of features in 10 units (at least 0.44 features per square meter of site area), and the 900 m$^2$ minimal estimate of the site area (based on soil resistivity surveys), the site may contain at least 400 archaeological features. The site is clearly a good candidate for the State and National Registers of Historic Places based on the scale of the intact deposits and their potential for exploring research questions about human activities and adaptations adjacent to the Kankakee Marsh over the last three millennia.

This report describes the procedures used, the results of the investigations, and gives a basic inventory of all the artifacts collected from the site, along with more detailed analyses of prehistoric ceramic and lithic artifacts and historic earthenwares. Future studies of other artifact classes will build on this foundation.

The work at Collier Lodge with the Kankakee Valley Historical Society has shown that there is a strong interest in archaeology and history within the local community. The work at the site educated several hundred people about archaeology, history, and historic preservation. It is hoped that future projects and laboratory studies will continue to nourish these interests and help the Kankakee Valley Historical Society with its goal of preserving and interpreting the Collier Lodge site.
Acknowledgements

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Every large archaeological project is a team effort. The successful work at Collier Lodge was the product of the contributed time and effort of many individuals. It is hardly possible to list all of them here, but I would like to take the time to single out a few individuals who have been exceptionally devoted to the project. First and foremost is John Hodson, the president of the Kankakee Valley Historical Association, whose timeless efforts ranged from promoting the KVHS in any way possible, to backfilling the units with Oli. Mary Hodson’s wide ranging contributions spanned the gamut of office work (tallying the volunteer counts) through artifact sorting, and searching the internet to identify historic artifacts such as a large kerosene lamp. Committed field workers who took the lead during the excavations (at least judging by names on field forms) included Bill Beck, Charlotte Cable, Kassie Haberkamp, Judy Judge, Ralph Klapis, Bridgette Murray, Eric Rakowski, Beth Sholly. Kathy Czerneck ably managed the sign-in table and provided a warm welcome to the many visitors. Kathy Graham handled the complex task of keeping the FS log and specimens organized.

I am especially grateful to Judy Judge for her help during the long and complicated process of cataloging the artifacts. It would not have been possible to have finished this report by its due date without her diligent assistance. Jessica W. Marks handled the complex task of cataloging the historic ceramics. Others who helped with the laboratory tasks include Sheena Ketchum (cataloging and data entry), Adam Snider (data entry), Jessica Zarra (cataloging and digital maps), and Jennifer Caston (washing most of the faunal samples). Members of the KVHS also took part in several different cataloging sessions and in a faunal workshop presented by Dr. Terrance J. Martin, Illinois State Museum.

Students from two Notre Dame field schools participated in the project. The 2003 class included Kate Burmon, Tom DeCola, Kim Fletcher, Diane Heilmann, Polly
Husmann, Sheena Ketchum, Jean Lin, Colin Moore, Ashton Spatz, and Kathleen Zadzora. The members of the 2005 class were Jacob Bach, Christel Bouvron, Jennifer Caston, Michael Gibbons, Jay Ingle, Sarah Johnson, Emily Kelly, Terry Malloy, Tricia Moye, Joy Setele, David Silverman, and Adam Snider. Renee McKinney conducted directed research in 2005.
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Archaeological Background

The Collier Lodge site (12 Pr 36), also known as Baum’s Bridge, is located on the southern border of Porter County, Indiana on the northern edge of the former Kankakee Marsh (Figure 1). This location was first described as an archaeological site by McAllister (1932), who gave it the site number Porter County 36. At the time of McAllister’s visit to the site, it was only one of two sites in Porter County known to have produced prehistoric pottery. From McAllister’s description of sherds from the site, it is clear that they included both grit tempered Woodland sherds (made between 800 B.C. to A.D. 1100) and shell-tempered sherds, an artifact type characteristic of the Upper Mississippian period (ca. A.D. 1100 to historic contact) in northwestern Indiana (Faulkner 1972; Schurr 2003). Thus, it is apparent that the site was used over a significant period of time in prehistory.

Figure 1: Location of the Collier Lodge Site (12 Pr 36) on the U.S.G.S. Kouts, Indiana 7.5 minute quadrangle map.

The Collier Lodge site has been occupied almost continuously since the early nineteenth century. Its original historic name was Pottawatomie Ford, and J. Sherwood may have operated a ferry there in 1834. In 1836, Eaton established the first well-documented ferry across the Kankakee near the site. He later attempted to establish a toll bridge in 1849 but it soon burned down and he reverted back to the ferry. Sawyer bought the property in 1857 and also attempted to maintain a bridge, but it was quickly swept
away by drift. In 1863, the site was purchased by Baum, who built the first successful bridge across the Kankakee at this location, and the site has since been best known as Baum’s Bridge. In 1865, the bridge was taken over by the county. The first hunting club was established in the vicinity in 1878. In 1898, the Collier Lodge was built at the site, and that building, although very deteriorated, is still standing. After Jim Collier’s death in 1952, the site passed through the hands of several owners until it was purchased by John Hodson in 2001.

Today the site consists of a grassy lawn containing the Collier Lodge building (Figure 2). It is located on a sandy ridge adjacent to a short segment of the original Kankakee River. A short portion of the channel was isolated as a sort of bayou or slough when the marsh was drained and the river segment was bypassed by a drainage ditch to the south. Today, the borders of the old channel segment look much like they must have when the lodge was in use, except for the high southern bank of the river made of spoil from the dredging operation.

Prior Field Work at the Collier Lodge Site

Shovel Probing and Geophysical Survey in 2003

The Kankakee Valley Historical Society (KVHS) has the restoration and interpretation of the Collier Lodge and its environs as one of its goals. In order to assist the KVHS in the management of archaeological resources at the property, the University of Notre Dame Archaeological Field School conducted a Phase 1 investigation of the site on June 12 and 13, 2003. The investigations were conducted under DHPA permit #200235 and were originally scheduled to span two days, but were cut short by rain after a
day and a half. The field work was open to the public and gathered much favorable media attention for historic preservation and archaeology, even with such a short time available.

During the 2003 investigations, a site grid was established and tied to a high-quality map of the site that had been prepared by a professional surveyor. A gradiometer was used to make a geomagnetic survey over an area of 350 m$^2$. The results of the geophysical survey clearly revealed the foundation of a building that once stood at the northern end site to the east of the lodge and many strong bi-polar magnetic anomalies characteristic of iron, an expected result for a densely occupied historic site. Shovel probes were placed across major axes of the site at 10 m intervals. Three lines of probes were completed. The contents of all shovel probes were screened through ¼ inch mesh screens and all soil profiles were recorded. More extensive shoveling probing of the site had been planned, but could not be completed because of rain. But more significantly, several of the probes were extremely deep and therefore required much more time than expected to complete. For example, one probe was excavated to a depth of 60 cm without reaching culturally sterile subsoil and could not be deepened because there was not enough room to maneuver the shovel within the hole. A one inch soil coring tool placed into the probe floor revealed that cultural deposits probably extended to a depth of about 1 m below surface in this portion of the site. Such deep cultural deposits are rarely encountered in northwestern Indiana. While they were not expected, they were an extremely welcome surprise.

The shovel probes produced an unusually rich artifact assemblage. In addition to the expected modern or recent items such as fragments of asphalt shingles, round nails, bottle caps, and various bits of plastic, historic ceramics imported from England and manufactured between A.D. 1780 - 1830 were also collected. These types of artifacts are characteristic of the Removal/Pioneer period in the region when Euroamericans were rapidly displacing Native Americans during the early portion of the nineteenth century (Secunda, et al. 2002).

Upper Mississippian sherds were found in several of the shovel probes, including one very large rim sherd with an everted rim and broadly trailed decoration that is similar to the types Koshoning Bold (Hall 1962) or Fifield Bold (Faulkner 1972), styles characteristic of the Upper Mississippian period shortly after about A.D. 1300. The recovery of such a large sherd (approximately 10 cm wide) suggested that prehistoric features were present at the site.

Shovel probes with deep cultural deposits showed that portions of the site were stratified, with historic artifacts within the top 20 to 30 cm of the soil lying over prehistoric sherds, flakes, and fire-cracked rock. The artifact distributions and soils found in the probes suggested that the prehistoric occupations are concentrated in a midden area spanning a roughly circular area at least 10 m in diameter. However, the eastern limits of the midden were not determined, so it could cover a larger area. Removal Period artifacts
were concentrated in a small area on the eastern edge of the site. Late nineteenth and
twentieth century artifacts were ubiquitous.

Bone preservation at the site was exceptionally good. Taxa preliminarily
identified in the faunal assemblage included both large and small mammals, reptiles,
birds, and fish, with many fragments appearing to have come from prehistoric contexts.
Charcoal pieces and fragments collected during screening show that the deposits also
contain botanical evidence about past activities at the site, and that flotation recovery
techniques would be profitable. While large pieces of wood charcoal were also collected,
many coal fragments are present, and they would probably make radiocarbon dating
difficult.

The very brief 2003 investigations showed that the Collier Lodge site has a very
strong potential to contain intact archaeological deposits dating to the Upper
Mississippian period, and perhaps to earlier and later periods as well. These conclusions
were confirmed and amplified by investigations conducted in 2004 and 2005.

**The 2004 Investigations with the KVHS**

In 2004, work was conducted at the site during a three week period from June 15
to July 2. The 2004 field season was very successful as all of the season’s objectives were
either met or exceeded. The project was originally designed to be a cooperative one
between the University of Notre Dame Archaeological Field School and the KVHS.
Because of unsatisfactory enrollment, the field school was cancelled and the project was
conducted by members of the KVHS under the author’s supervision. Prior to the start of
the field work, the members of the KVHS participated in an orientation session to prepare
them for the basics of work at an archaeological site. The session covered the work plan
and gathered information about participants’ prior experience and availability. They also
learned what personal equipment to bring (mainly leather work gloves and clothes and
shoes that can get really dirty) and how to protect their health in a field environment
(common field hazards such as heat, insects, poison ivy, sunburn, the need for an up-to-
date tetanus shot, etc.).

The KVHS membership includes a number of people who had prior archaeological
field experience. These ranged from members of the local (Valparaiso) chapter of the
Archaeological Institute of America, graduate students in archaeology, anthropology
majors who had bachelor’s degrees and had taken an undergraduate field school, and
several people who had worked as contract archaeologists in the past. Participants also
included avocational archaeologists who had participated in digs before a permit was
required for fieldwork in Indiana, but who had not been able to do recent field work
because of a lack of local opportunities. Other participants had little or no prior
experience. They were teamed with more experienced members or helped with general
tasks such as screening. Because so many experienced people were available, the work
was of a very high quality.
The 2004 season produced the following results:

1. Completed magnetic and soil resistivity surveys of the entire site area. The magnetic surveys were somewhat difficult to interpret because so much iron is present at the site. However, we were able to identify a septic tank and other strong recent features to be avoided. The resistivity surveys were more successful. In combination with the shovel probes, they showed that the deepest areas of midden at the site covered a roughly circular area approximately 35 m in diameter.

2. Completed 38 shovel probes at 5 m intervals to define artifact distributions and soil strata across the site (Figure 3). All probe soils were screened.

3. Gathered additional transit data points to provide elevations for all shovel probes and geophysical survey grid points, and to map site features.

4. Opened five units with a total surface area of 16 m$^2$ to test for subsurface deposits (Figure 4). The units exposed seven features. These included a brick feature (Feature 1) representing part of the foundation or a hearth from a previously undocumented structure at the site that appears to have been used
between the 1840s and the 1890s; an Upper Mississippian pit (Feature 3) thought to have been a storage pit lined with marl clay and then used as a refuse pit before it was abandoned (an outmoded interpretation based on the 2005 results, described below); several shallow basin-shaped stains that were prehistoric features of unknown function; and one deeply buried prehistoric feature (Feature 7) whose date and function were not determined because we ran out of time to excavate it. Two units contained prehistoric midden deposits, including a portion of a stratified midden that produced artifacts dating from the Early Woodland period (circa 800 B.C.) and every prehistoric period thereafter. We were also able to define a Removal period (A.D. 1795 – 1840) Potawatomi occupation in part of the site and recovered many artifacts dating to the Hunting Lodge period of the late 1800s.

None of the larger features were completely excavated because the field season ended before they could be completed. The floors of units that contained unfinished features were covered with six mil polyethylene and backfilled to protect the features.
The 2005 Investigations
with the Notre Dame Archaeology Field School and the KVHS

Goals of the 2005 Season

The 2005 investigations covered a span of three weeks from mid-June to early July. The first three days of the investigations included participation by members of the KVHS and students in Notre Dame’s Archaeology Field School. The remainder of the field season was primarily staffed with KVHS members, assisted by three students enrolled in directed research at Notre Dame.

The archaeological goals for the 2005 season included:

1. Conduct soil resistivity surveys with a 1 m probe spacing (instead of the 0.5 m spacing used in 2004) to try and detect deeper features that might lie beneath the midden zone. Also evaluate the use of a Geonics EM38 conductivity meter as an alternative to the magnetic survey on magnetically noisy historic sites.

2. Completely expose and document Feature 1, an intact layer of bricks that appears to represent part of the foundation or a hearth from a previously undocumented structure that once stood at the site. Based on the information from 2004, we suspected the feature was part of a post-Removal (post 1838) cabin that was demolished in the 1890s when the Collier Lodge building now standing at the site was constructed. It was necessary to completely expose the feature in its surrounding context to determine whether or not this interpretation is correct, given that it was based on an uncompleted excavation. The complete excavation of the feature and surrounding units was accomplished in 2005 and the results are described below.

3. Complete Feature 3, an Upper Mississippian pit. The feature was cross-sectioned and profiled in 2004 but approximately 30 percent of it was covered and backfilled at the end of the 2004 season. The remaining portions of this stratified feature were removed in 2005 and samples were taken for water screening and flotation. A former key goal was to determine what was stored in the pit. The shovel probe from 2003 that produced the Fifield Bold sherd had been placed into this pit, dating the feature between about A.D. 1300 – 1450. The excavations of this feature and surrounding units suggests the 2004 interpretation of the pit as a storage pit was incorrect, and it was instead some kind of roasting pit whose upper portion was disturbed during the nineteenth century (see below).

4. Expose and excavate Feature 7, a deeply buried prehistoric feature located at the midden/subsoil junction. The feature was defined but not excavated in 2004.
because it extended in the unit wall at a depth of 1 m below surface. It will ultimately be necessary to open the adjacent unit to the north to completely expose this feature, which has potential to provide information about prehistoric habitation activities at the site, and which may date back to the Early Woodland period. A soil core placed into the feature in 2004 suggested that it extended at least 25 cm into the subsoil. The feature contents were expected to shed light on Early Woodland or Middle Woodland activities at the site. Habitation features from both time periods have not been investigated in northwestern Indiana, so either outcome would increase our knowledge of the regional archaeology. The feature was completed in 2005 (see below) but unfortunately produced very little cultural material.

5. Open at least one unit in the portion of the site south of the former “tin shed”, where the magnetic survey indicates that there is a complex pattern of magnetic anomalies. These could be produced by relatively recent artifacts or could date to the Hunting Lodge era, one of the primary interpretive focuses at the site. The gradiometer survey of 2005, accomplished without the interfering effects of the shed itself, suggests a more likely alternative explanation. The scattered metal behind the shed probably represents more recent trash (probably twentieth century) that was deposited there because the location was invisible from the road. Testing of this area is now a low priority.

6. Open one excavation unit under an area that was covered by a concrete pad (the floor of a former garage). This area of the site had been inaccessible because of the concrete covering, but the concrete was removed before the 2005 season, opening the area to geophysical surveys and excavation. The results of both activities are described below.

Excavation Procedures

Investigation at the site began with the re-establishment of a metric site grid defined in 2003 by reference to several local benchmarks. Horizontal and vertical control of the excavations were maintained by reference to the grid coordinate system. The total station was placed on grid coordinate E 90 N 75 (Elevation = 100.839 m) where a stake from the preceding year was easily relocated. The station was then aligned to the grid by sighting to another stake from 2004, E 81 N 83. The station was then moved to E 80 N 75, a convenient point to maintain control over the grid without interfering with other activities at the site.

All units were excavated in either arbitrary levels with a maximum thickness of 10 cm, or in archaeological levels defined by changes in soil color, texture, or artifactual content. Archaeological levels with a thickness greater than 10 cm were subdivided into arbitrary 10 cm levels to maintain additional stratigraphic control. Soil colors were described using the Munsell system (1990 edition). All excavated soil was screened through 1/4 inch hardware cloth, except for soils that appeared to contain high
concentrations of microbotanical or microfaunal remains. Soils from these contexts were processed using flotation recovery techniques. Additional soil samples were water screened to test whether very small artifacts (such as seed beads or gunshot) were present. Soil samples were also collected from selected archaeological strata. Each archaeological level and feature was documented using the appropriate form and by scaled maps with a resolution of 0.5 cm. Artifacts with significant spatial relations to each other or to other features were piece-plotted. All artifacts collected were recorded in a field specimen log to maintain associations between specimens and their archaeological contexts. Appendix 1 provides a list of the field specimen (FS) numbers, their associated contexts, and the recovery method used. Color slides, black and white photographs, and digital images were taken to document the excavations and a log book of all excavation photographs was maintained. During the first two weeks of the project, excavation and artifact photographs were taken by Roger Barski, a professional photographer. The completed field records and the photographs are curated at the Archaeology Laboratory, University of Notre Dame. All artifacts collected during the excavation were processed, catalogued, and curated at the Archaeology Laboratory along with their associated documentation where they will be used for research and teaching.

At the conclusion of the excavation, all units were backfilled and the site contours were stabilized to prevent erosion (an easy task as the excavation area was basically flat). The methods used in the field investigation met or exceeded the standards described in Department of Natural Resources 312 IAC 22.

Results of the Investigations

**Shovel Probe Surveys South of the Main Site Area**

In addition to the investigations of the core site area, a shovel probe survey was also conducted along a sandy ridge to the southeast of the site that was at a similar but slightly lower elevation compared to the core area of the site adjacent to the lodge building (Figure 5). Because of the area’s elevation, it was thought that it might contain archaeological deposits related to the main occupation of the core site area. The shovel probing survey began with the establishment of a baseline oriented to the long axis of a small ridge with an elevation of between 655 and 660 ft. AMS. The ridge runs approximately east-west with a slight declination to the north at its eastern end. Probe locations were spaced at 10 m intervals, beginning at the western end of the ridge, and marked with labeled pin flags. When positive probes were encountered along the baseline, the probe interval was tightened to 5 m and probes were placed at 5 m intervals to the north and south of the baseline. Probe locations were mapped with the total station after the shovel probe survey was completed.

The soil profiles were examined and recorded for each probe (except for one exception noted in below) and all soils were screened through ¼ inch hardware cloth. Table 1 shows the soil profiles for each probe. Artifacts from the probes are listed in
Appendices 2 through 10. Typical soil profiles in the probes consisted of dark brown to brownish black sandy loam top soil over a B horizon composed of gray sand, transitioning to light sandy subsoil.

Figure 5: Shovel probe survey southeast of the core site area.
Table 1: Shovel Probes Southeast of the Core Site Area

<table>
<thead>
<tr>
<th>Probe Number</th>
<th>Depth of Topsoil</th>
<th>Depth of B Horizon</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50</td>
<td>70</td>
<td>B horizon is marbled topsoil and sand</td>
</tr>
<tr>
<td>1 S</td>
<td>27</td>
<td>50</td>
<td>B horizon is marbled topsoil and sand</td>
</tr>
<tr>
<td>1 N</td>
<td>N R</td>
<td></td>
<td>Filled in by volunteer before it could be recorded</td>
</tr>
<tr>
<td>1 W</td>
<td>25</td>
<td>54</td>
<td>Light topsoil, very marbled B horizon with mix of topsoil and subsoil</td>
</tr>
<tr>
<td>2</td>
<td>49</td>
<td>77</td>
<td>Well developed normal profile</td>
</tr>
<tr>
<td>2 W</td>
<td>10</td>
<td>10</td>
<td>Very disturbed</td>
</tr>
<tr>
<td>3</td>
<td>44</td>
<td>74</td>
<td>Well developed normal profile</td>
</tr>
<tr>
<td>4</td>
<td>23</td>
<td>36</td>
<td>Well developed normal profile</td>
</tr>
<tr>
<td>5</td>
<td>26</td>
<td>39</td>
<td>Well developed normal profile</td>
</tr>
<tr>
<td>6</td>
<td>34</td>
<td>54</td>
<td>B horizon very weakly developed</td>
</tr>
<tr>
<td>7</td>
<td>20</td>
<td>37</td>
<td>B horizon is marbled topsoil and sand</td>
</tr>
<tr>
<td>5 S</td>
<td>29</td>
<td>29</td>
<td>No defined B horizon</td>
</tr>
<tr>
<td>6 S</td>
<td>27</td>
<td>27</td>
<td>No defined B horizon</td>
</tr>
<tr>
<td>6 N</td>
<td>14</td>
<td>14</td>
<td>No defined B horizon</td>
</tr>
<tr>
<td>7 N</td>
<td>10</td>
<td>22</td>
<td>B horizon is marbled topsoil and sand</td>
</tr>
<tr>
<td>7 S</td>
<td>27</td>
<td>27</td>
<td>No defined B horizon</td>
</tr>
</tbody>
</table>

Shovel probes at the western and eastern ends of the probe transect were disturbed, as revealed by poorly developed or subsoil-mottled B horizons. However, the disturbance had occurred long enough ago to allow the development of an O horizon (topsoil) in most cases. Probes to either side of the baseline at the eastern edge of the transect showed more evidence of disturbance, revealed by the absence of a B horizon in this area. Probes 3 through 5 suggest that the center of the ridge has the strongest potential for intact archaeological deposits.

**Geophysical Surveys**

Geophysical surveys were conducted in appropriately placed grid units indexed to the areas surveyed in 2003 and 2004. In prior seasons, a concrete pad that had been the foundation of a garage occupied the area immediately to the east of the lodge. It is thought that the pad was poured in 1975. It was removed prior to the 2005 season, opening a new area for geophysical surveys and excavation. The ground surface of the former pad area consisted of sand with very little vegetation, along with scattered chunks of broken concrete and historic metal scrap, such as some kind of lid with a large bolt through it found at E 80.4 N 90. A dark, burned area with charcoal fragments was located at approximately E 83 N 93. As the tin shed located to the southeast of the lodge had also been removed before the field season, it was possible to expand the geophysical surveys to
cover areas that had not been investigated before. A gradiometer survey was conducted in
20 m survey grid with its southwest corner at E80 N 75, placed to cover the area formerly
covered by the concrete pad. Within a map of the magnetic survey results (Figure 6), the
pad area (Figure 6) shows evidence of scattered ferrous metal (strong dipoles) and a
strong anomaly at E 86 N 90 (“a”). Surveys of an additional grid to the south to cover the
area formerly covered by the metal shed reveal evidence of scattered metal in the area
between E 90 – 100 N 55 – 65 (“b”). These are probably from historic metal trash that
was deposited around the shed. Other strong dipolar anomalies characteristic of ferrous
metal are scattered around the site and the two prominent features in the southern end of
the grid (“c”) are probably septic tanks or a septic tank and dry well, especially as a shovel
probe placed over the northern most anomaly showed that a septic tank produced the
anomaly. A well-defined magnetic anomaly at E 92 N 72 (“d”) may merit archaeological
investigation as a non-metallic feature. A strong anomaly at the southern most end of the
survey area marks the location of a former outhouse (“e”).

The gradiometer survey was followed by a soil resistivity survey using a twin
probe array with a 1 m probe spacing. The maps produced by the two resistivity surveys
(with the 0.5 m and the 1 m probe spacings) are very similar although the wider probe
spacing produced a survey with fewer noise spikes (Figure 7a and b). Figure 7b shows the
former location of the tin shed as a clearly defined square anomaly with slightly lower
resistance (near the middle of the image). Otherwise, the areas with the thickest midden
correlate with the lowest soil resistivities (darker blues).
Figure 6: Magnetic Survey (values ranging from ±150 nT).
Excavations began with removal of soil from uncompleted units that had been tarped with black polyethylene and backfilled in 2004. The basic soil profile at the site was relatively simple, with four primary soil zones being identified (Figure 8). These consisted of dark topsoil, underlain by a slightly lighter midden, in turn underlain by a mottled transition zone between the midden and the very light sandy subsoil. Additional soil types encountered included dark feature fill (similar in color to topsoil) and mottled feature fill (where the feature soil was mixed with subsoil through disturbance or natural processes), and areas of heat reddened sand indicative of in situ burning. Large charcoal fragments were mapped in some floors and walls, and other objects are indicated on individual floor maps as necessary.

**Unit E 90-92 N 75-77** was the deepest unit excavated in 2004, when nine and a half levels were removed (Level 10 was excavated only in the northern half of the unit). Excavation in 2005 began with removal of Level 10 in the south half of the unit. A
fragment of a very large birdstone (discussed below) was found in this level. Feature 7, an amorphous area of darker soil (relative to the lighter soil of the unit floor) with sandy patches, was first defined in the floor of Level 10 in 2004 (Figure 9). In 2005, the feature was pedestaled and then cross-sectioned and sampled for flotation. The remainder of the feature was screened and produced very little cultural material. A cross-section showed that it was a shallow, basin shaped feature with poorly defined edges of mottled dark sandy loam (10 YR 3/2) around a dark (10 YR 2/1) sandy loam “core” (Figure 10). The feature extended to the north beyond the unit and had been disturbed by roots and/or rodents. It seemed to disappear by the end of Level 11 but returned briefly as a very poorly defined stain in the Level 12 floor. This pattern seems to be a common characteristic of features at the site, perhaps caused by feature soils being leached into the sandy subsoil.

Level 11 was also a 10 cm level. It consisted of sandy soil with some dark mottling and produced scattered flakes and fire-cracked rock (abbreviated as FCR). Another fragment of the birdstone was collected from the southeast corner. After troweling the floor, Feature 11 was defined as a patch of homogenous sand that was slightly redder in color (7.5 YR 4/4) compared to the remainder of the floor (7.5 YR 3/4). The feature went into the corner of the unit and was probably the source for the fire-cracked birdstone fragments. Feature 11 was pedestaled and removed separately in the
Figure 9: Feature 7 in plan view.

Figure 10: Feature 7 cross-section.
next two levels. It disappeared by Level 13 but was never mapped in profile because that corner of the unit was destroyed by a ground hog. On June 29, 2005, it was found that a ground hog paid a visit to the tarped unit sometime over the weekend, tunneling in through the southwest corner and leaving through the southeast, ruining the profile of the little feature that was visible in the wall. In spite of the all the legends about the wonderful artifacts that can be found in groundhog backdirt, this particular specimen of *Marmota monax* left nothing of interest behind.

Excavation continued to Level 14 when sterile subsoil was present across the entire unit. Feature 14, a poorly defined oval stain just slightly darker than the surrounding matrix, was defined in the floor of Level 13. Upon cross-sectioning it was found to be a very shallow stain just a few centimeters thick that was devoid of artifacts. It may not have been a cultural feature. The remainder of Level 14 was not excavated because sample buckets in the vicinity of Feature 14 were culturally sterile.

The maximum depth of the excavation was 1.18 m below surface (B.S.), providing the deepest test unit at the site. The north profile wall (Figure 11) provided the best information about the stratigraphy in the unit because of the ground hog damage to the two southern corners and some sloppy volunteer excavation work where the west wall was badly gouged. As shown in Figure 11, four strata were present. These consisted of dark topsoil approximately 15 cm thick laying over a lighter B horizon 10 to 15 cm thick, which in turn lay over a very mottled transitional zone between the B horizon and the subsoil. The amorphous nature of Feature 7 is clearly shown at the lower eastern side of the profile. A charcoal lens mapped in the Level 8 floor was visible in the wall above Feature 7 and could provide a radiocarbon date that would post-date the feature. Because Feature 7 was very poorly defined, extended into the wall, and contained very few artifacts, it is not known what its function might have been.

![Figure 11: Unit E 90-92 N 75-77 north wall profile.](attachment:image.png)
Unit E 79–81 N 79–81 contained Feature 3, the Upper Mississippian pit that remained uncompleted at the end of the 2004 season. In 2005, the backfill was removed, the poly tarp was stripped off, and the unit surfaces were trowelled to redefine the feature. Excavation began by removing the balk in the center of the feature. A portion of the first zone encountered (Zone C1) was taken for a flotation sample, and the remainder was removed in 10 cm levels with dry screening.

The southern end of the unit was excavated to Level 4 in 2004 and the floor of that level was thought to represent the appearance of sterile subsoil. A small sample of soil from the southeast corner of the unit was removed and screened when cleaning the corner to expose a band of dark soil in the east wall. The screened sample produced flakes and FCR, so the entire level was removed as Level 5. When the floor was troweled and mapped two zones were present that were removed separately in the subsequent level.

At the end of the 2004 season, Feature 3 was thought be some kind of Upper Mississippian storage pit that had been lined with clay because of the presence of marl in the floors of Levels 4 and 5 (Figures 12 and 13). It was assumed that marly clay had been used to cap or line the feature. However, after the excavation of Feature 1 (the brick hearth) showed that marly soil was used to produce that feature, it seems more likely that the source of the marl was associated with Feature 1, either when it was constructed in the early nineteenth century, or when it was damaged in the late nineteenth century. Thus, the upper six levels of the feature (to a depth of about 64 cm) were probably disturbed. The base of the feature, which produced reddened sand and charcoal flecks, along with its general size and shape, are consistent with similar pits from the Griesmer site that are thought to have been used for roasting water lily tubers (Faulkner 1972).

Figure 12: Unit E 79-81 N 79-81 Level 4 floor.  Figure 13: Unit E 79-81 N 79-81 Level 5 floor.
Unit E 79-81 N 81-83 contained most of Feature 1, the brick hearth and a dense deposit of historic debris extending north of the feature (Figure 14). After cleaning the feature, the floor was troweled to redefine soil zones mapped in 2004. Excavation in this unit began by troweling the northwestern portion of Level 4, identified as Zone C. When this had been leveled to 10 cm, we then began working on the dense concentration of historic debris north of Feature 1 on the eastern side of the unit. This involved troweling and brushing out the matrix and then piece-plotting and removing each artifact as it was freed.

![Figure 14: Unit E 79-81 N 81-83 debris area north of Feature 1.](image)

Level 4 was established across the unit after removal of all the historic artifacts from the northeast corner. The area under the debris field was a complex mixture of many different kinds of soils (Figure 15), bordered on the west by the very dark soil of Zone C. At this point, it appeared that the sandy soil of Zone L was the basic background soil of
the unit. Zone C later proved to be a prehistoric feature with abundant FCR. The very light sandy soil with unusually pronounced mottling in the northeast corner is visible in the east wall as a lens. Zone S appeared similar in color and texture to the typical B horizon of the site.

The next step was to remove Zone C, Level 5. This context contained abundant FCR, including many pieces that were cracked in situ, along with abundant charcoal fragments. In the northeast corner, Zones R, L, and Q were removed sequentially to level the floor to correspond with the base of Level 5 under Zone C. Zone I, a dark, very mottled soil with reddened spots, coal flecks, and brick and mortar fragments was troweled off. This exposed Zone I in the east wall as a thin layer over gray marly clay (Zone O). Zone O extended to the south toward Feature 1 and contained a couple of large brick fragments, forming a band approximately 23 cm wide in plan. It appears to be marly clay rich with small flecks of decomposed mortar. Zone B was a thin layer of light mottled sand, 2 cm thick. When it was removed, soil similar to Zone I was discovered below it. This zone was removed as “Zone I below B.” The floor of Level 5 was considerably simpler than its upper surface (Figure 16). Zone I was still present but just as a small patch with mottled edges in the northeast corner. Zone C was also still present.
but contained much less rock after Level 5 was removed. The rocky portion of Zone C was clearly visible in the walls as a well-defined stratum of cracked rock mixed with charcoal.

Level 6 was then removed. Zone C largely ended by the base of this level, leaving only a slight mottling in the floor. The base of the zone was clearly visible in profile in the walls. The north edge of Feature 1 still contained unexcavated artifacts. These were removed and piece plotted and the soil on the north edge of the feature was trimmed to produce a profile along the arc of the disturbed area on the northern side of the feature. This profile (Figure 17), supplemented by probing the interior of the feature with a pin flag, showed that the feature was basically a rectangular box composed of a single layer of bricks, filled with a layer of soft marly clay 16 cm thick. Bricks were not present in the interior of the feature. About 2 cm of very reddened sand was visible under the clay. It had originally been thought that Feature 1 was a brick hearth, but the excavations showed that it was a much simpler construction that was made to require the minimum number of bricks to create a functional hearth. It also became clear that the marly clay of Zone O in units E 78-81 N 81-83 and E 81-83 N 82-84 were redeposited lenses of the hearth’s marly fill. The same can probably also be said for Feature 9 in E 81-83 N 80-82, a brick embedded in marly soil, although it is more difficult to understand why the brick was
redeposited so far from the feature. The reddened sand from under Feature 1 probably was the source for the reddened soil patches (Zone P) in E 79-81 N 81-83 and in the unit immediately to the east.

Figure 17: Feature 1 profile cut.

The profile of Feature 1 also shows that the clay used to fill the brick box had a high organic content, as the fill along the edge of the bricks is black and mucky looking. It seems likely that the entire fill was black “gumbo” (clay-rich) muck which lightened to a marly gray when the organic material was oxidized during heating. A zone of mucky and marly soil in Feature 3 (the Upper Mississippian pit to the south of Feature 1) at Levels 4 and 5 was thought to represent marly clay that had been used to line or cap the feature. As noted above, it now seems likely that the muck and marl were also redeposited when Feature 1 was disturbed and that the upper 5 levels of Feature 3 were disturbed as well.

Unit E 81–83 N 80–82 was a new unit opened to expose the eastern side of Feature 1 and to explore the area to the east of the feature. After stripping off the sod, Level 1 was removed as a 10 cm level. The floor of the level was mainly dark sandy loam with some brick fragments present near Feature 1. A small area of sandy mottling was
present on the east side of the unit, suggesting a former disturbance to that area. By Level 2, the eastern edge of Feature 1 was fully exposed and found to extend less than 20 cm into the unit. Patches of light sand and soil with abundant charcoal or coal fragments were located on the eastern side of the unit. One brick was embedded in a light sandy patch in the southeast corner. The floor was simplified considerably by the floor of Level 3 (Figure 18). The embedded brick extended into the east wall of the unit and was surrounded by a small halo of mixed dark soil with historic artifacts. The brick and its associated soil zones comprise Feature 9, which appears to be a brick that was originally part of Feature 1, apparently deposited when the northern end of Feature 1 was disturbed. A blob of marly soil that appeared identical to the marly soil inside Feature 1 was found under the brick in Level 4, further reinforcing this interpretation.

In the following levels, the floor resolved itself to subsoil by Level 5, where three features were visible in the floor (Figure 19). Feature 9 was still present as a small area of marly soil against the east wall. Two dark zones were present against the north and south walls of the unit. Zone F was a dark semicircular patch against the north wall, surrounded by a lighter halo mottled with dark soil and charcoal. Zone G was more amorphous and abutted against the south wall. It consisted of dark sandy soil mottled with black. These zones were later labeled Features 12 and 13 respectively. By Level 7, the two features were the only cultural deposits still present in the floor. By this depth (70 cm B.S.), they
had taken on relatively squared off outlines and were visible in profile as straight-sided pits. Feature 13 ended in Level 8, with Feature 12 ending in the next level, the last one excavated in the unit. The unit was finished by taking Feature 12 and the northwest quadrant down to 10 cm as Level 9 with screening to test for artifacts. As the soil in the northwest quadrant was found to be culturally sterile, the rest of the level was not excavated.

As all three features extended into walls, they were clearly visible in profile (Figures 20, 21 and 22). Features 12 and 13 probably represent the post molds of relatively large posts (about 20 cm in diameter) that had been removed, based on the appearance of the features in profile. As a line drawn through the center points of the features aligns with the orientation of Feature 1 (Figure 23), it is likely that the posts were originally part of the structure served by Feature 1, and that they were removed when the structure was demolished. At this point, it appears as if Feature 1 was the hearth for a structure supported on posts that was oriented at approximately 90 degrees from the long axis of the existing lodge building. The fireplace was probably located on the western wall of the building, with the rest of the structure extending to the east away from the river. Future excavations at the site should be attempted to determine more about this vanished structure, including its size.

Figure 19: Unit E 81-83 N 80-82 Level 5 floor.
Figure 20: Unit E 81-83 N 80-82 Feature 9 profile.

Figure 21: Unit E 81-83 N 80-82 Feature 12 profile.
**Figure 22: Unit E 81-83 N 80-82 Feature 13 profile.**

**Unit E 81-82 N 82-84** was opened to further explore the extent of the debris field north of Feature 1. In Level 3 (Figure 24), the floor was relatively well defined, showing the eastern edge of the debris field, a zone of dark mottled soil with abundant historic artifacts (labeled Zone C in the floor). During the excavation of Level 3, an iron sheet was piece plotted and removed. The sheet sloped downward to the southwest along the edge of this unit’s Zone C, suggesting a basin shaped feature of some kind at this point. By the base of Level 3, Zone C was still well-defined, as was the light sandy Zone B. However, C developed an extension to the east at its north end that looked like the cut mark of a shovel blade. By the end of Level 4 (43 cm B.S.), the northern edge of Feature 12 was visible in the floor and soils associated with the disturbance of Feature 1 were present in the southwest corner of the unit. The debris field soils designated as Zone C largely disappeared by the end of Level 5, leaving only the north edge of Feature 12 and a marly patch of soil from Feature 1 in the floor at a depth of approximately 53 cm (Figure 25. The unit was not completed because the season ended, so the floor was tarped and backfilled to be completed in the next season.

Based on the appearance of Zone C in this unit, bordered with shovel cuts on its north end, the debris field appears to have been a pit that was excavated when the structure associated with Feature 1 was demolished. Artifacts associated with the debris field suggest the structure (see below) may have been taken down in the late 1800s, perhaps before or just after the present lodge building was constructed in 1898.
Figure 23: Feature 1 and associated pits in plan view.
Unit E 82-84 N92-94 was opened in the area formerly occupied by the concrete pad. The first level was removed to a maximum target depth of 10 cm to produce a level floor. The floor contained Feature 8, an amorphous dark soil stain with intense patches of
charcoal. A large charcoal patch was visible on the east side of the feature. Reddened soil in the northwest corner of the feature suggests burning in place. This feature lay under the charcoal stain observed on the surface. The Level 1 floor was otherwise marked with patches of very light sand and darker topsoil. Three square postmolds or impressions from the concrete pad were clearly visible in the floor (Figure 26). They were probably impressions from the pad or forms used to produce it because they disappeared by the next level.

Feature 10 was defined in the floor of Level 5 as a charcoal stain with large pieces of charcoal and a halo of slightly darker soil. It was located against the west wall of the unit south of Feature 8. Feature 8 became further defined as a somewhat amorphous blob with an intrusive sandy strip or tongue (Figure 27). The reddened soil against the north wall in the floor of Level 4 was visible as a very thin lens in the wall. The feature became slightly smaller in area in the next level and was well defined in the northwest corner of the unit. The artifacts recovered from the feature were consistent with a refuse-filled pit. By Level 9, a mottled reddish brown border was visible, accompanied by charcoal flakes. The feature ultimately extended to 97 cm B.S. In profile in the unit walls (Figure 28) it was round-bottomed pit filled largely with midden over lighter zones and a charcoal rich zone near its base.

Figure 26: Unit E 82-84 N 92-94 Level 1 floor.
Figure 27: Unit E 82-84 N 92-94 Level 5 floor.

Figure 28: Feature 10 profile.
Feature 10 is similar to Feature 3 and the Upper Mississippian pits documented at the Griesmer site, thought to have been used for roasting water lily tubers (Faulkner 1972:45). The charcoal rich zones and reddened margin suggest that Feature 10 was also been used for roasting something, although the question of whether or not it was used for roasting water lilies will have to wait for future botanical analysis of flotation samples taken from the feature. The intensity of heating seems to have much less in Feature 10 compared to those at Griesmer, so it is possible that something else was processed in the pit. Feature 8, the charcoal stain near the top of the pit, may have been deposited on the edge of Feature 10 when it was first emptied. The pit was then used for refuse and does not appear to have been re-used for roasting. Completion of the portions of Feature 10 beyond the 2005 unit is a high priority for future work at the site. Except for Feature 10, the remainder of the unit consisted of largely sterile sandy subsoil.

**Unit E 94-96 N 89-91** was established to test an area of the site that had produced some early nineteenth century artifacts. Eight levels were completed in this unit, with the last consisting of the just the northwest quadrant of the unit. The soils in this portion of the site have a very simple profile, consisting of 25 cm of topsoil, followed by 25 cm of B horizon, on top of very light sandy subsoil. No features were identified during the excavation of this unit.

**Unit E 94-96 N 87-89** was opened to search for features that might be associated with Removal period artifacts in this part of the site since none were found in the adjacent unit to the north. Three levels were excavated before the season ended with topsoil still present in the unit floor. The unit was tarped and backfilled to be completed in the future.

**Unit E 77-79 N 80-82** was opened to search for features associated with the cabin to the west of Feature 1. Only three levels (to a depth of 24 cm B.S.) were excavated before the season ended. Topsoil was still present across most of the floor at this depth. The floor was tarped and backfilled for future work.

**Units Completed in 2004**

Two units in addition to those described above were excavated and completed in 2004. The results of those excavations are described here to provide a complete account of activities at the site up through 2005. Both units were two by one meter units with their long axes placed along the E 90 line. In combination with the excavations in E 90-92 N 75-77 they provide information about soil profiles along the north-south axis of the site.

**Unit E 90-91 N 83-85** was excavated in five levels to a depth of approximately 52 cm when subsoil was encountered. As shown in the eastern wall of the unit (Figure 29), the soil profile was relatively simple, beginning with about 25 cm of dark brown (7.5 YR 3/2) sandy loam that was historic midden. This layer over a mottled transitional B horizon that contained mainly prehistoric artifacts, which in turn lay over a lighter (10 YR 4/3), culturally sterile sandy subsoil at a depth of approximately 50 cm B.S.
One feature (Feature 2) was defined in this unit. In plan view in the floor of Level 5, it was defined as against the subsoil as a slightly darker amorphous stain that appeared to have been disturbed by roots or a rodent on its eastern edge. After cross-sectioning, it was found to be a shallow basin-shaped stain that extended 5 cm into the subsoil and may have had a flat bottom, but that is speculative because a root/run extended through the feature.

Unit E 90-91 N 80-82 contained soils with the same general profile as those in E 90-91 N 83-85 located just one meter to the north, but the cultural soils were deeper, with ten levels excavated and subsoil encountered at about 70 cm B.S. Once again, a dark historic midden lay over a lighter transitional zone that contained primarily prehistoric artifacts (Figure 30). The subsoil/prehistoric midden interface was uneven in the unit. It was encountered in Level 7 (about 68 cm B.S.) in the northern end of the unit (Figure 31) but extended to Level 10 (about 85 cm B.S.) in the southern end of the unit. One feature was defined in the unit (Feature 6). This small (15 cm diameter) circular feature was composed of darker soil with charcoal flecks, contrasting against the lighter and culturally sterile subsoil, and extending only about 2 cm below the Level 7 floor. The feature is also visible in the unit profile wall where its outline suggests it is either the bottom of a rodent burrow or perhaps the bottom of a deep postmold. No other postmold-like features were seen in the unit.

In combination with Unit E 90-92 N 75-77, the soil profiles in the units along the E 90 line correlate very well with the soil resistivity surveys, with deeper midden profiles correlating with lower soil resistivity. This is caused by the higher moisture retention
capabilities of the midden soils, as their darker color reflects higher humus content. As moisture is necessary for electrical conduction in soils, that in turn translates to lower soil resistance.

Figure 30: Unit E 90-91 N 80-82 west profile.

Figure 31: Unit E 90-91 N 80-82 Level 7 floor.
The Artifact Assemblage

Laboratory Procedures

While still in the field, all screened samples were processed in a field lab established in a mobile home at the site. After each context was completed, all the bags or items for the FS number assigned to the context were deposited at the FS station. The FS samples were transferred to the lab field lab periodically throughout the day and each sample was logged into the lab tracking notebook.

Each volunteer working in the field lab was given a sheet of paper that described the lab procedures. Every screened sample was re-screened through a ½ inch screen to segregate large fragments of very common artifacts like brick fragments and FCR from small ones. All artifacts retained on the screen were washed. The portion that passed through the screen was carefully examined and any interesting artifacts (e.g. anything that was not a brick fragment, small piece of FCR, natural pebble, etc.) was removed for further processing. The remainder of the sample between ¼ and ½ inch in size was termed “residue” and was placed in a bag with a tag labeled with the FS number for later examination. All residue samples were weighed and examined for artifacts before discard.

Faunal fragments were then removed from all non-residue samples for washing in the regular lab. This was so that they could be washed over a screen in case they were very fragile. The remaining durable artifacts were cleaned with a soft brush and water. Each FS sample was placed in a separate tray to which the FS tag was clipped with a clothes pin. The cleaned samples were allowed to dry in a room of the field lab equipped with air conditioning and a dehumidifier. Depending on the sample’s size and the ambient humidity, this usually required one or two days. Dry samples were placed in plastic bags along with their FS tags, placed in a box, and taken to the Archaeology Laboratory at Notre Dame as boxes were filled. Unusual or fragile specimens were wrapped in foil or otherwise handled separately from the typical FS sample.

The cleaned samples were rough sorted into at least seven categories of major material types:

1. Ceramic (pottery, both historic and prehistoric)
2. Glass
3. Metal
4. Fauna (bone and shell)
5. Brick
6. Stone
7. Other.
Each type was placed in a separate bag with its own tag, labeled with the FS number and the initials of the sorter. Experienced sorters were able to use more specific categories (for example, separating prehistoric and historic ceramics, or sorting chert from other types of stone). The one weak area in this process was making sure that the FS number was recorded on the material type tag. Error rates were generally less than 0.5% (one or two unlabelled tags in two or three hundred FS numbers).

Each material type was then cataloged using the appropriate categories. The objects in each FS number were identified, the identifications were recorded on tags, along with the counts and weights of each type of artifact. After being checking by the author, each card was assigned a catalog number, the artifacts were placed in labeled bags, and the information on each catalog tag was entered into the artifact database.

While this procedure was generally adequate, it did suffer from some defects. The most serious problem was that the ability to sort artifacts into the correct category during the rough sorting procedure was heavily dependent on the experience, skill, and diligence of the largely volunteer workforce. Inexperienced or inattentive sorters often mis-sorted small artifacts, but the mis sorts were usually predictable. Typical examples consisted of including small redware earthenware sherds with brick fragments, white clay pipe stems with bone, chert flakes with historic pottery, and the like. When mis sorts were encountered during cataloging, they were identified with a special colored tag labeled with the FS number and the correct rough sort category. If a sorted lot of the same category had not yet been cataloged, the mis sorts were placed into their correct lot. In most cases, the mis sorts were only discovered after other artifacts from the same category and FS had been cataloged. In that case, the artifacts were combined into existing categories if a catalog number for the appropriate category and FS had already been assigned. Otherwise, they were given their own catalog number. Correcting mis sorts proved to be a very time consuming procedure but is probably unavoidable with a volunteer workforce with limited experience. Sorting accuracy increased markedly between the 2004 and 2005 seasons, showing that increased experience in lab work translated into greater accuracy.

In other cases, the problems were more serious. This was especially true for the historic ceramic collection. The 2004 collection was cataloged by volunteers under the direction of the author. The 2005 ceramics were cataloged by Jessica W. Marks, who had substantial previous experience in cataloging historic ceramics from northwestern Indiana. In re-examining the 2004 collection, it was found that some types of decoration were not distinguished accurately by the volunteers (for example, sponge printed and hand painted sherds, when small, were often cataloged as transfer prints). It was therefore necessary to re-examine all of the 2004 collection to correct the catalogue and the associated database. This was so extremely time consuming that it delayed the draft report. The ultimate conclusion was that, for important or complex artifact types, it would probably be better to just have an experienced person do all the cataloging of that artifact type in the first place.
Prehistoric Artifacts

Prehistoric Ceramics

The prehistoric ceramic sherds were sorted and described by temper, body position on the vessel, surface and interior treatments, and applied decoration. The inventory of prehistoric ceramics is given in Appendix 2.

Temper

Most sherds were tempered with either grit (small particles of crushed stone) or shell (crushed, burned mussel shell). The distribution of sherds by temper type is shown in Table 2. Grit tempered sherds are characteristic of the Woodland period and were produced between about 800 B.C. and A.D. 1100. A variety of crushed rocks could have been used to produce grit tempering material. Eroded and decomposing pieces of granite seem to have been a common source of grit for temper in northwest Indiana because the rocks are easily crushed to produce a fine grit dominated by white particles. Sherds tempered with very coarse grit are often characteristic of Early Woodland pottery, the first pottery manufactured in the region. One sherd had a very sandy paste and it is not clear whether very sandy clay was used, or if sand was added to the clay as an additional tempering agent. Shell tempered sherds date to the following Upper Mississippian period, from about A.D. 1100 up to the historic period. A very small number of sherds were tempered with shell that was very finely crushed. Fine tempers are most common in plain vessels.

Table 2: Prehistoric Sherds by Temper

<table>
<thead>
<tr>
<th>Temper</th>
<th>Number</th>
<th>Percent</th>
<th>Weight (g)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grit</td>
<td>1005</td>
<td>53.7</td>
<td>1664</td>
<td>67.9</td>
</tr>
<tr>
<td>Grit, coarse</td>
<td>22</td>
<td>1.2</td>
<td>74</td>
<td>3.0</td>
</tr>
<tr>
<td>Grit, sandy paste</td>
<td>1</td>
<td>0.1</td>
<td>2</td>
<td>0.1</td>
</tr>
<tr>
<td>Limestone</td>
<td>1</td>
<td>0.1</td>
<td>6</td>
<td>0.2</td>
</tr>
<tr>
<td>Shell</td>
<td>821</td>
<td>43.9</td>
<td>652</td>
<td>26.6</td>
</tr>
<tr>
<td>Shell and grit</td>
<td>17</td>
<td>0.9</td>
<td>39</td>
<td>1.6</td>
</tr>
<tr>
<td>Shell, very fine</td>
<td>1</td>
<td>0.1</td>
<td>10</td>
<td>0.4</td>
</tr>
<tr>
<td>Undetermined</td>
<td>3</td>
<td>0.2</td>
<td>4</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1871</td>
<td></td>
<td>2451</td>
<td></td>
</tr>
</tbody>
</table>

A small number of sherds had unusual or mixed tempers. A few sherds appear to have been tempered with a mixture of shell and grit. It is not known whether the mixed tempers were used for a reason, or whether the grit just happened to be present in the clay. Faulkner reported mixed grit and shell tempered sherds from the Griesmer site (Faulkner 1972), so combined tempers are not unknown in the Kankakee Valley. However, the
small number of sherds tempered with both shell and grit and their small size (generally weighing less than 1 gm) suggests that the grit could be accidental inclusions in the paste in this assemblage. One sherd may have been tempered with burned, crushed limestone. This temper was in common use during the very end of the Middle Woodland period (from circa A.D. 200 to 400). It was first used in Hopewell ware, a highly decorated type of pottery that was often included with mound burials. Toward the end of the Middle Woodland period and shortly thereafter, limestone became the dominant temper type for all vessels produced in the central and middle Illinois River Valley (Griffin, et al. 1970; Munson 1986). Such does not appear to be the case for the Kankakee Valley, where grit tempered sherds predominate on terminal Middle Woodland and early Late Woodland sites (Mangold and Schurr 2005; Schurr 1997b).

A small number of sherds had no visible temper, or the temper could not be determined. As these tended to be small, they are probably just portions of vessels where the temper was unevenly mixed into the clay.

Vessel Portion

All of the sherds in the assemblage appear to represent the remains of utilitarian vessels that were either pots or jars. All were very fragmented. Vessel portions represented in the collection include fragments of bases, bodies, necks, and rims. Body sherds are by far the most abundant, but since most of the vessels probably had rounded bottoms, base sherds could only be identified when they were unusually thick. Neck fragments came from vessels with constricted necks, most commonly produced from the late Middle Woodland period onward (prior to then vessels were often straight sided). For prehistoric pottery from eastern North America, rim sherds can be especially informative because the rims sometimes had distinctive shapes that changed over time and because the area near the rim and just below it was the portion of the vessel that was most often decorated.

Surface and Interior Treatments

Two major surface treatments were used throughout prehistory. The distribution of surface treatments for grit and shell tempered vessels is shown in shown in Tables 3 and 4 respectively. Texturing was most often applied to the exterior of the vessel and the interior was usually smoothed. Most vessels had surfaces that were either smooth or cordmarked (where the clay of the vessel surface was textured by impressed cord markings, sometimes applied with a cord-wrapped paddle). A third category, smoothed-over cordmarking, was also recognized during the sorting process. This could be a deliberate or accidental blurring of the cordmarking done when the clay surface was still pliable. Many vessels with cordmarked bodies had smoothed necks and rim areas, especially if decoration was applied to these regions. In this case, smoothed over cordmarked sherds came from the transitional area between the two surface treatments. Most sherds are so small that the orientation of the cordmarking cannot be determined.
However, a few rimsherd do show oriented cordmarking. In those cases, the cords were aligned either vertically or diagonally with respect to the vertical axis of the vessel. Two sherds (2004.34.11 & 17) had very pronounced cordmarking, probably produced by texturing a surface when the clay was very moist and soft.

Table 3: Grit Tempered Surface Treatments

<table>
<thead>
<tr>
<th>Surface</th>
<th>Number</th>
<th>Percent</th>
<th>Weight (g)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cordmarked</td>
<td>333</td>
<td>36.7</td>
<td>513</td>
<td>37.1</td>
</tr>
<tr>
<td>Cordmarked, pronounced</td>
<td>10</td>
<td>1.1</td>
<td>12</td>
<td>0.9</td>
</tr>
<tr>
<td>Smoothed cordmarking</td>
<td>90</td>
<td>9.9</td>
<td>86</td>
<td>6.2</td>
</tr>
<tr>
<td>Total cordmarked</td>
<td>433</td>
<td>47.7</td>
<td>611</td>
<td>44.1</td>
</tr>
<tr>
<td>Smooth</td>
<td>185</td>
<td>20.4</td>
<td>475</td>
<td>34.3</td>
</tr>
<tr>
<td>Smooth/Eroded</td>
<td>172</td>
<td>19.0</td>
<td>113</td>
<td>8.2</td>
</tr>
<tr>
<td>Eroded</td>
<td>103</td>
<td>11.4</td>
<td>137</td>
<td>9.9</td>
</tr>
<tr>
<td>Fabric Impressed</td>
<td>13</td>
<td>1.4</td>
<td>37</td>
<td>2.7</td>
</tr>
<tr>
<td>Pinched</td>
<td>1</td>
<td>0.1</td>
<td>11</td>
<td>0.8</td>
</tr>
<tr>
<td>Total</td>
<td>907</td>
<td></td>
<td>1384</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Shell Tempered Surface Treatments

<table>
<thead>
<tr>
<th>Surface</th>
<th>Number</th>
<th>Percent</th>
<th>Weight (g)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cordmarked</td>
<td>130</td>
<td>15.4</td>
<td>236</td>
<td>21.9</td>
</tr>
<tr>
<td>Smoothed cordmarking</td>
<td>51</td>
<td>6.0</td>
<td>64</td>
<td>5.9</td>
</tr>
<tr>
<td>Total cordmarked</td>
<td>181</td>
<td>21.5</td>
<td>300</td>
<td>27.9</td>
</tr>
<tr>
<td>Smooth</td>
<td>267</td>
<td>31.7</td>
<td>478</td>
<td>44.4</td>
</tr>
<tr>
<td>Smooth/Eroded</td>
<td>184</td>
<td>21.8</td>
<td>101</td>
<td>9.4</td>
</tr>
<tr>
<td>Eroded</td>
<td>208</td>
<td>24.7</td>
<td>154</td>
<td>14.3</td>
</tr>
<tr>
<td>Undetermined</td>
<td>3</td>
<td>0.4</td>
<td>44</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td>843</td>
<td></td>
<td>1077</td>
<td></td>
</tr>
</tbody>
</table>

Many of the sherds had one or more surfaces that were eroded. For larger sherds, it was often possible to determine if the interior or exterior was eroded by examining the curvature of the sherd. Cordmarked surfaces are almost certainly exterior surfaces unless they are found on sherds of Early Woodland pottery produced before about 250 B.C. For very small smooth surfaced sherds with one eroded side, it is not possible to determine whether the smooth surface represents the interior or exterior of the vessel. And of course, some sherds were eroded on both surfaces.
A small minority of sherds were given other surface treatments. Fabric impressed sherds showed fabric impressions where the warp and woof of the impressing fabric could easily be seen. In a few cases, fabric impressions were applied to the exterior and interior surface, a diagnostic feature of Early Woodland Marion Thick pottery. One sherd appears to have been brushed or wiped, but this could be either deliberate or accidental. Other decorative treatments include dentate stamping and very pronounced cordmarking. Another surface treatment that was probably accidental consists of some kind of plant impression on a cordmarked surface.

Sometimes decorative elements were placed over the surface. Decorative methods used in prehistory in northwestern Indiana generally consist primarily of incising (with lines of various widths) or impressing (with various types of tools). The various types of decorative techniques changed in popularity over time, and these, along with temper, surface treatment, and vessel shape (especially rim shape) can be used to date prehistoric ceramics to within a few centuries.

Chronological and Cultural Significance of the Collier Lodge Assemblage

When possible, sherds were described using styles previously defined for northwest Indiana. The prehistoric ceramic assemblage from Collier Lodge appears to span the entire time period over which ceramics were produced in the Kankakee Valley, from Early Woodland (beginning around 800 B.C.) to Upper Mississippian (after about A.D. 1100, lasting up to the beginning of the historic period in the seventeenth century). Throughout much of prehistory, pottery styles of northwestern Indiana show many similarities with styles defined for pottery from sites in Illinois, especially along the Illinois Valley. That is partly because much more archaeological work was done in Illinois at an earlier date than in Indiana, so that sherds that were found in Indiana showing similarities to types that had been previously defined from sites in Illinois were described by reference to Illinois types. The second reason is that the region now called northwest Indiana is geographically linked to what is now Illinois by the river system (the Kankakee is a tributary of the Illinois River) and the coast of Lake Michigan. Thus, there was free movement of peoples throughout the region along the southern end of Lake Michigan and along the Illinois to the Mississippi. It has long been recognized (Lilly 1937) that pottery produced in northwest Indiana during the Middle Woodland period (between about 200 B.C. to A.D. 350 or 400) was very similar to pottery from the lower Illinois Valley during the same period and that the very latest styles of prehistoric pottery (produced after A.D. 1100 and up to the historic period) were very similar to styles from northern Illinois and the Chicago region (Faulkner 1972).

Based on decoration and paste, at least 19 different grit tempered vessels are represented by sherds in the assemblage. These are identified by letters A through R in Table 5, which lists chronologically and culturally diagnostic sherds from the assemblage. Fewer vessels are represented amongst the shell tempered sherds (at least 7 total, identified by the numbers 1 through 6 in Table 5). The smaller number of shell tempered
vessels reflects the shorter duration of the Upper Mississippian period compared to all the preceding ones combined.

### Table 5: Diagnostic Prehistoric Sherds

<table>
<thead>
<tr>
<th>Accn. No.</th>
<th>Cat. No.</th>
<th>FS. No.</th>
<th>Type</th>
<th>Vessel</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004.01</td>
<td>2515</td>
<td>68</td>
<td>Marion Thick A</td>
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<td>EW</td>
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<tr>
<td>2004.01</td>
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<td>91</td>
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<tr>
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<td>868</td>
<td>98.1</td>
<td>Marion Thick A</td>
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<td>EW</td>
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<td>2004.01</td>
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<td>EW</td>
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<tr>
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<td>635</td>
<td>106.2</td>
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<tr>
<td>2005.34</td>
<td>187</td>
<td>209</td>
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<tr>
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<td>167</td>
<td>247</td>
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<td>301</td>
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<tr>
<td>2004.01</td>
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<tr>
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<td>2004.01</td>
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<td>634</td>
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<td>2004.01</td>
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Early Woodland (circa 800 to 200 B.C.)

**Marion Thick**

Marion Thick pottery (Griffin 1952) is the diagnostic horizon marker for the beginning of the Woodland period, the first period during which pottery was made and utilized by the prehistoric inhabitants of the region. Marion Thick pottery is easily recognized by several key attributes. First, as the name implies, the vessels are unusually thick, with wall thicknesses typically ranging from 10 to 15 mm. Second, the vessels were tempered with unusually coarse grit, easily observed as large particles of crushed rock widely distributed through the paste. The final key attribute is the presence of fabric or cordmarking on both the interior and the exterior of the vessel (later vessels lack interior marking). Marion Thick vessels were large, flower pot shaped containers with thick walls, fired at relatively low temperatures and probably made and used on site for the processing of foods that needed extended boiling. Because the vessels were fired at low temperatures, they were not very durable, and Marion Thick sherds usually represent relatively small fragments of much larger vessels. Sherds in the assemblage from Collier Lodge possess the characteristic attributes of Marion Thick, having very coarse grit temper, a fabric impressed interior and exterior, and are relatively thick (ranging from 12.5 to 18 mm). Many of the sherds have eroded surfaces, consistent with the lower firing temperature and great age of this type of pottery. Based on paste color and texture, the Marion Thick sherds in the Collier Lodge assemblage could have come from a single vessel (vessel A, Figure 32a).

Marion Thick was made during the Early Woodland period. No Early Woodland sites from the Kankakee Valley have been radiocarbon dated but radiocarbon dates from sites in the Great Lakes region suggest that Marion Thick was produced between about 800 to perhaps 400 B.C.

**Marion “Thin”**

Around 400 B.C., and perhaps a bit earlier, Marion Thick was replaced by improved pottery with thinner walls, smoothed interiors, and tempered with smaller grit particles. Pottery styles produced along the lower Illinois River valley during the later portion of the Early Woodland period (between about 250 to 150 B.C.) can be recognized by their distinctive decorations (Griffin 1952). These later Early Woodland types include Black Sand, Fettie Incized, Neteler Stamped, and Sister Creeks Punctated. Of these four styles, only two have been reported from northwestern Indiana: Sister Creeks Punctated (found at the Bellinger site [Schurr 1997b] in the upper Kankakee drainage and at the Griesmer site in Lake County [Faulkner 1972:55]; and Neteler Stamped (in surface collections made by Ernest W. Young at the Mud Lake locality in LaPorte County). The other two styles described as characteristic of the later part of the Early Woodland period in Illinois have not been found in northwest Indiana. The same situation pertains to the St. Joseph River valley of southwest Michigan, where cordmarked pottery with incised
decoration dated to the later part of the Early Woodland has been informally described as “Marion Thin” (Garland 1986). Similar incised over cordmarked pottery has also been described from the Bellinger site in association with sherds from a miniature Sister Creeks Punctated vessel and a stemmed projectile point base dating to the same period. Thus, it appears that a distinctive but as yet undefined type of grit tempered pottery with incising over cordmarking was produced in the Kankakee Valley between about 400 to 200 B.C. For convenience, pottery of this type is called “Marion Thin” until enough sherds can be obtained to provide a more formal definition of the type.

Sherds that would fit into the Marion Thin type were collected from the Collier Lodge site. The sherds appear to represent two different varieties of Marion Thin. Five sherds represent the variety of Marion Thin previously described by Garland (1986) and Schurr (1997b). These relatively thick grit tempered sherds have a temper that is coarse, but not as coarse as that of Marion Thick. They are also better fired. Wall thicknesses range from 6.5 to 9 mm. They probably came from a single vessel (vessel B) that had a cordmarked exterior and a smoothed interior, except for the base, where a relatively flat sherd shows a smoothed over cordmarked surface on one side and a “pinched” surface on the other. This sherd is so flat that it is not possible to tell which side was the interior of the vessel. The cordmarked surfaces were decorated with fine trailed (less than 1 mm) incised lines and large circular punctuates, perhaps made with a finger tip or a circular tool (Figure 32b). The appearance of this type of pottery provides a marked contrast to heavily incised styles (Black Sand, Fettie, and Morton) of the central and middle Illinois Valley region during the same period. This difference suggests that a distinctive late Early Woodland culture was present in the Kankakee Valley.

A second type of Marion Thin also seems to be present. These sherds, which probably all came from one vessel (vessel C), were impressed on both the interior and the exterior with a very fine fabric. The temper is less coarse and the paste is slightly grayer than that of the cordmarked and incised version of Marion Thin. Wall thicknesses range from 8.7 to 9.4 mm. Based on their attributes, they may slightly pre-date the incised over cordmarked version of Marion Thin.

Other Possible Late Early Woodland Sherds

Sherds from two other vessels (D and E) could also date to the late Early Woodland, but as they are types that have not been described before for northwestern Indiana. They could also date as late as the earlier part of the Late Woodland based on vessel thickness and general appearance of the paste.

Fingernail Impressed. At least two different vessels appear to have been decorated with fingernail impressions. The impressions were made using several different motions. One vessel (D, represented by seven sherds), was a jar with a straight wall and a smooth exterior. Cordmarking is retained on the interior and extends up onto the lip on some rimsherds, a characteristic shared by Marion Thin. The exterior of the vessel was
decorated below the rim with fingernail impressions made with slight outward pressure in a v-shaped pattern to produce a band of chevrons below the rim spaced on 12 mm centers (Figure 32c). Other sherds that appear to be from the body of the same vessel show that the body below the rim was decorated with additional impressions made with a stronger pushing motion directed toward the rim to make a band of roughly lunate impressions.

A second fingernail impressed vessel (E), represented by a single rim sherd, has a redder paste and a different decorative motif. It was probably also a straight sided jar with a smoothed exterior surface which was decorated with downward “pushing” fingernail impressions below the rim (Figure 32d). The lip is decorated with a line of fingernail impressions made by lightly pressing the nail into the clay perpendicular to the lip. This sherd probably represents an Early Woodland or very early Middle Woodland vessel based on its thickness, but it could also date to the early Late Woodland.

Figure 32: Early and Middle Woodland sherds.

Middle Woodland Period (150 B.C. to A.D. 350)

The sequence of style changes for the Middle Woodland period is probably the single most investigated aspect of prehistoric pottery in northwestern Indiana, beginning with George Quimby’s (1941) definition of the Goodall focus, largely based on pottery
recovered from the type site of Goodall Mounds in LaPorte County, Indiana. A modern summary of ceramic style changes through the Middle Woodland period has recently been published (Mangold and Schurr 2005). The Middle Woodland wares are similar to those found within the well-known Havana sequence first defined for the lower Illinois valley region of Illinois (Griffin 1952) and generally parallel overall trends in Havana styles through time, with some distinctive local features. Middle Woodland pottery is grit tempered and relatively well made with wall thickness in the 8 to 10 mm range. Cordmarking was common early in the period, but gradually lost favor to smooth surfaces over time. Rims often show an interior bevel and interior lip impressions made with cordwrapped dowels and other tools are very common.

One of the most obvious diagnostic features of Middle Woodland pottery is the presence of dentate stamping (decorations made by pressing or rocking a comb-like stamp into the surface, creating a line or zone of square impressions). Dentate stamping was usually applied over a smoothed surface, frequently in a band under the rim. Plain and stamped zones were sometimes defined on the vessel surface, with the stamped areas outlined by an incised line. Zoning was especially common on Hopewell style vessels, where pots or bowls were decorated with zoned areas on the body, accompanied by a distinctive rim band consisting of cross hatched, incised lines marked off from the body of the vessel by a row of punctations (small dots poked into the clay). Rims on these types of pots are often cambered to produce a rim band that bulges outward.

The most surprising thing about the Collier Lodge assemblage is its almost complete lack of Middle Woodland period pottery styles, especially dentate-stamped Havana wares. Three possible dentate stamped body sherds were identified in the collection, but none are very good examples because the sherds are very small, eroded, or both. One very thick sherd (11 mm) bears what could be a single large square stamp (5 mm) on a smooth surface, but it could also be a void left when a large piece of temper fell out, or even an accidental impression. The other two possible examples may have medium sized stamps (3 to 4.5 mm) on eroded surfaces that are difficult to interpret.

Other sites in similar topographic settings to Collier Lodge, and with multicomponent assemblages from Early Woodland to Upper Mississippian, have produced dentate-stamped Havana wares. These include collections from sites with prominent late prehistoric (shell tempered) occupations including the Griesmer site in Lake county (Faulkner 1972) and at the Hoxie Farm site (Herold, et al. 1990). There are several possibilities for the lack of Middle Woodland occupations dated between about 150 B.C. to A.D. 200 at Collier Lodge. It could be that portions of the site were occupied during the Middle Woodland period, but that the occupation was very small and localized and therefore not included in the excavated sample. Or it could be that the site was not suitable for habitation during the period. It is unlikely that the site was flooded during that time period, as no evidence of water-lain deposits were found between the Early Woodland and later occupations. However, if the water level in the marsh was unusually high, it might have made it difficult to cross the Kankakee at this location, something that
was undoubtedly an important attractive feature of the site location from the prehistoric into the historic periods. Changes in water level (either higher or lower) could also have affected the types of resources that were available, perhaps in as yet undefined ways that would have made the local environment less productive for whatever resources were of most interest during the Middle Woodland period. And finally, the lack of habitation during the height of the Middle Woodland period corresponds to the period of most intense development of large mound sites on the marsh margins and to the north, such as at Upp-Wark (near Boone Grove). As the large mound sites were not permanent habitation sites, it is thought they were probably used seasonally for encampments and ritual activities. For people dependant on wild resources, as was the case during the Middle Woodland period, scheduling is an important principle that controls their use of the environment because of their need to move to different spots in the environment to exploit resources that are most abundant at different places and times (Flannery 1968). If the scheduled use of the Collier Lodge locality conflicted with the timing of ritual activities at mound sites, the site may have not been used during the period even if it was in all other ways perfectly satisfactory. At this time, it is not possible to distinguish between these possibilities because they require further testing by additional excavations at the site to see if the lack of Middle Woodland ceramics at the site is just a result of limited sampling. Environmental reconstructions would also be helpful in determining if the environment of the site had changed significantly during the Middle Woodland period.

There is some limited evidence for late Middle Woodland use of the site after about A.D. 150. Before that time, by about A.D. 1, very finely made Hopewell style vessels were produced in the central and lower Illinois valley. These Hopewell ware vessels are distinguished by their very thin walls, highly decorated surfaces, and black paste tempered with crushed limestone. Hopewell ware vessels were always relatively rare and have been most often reported from burial contexts, although Hopewell ware sherds do make up a very small proportion of sherds at habitation sites (less than 5% [(Munson 1986:293)]). Late in the Middle Woodland period, the Hopewell style vessels are no longer made in the Illinois Valley, although some of their attributes (limestone temper and some decorative techniques) become more common in ceramic assemblages. As discussed above, pottery tempered with limestone, often with a smooth surface, is seen as a horizon marker for the later part of the Middle Woodland period (after A.D. 150 or so). Sherds of this type are relatively rare in northwestern Indiana, perhaps because suitable limestone for temper is not readily available. The assemblage at Collier Lodge produced one smooth surface limestone tempered sherd that may date to the period between about A.D 150 to 350. Two less ambiguous late Middle Woodland diagnostics are provided by one late Hopewell rim sherd and a zoned body sherd. One late Hopewell style vessel (G) is represented by a single very distinctive rimsherd (Figure 32e). This sherd came from a grit-tempered vessel with a slightly thickened rim band 1.4 cm wide. The rim band is decorated with oblique cord impressions angled upward from left to right. The cord impressed rim band is set off from the body of the sherd by a row of hemiconical punctations. This is a late variant of a Hopewell style rim where the crosshatching that was widely used earlier is replaced by an impressed or incised
decoration. Similar rims with incised decorations are known as Summnerville Incized and have been reported from the Summnerville site in the St. Joseph Valley of southwestern Michigan (Quimby 1941) and from the Bellinger site on the upper Kankakee (Schurr 1997b). The oblique cordmarking on the rim is a motif found in late Middle Woodland Steuben phase occupations of the central Illinois valley (Wolforth 1993) and in the late Middle Woodland component at the Bellinger site. A grit tempered body sherd 5 mm thick with a zoned decoration of consisting of a roughened zone (not dentate stamped, the typical treatment used in zoning) separated from a smoothed area by a 2 mm wide line looks as if it could have come from the same vessel as the rim sherd of Vessel G, as zoned body decorations often were applied to the bodies of vessels with Hopewell style rims. However, as the two sherds came from different parts of the site, it seems unlikely that they came from the same vessel.

Munson (1986) has proposed a model for changing settlement patterns though time in the central Illinois Valley that is very relevant to the Kankakee Valley. He notes that Middle Woodland period settlement patterns mark a shift toward the most productive portions of the environment and to settlements located in close proximity to mound sites compared to the preceding Early Woodland period. According to Munson’s model, population densities increase throughout the Middle Woodland, causing increased infilling of the landscape over time, so that sites that were abandoned at the beginning of the Middle Woodland are once again inhabited at its end. The Bellinger mound site and Collier Lodge seem to indicate that the same processes were occurring in the Kankakee Valley. Both sites were occupied during the late Early Woodland, abandoned during most of the Middle Woodland, and then re-occupied at the very end of the Middle Woodland (around A.D. 400). In spite of the proximity to the Kankakee Marsh and its location on an easy route across the marsh, the Collier Lodge site was apparently in some sense a peripheral location at the peak of the Middle Woodland period (between about 150 B.C. to A.D. 150) when mound building and other Hopewellian ceremonial activities were at their peak.

**Late Woodland (A.D. 350 – 1050)**

The Late Woodland is marked by the disappearance of Hopewell burial ceremonialism, and over time, the adoption of the bow and arrow and eventually, the development of maize cultivation as a major element in the subsistence adaptation. Mason (1981) divides the Late Woodland period of the Great Lakes into two sub-periods. Late Woodland I (LWI) was a period of transition between the Middle Woodland, noted for its elaborate burial ceremonialism, and the succeeding Late Woodland II (LWII) period when traits most typical of the Late Woodland period are most clearly expressed. Classic LWII occupations have not been identified in northwestern Indiana. Instead, the appearance of shell tempered pottery marks the start of the Upper Mississippian period, chronologically contemporary with LW II occupations in other areas but distinguished by pottery styles and presumably by corresponding differences in lifestyles as well.
Late Woodland I

In Mason’s scheme, the Late Woodland I period (LWI) lasted between about A.D. 400 to perhaps a century either side of A.D. 1000. As noted above, the Late Woodland I period was a transitional period. Mound building continued, but only as isolated mounds. The mound groups of the preceding Middle Woodland period were no longer constructed. Although fewer mounds were constructed, they contained more burials, but with fewer grave goods. The general impression is that status differences, at least as expressed in burial rituals, become less important during LWI. The Weise Mound (12 Pr 35) (McAllister 1932), located about 1.5 km from Collier Lodge, is a typical LWI burial mound.

Pottery styles of the LWI period lack the decorative elements characteristic of Middle Woodland pottery. The vessels are well made, with relatively thin walls, but are of a much simpler style, with an emphasis on utilitarian cordmarked vessels. A rimsherd from a cordmarked vessel with a slightly constricted neck and exterior lip impressions (Figure 33a) could be from a vessel dating to the LWI period (vessel H). Two other sherds from vessels with slightly constricted necks could be examples of Weaver Plain (Figure 33b) and Weaver Cordmarked (Griffin 1952) a widespread type characteristic of LWI occupations in the lower and middle Illinois Valley.

Figure 33: Late Woodland sherds.
Late Woodland Collared

Stronger evidence for terminal LWI occupation of the site is provided by the presence of collared vessels in the assemblage (collars are a widespread attribute of Late Woodland pottery styles). Collared rims were formed by placing a small strip of clay below the lip to form a thickened band or collar. Collars can also be formed by folding the rim over on the outer side, but all the examples from Collier Lodge appear to have applied collars. These rim forms are diagnostic of the period between about A.D. 600 to 1100, when vessels with rims of this type were in wide use throughout the Great Lakes region (Mason 1981). Even within the Kankakee valley, collared rim vessels with several different morphologies have been identified (Schurr 2003), including one well-defined type of rim characteristic of Albee Late Woodland occupations with a distinctive wedge-shaped collar (MacLean 1931; McCord and Cochran 1994). Collared rim sherds from four or five vessels, all with relatively thin collars, were identified in the Collier Lodge assemblage (Figure 33g). Two have impressed decorations on the thickest part of the collar, made with an unidentified tool. The impressions on one sherd are small, ill-defined marks about 2 mm in size, spaced on 5 mm centers. A second rim with very coarse temper had oblique impressions. Two unusual rim sherds, probably from a single vessel (J) have punctuations on the collar (1.5 mm in diameter, spaced on 5 cm centers) and notches on the lip, which were made with a cordwrapped dowel 3.5 mm in diameter applied on 9 mm centers.

The collared sherds from Collier Lodge include the two different types that have been defined by archaeologists. These include sherds that are share characteristics of Albee Cordmarked (Winters 1963); and collared sherds with notched collars that Faulkner (1972) called Notched Collar because they share attributes of both Albee Cordmarked and Starved Rock Collared (Faulkner, 1972, citing Hall), but do not exactly fit either original type description. The collars are wedge-shaped like Albee Cordmarked but are broader than the typical Albee collar, and similar in width to the wider, flat collars of Starved Rock Collared. The Late Albee ceramics (dating between about A.D. 850 to 1050) that have been documented from the Kankakee Valley (Schurr 2003) are distinguished by very distinctive wedge-shaped rims with notched lips and punctuated lips or notched collars. This type of pottery is not present at Collier Lodge.

It is not known if these different types of collars mean that one culture produced several different types of collared vessels; if collar styles were evolving rapidly over time; or if regional cultures, each with a slightly different idea about how to make a collared jar, were interacting in the region. The notched collar forms could represent a style intermediate between the development of early Albee pottery, with small cordmarked wedge-shaped collars, and later Albee pottery with punctuated or incised collars.

 Portions of four other grit tempered vessels (Vessels O - R) that may date to the Late Woodland period were also recovered from the site. Three rims (O, P, Q) came from vessels that had straight or slightly constricted necks and cordmarked or smoothed-
cordmarked exteriors. On one vessel (O) the cordmarking may have extended onto the lip. Another (P) shows interior lip impressions. One grit-tempered body sherd (Q) was incised on both surfaces. The exterior is slightly eroded but still retains fine parallel incised lines, perhaps applied over a smoothed cordmarked surface (Figure 33 h). The interior was also decorated with fine cross hatched lines. This sherd, which probably came from the neck of a vessel, is 4.5 mm thick and probably dates to the Late Woodland, but its paste is not similar to any of the rims in the collection.

Upper Mississippian (A.D. 1100 – circa A.D. 1550)

Shell tempered pottery is diagnostic of the Upper Mississippian period in northwest Indiana. This is the last prehistoric period before the historic era begins. The Upper Mississippian period probably began as early as about A.D. 1100 and would have extended until whenever the Native Americans of the region stopped making pottery and began using brass kettles obtained from Europeans. Faulkner (1972) provides a chronology for changes in Upper Mississippian ceramic styles throughout the period. The basic Upper Mississippian vessel was a globular jar with a rim that could range from slightly outflaring to everted (bent outward at an angle). Early in the period, surfaces are mainly cordmarked, but the proportion of cordmarking declines over time until smoothed surfaces predominate. Incised decorations, sometimes supplemented with punctations, are common. The earliest styles, known from the Fisher type site, have curved horizontal lines of medium thickness\(^1\). Relatively few Fisher radiocarbon dates are available, but they suggest this type of decoration was probably in use between about A.D. 1250 until just before A.D. 1400 (Jeske 2003). Fisher pottery is not present in the assemblage, suggesting a later date for the Upper Mississippian occupation at Collier Lodge. By around A.D. 1400, the curving lines of Fisher pottery are replaced by medium straight trailed lines that are often placed in chevrons or nested triangles around the upper body of the vessel on Fifield Trailed vessels (Faulkner 1972). It is thought that the earliest Fifield trailed vessels were cordmarked and that later ones were more likely to have smooth surfaces, but smooth and cordmarked surface treatments seem to have coexisted. Another decorative treatment is wide parallel lines placed vertically over cordmarked surfaces, characteristic of the type Fifield Bold (Faulkner 1972). By the end of the sequence, cordmarked Fifield Bold jars are replaced by Huber Bold, basically the same type of jar but with a completely smoothed surface and perhaps with wider trailing. Fifield Trailed vessels were no longer manufactured, as medium trailing was replaced by fine trailed parallel lines characteristic of Huber Trailed, produced up to the time of historic contact (Brown 1990; Faulkner 1972). Huber Trailed is often used as a horizon marker for sites from the Protohistoric period (the period when Native Americans were interacting with Europeans or obtaining European trade goods, but had not yet officially entered the historic record.

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1. Line thickness descriptions follow those of Faulkner (1972:63, Footnote 3). Thin – less than 2.0 mm in width, Medium – 2.1 to 6.9 mm, Wide – 7.0 mm or greater.
Fragments of at least six Upper Mississippian vessels are in the collection (Table 5). They include three Fifield Trailed Vessels (1 – 3), one Huber Bold vessel (4), and two untyped vessels (5 and 6).

**Fifield Trailed**

Vessel 1 has medium (2.8 mm) trailed lines on a smooth surface in a chevron pattern (Figure 34e). A sherd with a handle or lug attachment scar 8.1 mm wide probably came from the same vessel. The rim shape of this vessel is unknown. Vessel 2 is represented by one rim and two body sherds (Figure 34c). The trailing on Vessel 2 was a bit wider (5 m) than that on Vessel 1 but was also placed in a chevron pattern. It had a slightly outflaring rim with a smooth lip that was flattened to produce a small ridge on the exterior side of the lip. The body sherds could easily be associated with the rim because this pot had unusually coarse shell temper. Vessel 3 also had medium trailing of the wider variety (5 mm) placed over a lightly cordmarked surface. It is represented entirely by body sherds (Figure 34d).

![Figure 34: Upper Mississippian sherds.](image)
Huber Bold

One Huber Bold vessel (Figure 34a) was decorated with wide (8 – 10 mm) very shallow trailing placed over a smooth surface. The trailing was probably made with a fingertip or a rod with a rounded end. The rim was everted and was 2.2 cm wide with regularly spaced impressions on the lip made with a smooth rod, perhaps 5 mm in diameter. The everted rim of this vessel was impressed with a dowel or rounded tool (Figure 33b).

Untyped Shell Tempered Vessels

Vessel 5 has a very unusual surface treatment (Figure 33f). The appearance is similar to that of a cordmarking, but it is not clear how the texture was created. Perhaps the surface was roughened by combing or with a tool when the clay was very soft. The rim is slightly everted and has a smooth lip.

Vessel 6 is represented only by two body sherds from the shoulder of a vessel that had a well-defined inflection point in the vessel contour at the base of the neck. One of the sherds appears to have been tempered with shell and a small amount of grit. Only shell temper is visible in the other body sherd, and as their appearance suggests they both came from the same vessel, that suggests the temper was unevenly distributed in the paste. The vessel surface was cordmarked and then smoothed in such a way as to leave vertical cordmarks on the inflection point of the shoulder. The body sherds have not been associated with rimsherds in the collection so the vessel form is unknown.

Based on the types of shell tempered pottery present, the Upper Mississippian occupation of the Collier Lodge site probably occurred after A.D. 1400 but prior to about 1600. Curvilinear trailed Fisher style pottery is absent from the site. As that pottery style is characteristic of the earliest Upper Mississippian occupations of the region, there is no evidence that Collier Lodge was occupied at the start of the Upper Mississippian period. In a similar fashion, Huber Trail, a style characteristic of the very latest Upper Mississippian, and dating to the time of historic contact, is also absent, suggesting the site was not in use as late as the late 1500s. Other late pottery styles characteristic of contact era sites, such as the Danner series pottery documented from the Zimmerman site near Starved Rock, Illinois (Brown 1975) are also absent, further reinforcing the concept that the site was not in use just before Europeans began entering the upper Great Lakes region.

Another indicator that can be used to date the Upper Mississippian assemblage at Collier Lodge is the relative proportion of cordmarked and smooth surface shell tempered pottery. During the early part of the Upper Mississippian period, cordmarking is the dominant surface treatment, but it declines over time, and smoothed surfaces become most common (Faulkner 1972:170, Figure 23). Two sites, Griesmer and Hoxie Farm, are
unusual because both produced Huber Trailed pottery accompanied by relatively high proportions of cordmarked pottery. This is good evidence that both sites contain more than one Upper Mississippian occupation, as both also produced Fisher Trailed. Thus, both sites contained both the earliest and the latest recognized Upper Mississippian types. Brown (Brown:153) concludes that Griesmer was a single component site based on a lack of evidence for stratigraphic separation between Fisher and Huber styles in the midden. A careful reading of Faulkner’s (1972:74-75) report shows that Faulkner had recognized a lack of vertical stratification, but was able to demonstrate spatial segregation of Fisher and Huber wares in pits, a situation which he plausibly explained as a result of mixing when the later Huber occupation people dug pits at the site that disturbed earlier Fisher pits and midden. It therefore appears that Faulkner’s separation of two separate components at Griesmer is valid, and that Collier Lodge was occupied after the earliest component at Griesmer and before the later one.

Based on surface treatment and decoration, Collier Lodge should have been occupied after A.D 1400 and prior to 1600 or so. The site was probably not in use by A.D. 1679-1680 when LaSalle would have passed by unless imported brass kettles had completely replaced aboriginal ceramics in the area by that time. The predominance of Fifield style and Huber Bold is similar to the surface collection reported for the Rader site in Lake County (Faulkner 1964; 1972:172), suggesting it and Collier Lodge were occupied at about the same time.

**Prehistoric Lithic (Stone) Artifacts**

**Chipped Stone**

Stone (lithic) artifacts were sorted by whether or not they were debitage or tool fragments, then further described as necessary. The lithic inventory for the excavations is given in Appendix 3. Lithic artifacts recovered from Collier Lodge were basically produced by two different methods: by chipping or by pecking and grinding. The vast majority of chipped stone artifacts were made from chert, a low quality grade of flint that is widely available in North America. Ground stone tools were made from hard igneous cobbles and from softer stones such as slate or sandstone.

Knapping, the technical term for the production of chipped stone tools, is a reductive or subtractive technology that follows a distinctive trajectory, or set of steps. A chipped stone artifact begins as a solid piece of material. After a flake is removed from the piece, it becomes a core. Continuing reduction produces additional flakes and eventually the core is shaped to become a tool. The tool may be chipped on two sides (producing a biface) or on just one side (to produce a uniface). The tool will probably be further reduced as it is re-sharpened or re-shaped for other uses. Eventually the tool is broken or exhausted, and may become a fragment of a tool. Flakes can be used as tools and may be deliberately modified or incidentally if the edge is marked by cutting or some other activity. Bipolar reduction is an alternative to the reductive trajectory. In this
method, a piece of chert is placed on a hard surface and then smashed with a hammerstone or other hard object to produce a selection of flakes and other fragments. This is an effective method for producing flakes from poor quality chert nodules that are very hard (a frequent characteristic of glacially deposited chert cobbles, the only local source of chert in the Collier Lodge area). The chipped stone artifacts are presented under the categories of “Debitage” (knapping debris left over from tool production and reworking) and tools.

Debitage

Cores and Core Fragments

Most of the cores are relatively small and are made from glacial cobbles. Core fragments are more common than complete identifiable cores. Extensive reuse and recycling of chert is an important characteristic of most northwestern Indiana lithic assemblages. This economy of use was necessary because high quality chert sources are not present in the area.

Flakes

Flakes were initially sorted into two categories. Primary flakes are flakes that show more than 50% cortex (the exterior surface of the chert nodule), revealing that they were removed during the early stages of core reduction. Secondary flakes show less than 50% cortex (and most showed none). The primary chert flakes are relatively small, suggesting a heavy reliance on glacial pebble cherts or bipolar reduction. A very heterogeneous array of cherts is present in the secondary chert flake collection. Comparison of the primary and secondary flakes suggest the vast majority are made of locally available cherts. Identifiable exotic (imported) cherts make up a very small proportion of the collection. Additional studies of the flakes in the future could probably produce additional information about the sources of the chert used at the site.

A few flakes of materials other than chert were found. One appears to have come from the surface of a glacial cobble, perhaps in the early stage of pecking to produce a ground stone tool. Other materials include silicified sandstone, a very hard quartz-rich form of sandstone that was frequently used to produce chipped stone tools in some parts of eastern North America (e.g. in Wisconsin). One flake (2005.34.1204) is light colored and may have come off a piece of limestone gravel, so it might not be an artifact. The other (2005.34.922) is a reddish colored primary flake.

Two secondary flakes are of special interest. One is clearly black obsidian. The closest source for this material is thought to have been in the vicinity of what is now Yellowstone National Monument. Complete and finely made obsidian artifacts were made during the Middle Woodland period (150 B.C. to A.D. 350) where they were often deposited with burials or in mounds. Another flake is smaller and could be either obsidian
or Knife River flint from North Dakota. The dates and uses of Knife River flint parallel those of obsidian.

**Blocky Fragments**

This is a remnant category for chert fragments that are not flake-shaped, but instead are thick and blocky. These could have been produced by bipolar reduction or by chert cores that shattered along fault or defect lines during knapping.

**Tools**

**Modified Flakes**

Modified flakes show some type of edge modification, either accidental or deliberate. Analysis of the modified flake assemblage using methods such as use wear analysis (Keeley 1980) could provide more information about the ways that flakes were used. A few modified flakes were identified in the assemblage, but most of the flakes from Collier Lodge are too small to have been used as tools.

**Unifaces**

A uniface is a tool with one side that has been worked. Excluding scrapers, only one true uniface (2005.34.1043) was identified in the collection. It was probably used as a knife.

**Scrapers**

Scrapers are unifaces, bifaces, or flakes with at least one steeply retouched edge. The specimens from Collier Lodge are mainly unifaces. They were used for scraping hides, fibers, and other materials. Scrapers are often classified based on which edge of the flake or biface was retouched. The Collier Lodge collection includes side (Figure 35a) and end scrapers (Figure 35b) on modified flakes. Other scrapers are modified unifaces. They include an ovoid scraper that was produced on a flake removed from a glacial chert cobble (2005.34.1167) and “humpbacked” scrapers characteristic of the Upper Mississippian period (Figure 35 c to e).

**Bifaces**

The most easily recognized chipped stone tools are bifacial. Crude bifaces (and fragments) are bifaces that bear large flake scars. In the Collier Lodge assemblage, most appear to be fragments of bifaces that broke during reduction, before they could be further refined. This was probably a common hazard when knapping poor quality local cherts.
Refined bifaces are often extremely useful because they are often hafted bifaces (used as projectile points or knives). As haft and blade shapes changed over time, it is often possible to date a refined biface just by looking at it. Biface fragments are also useful because they provide information about how tools were being used when they were broken. In the Collier Lodge collection, most biface fragments are either tips or bases. The tips may have been broken when a biface was being used as a knife, either when accidentally hitting a hard surface (such as a bone), or when used in a twisting motion. Tip fragments contained a relatively high proportion of exotic cherts, suggesting that they came from large bifaces that were imported from elsewhere. One gray tip is probably Wyandotte chert from Harrison County in southern Indiana. A light pink tip could be heat treated Burlington chert from the St. Louis, Missouri area.
Hafts could have broken in the same manner as tips, but since they would have been contained in the wrappings and adhesives used to attach the biface to a shaft or handle, their presence suggests that the maintenance and repair of tools was taking place at the site. Several undiagnostic (undated and untyped) base fragments were found. All appear to have been made of local cherts. Other base fragments appear to have come from potentially dateable bifaces. Small notch ears must have come from corner notched or expanding stem points, but as this style of point was used off and on for many thousands of years, it was not possible to determine exactly what kind of points they came from. Notched points were especially common during the Early Archaic (from about 8,000 to 6,000 B.C.), the earlier portion of the Late Archaic (from about 4,000 to 3,000 B.C.) and from the Middle Woodland to the early part of the Late Woodland (between about 150 B.C. to around A.D. 600). As notched points largely went out of use after about A.D. 600 or so in northwestern Indiana, they are not likely to date after that time. Two very refined haft fragments appear to represent the bases of Adena points, a contracting stem point form used during the Early Woodland period (800 to 300 B.C.) (Justice 1987). Adena points were often relatively large bifaces, requiring large pieces of high quality chert for their production. The two possible Adena point bases are made of exotic cherts (Wyandotte [Figure 36k] and Burlington [Figure 36l]).

Figure 36: Stemmed and notched points.

Medial (middle) sections of bifaces in the collection tend to have been heavily reworked after breakage, so that they are very small. This is clear evidence for the
recycling of broken tools. Three (2005.34.1057, 1159 and 1211) are of Wyandotte chert and one is probably heat-treated Burlington (2005.34.1166). The remaining two are of unidentified cherts. The final type of biface fragment consists of small edge segments that may have broken off during use or manufacture. Because of their small size, it is difficult to glean useful information from them.

Several undiagnostic (undated and untyped) base fragments were found. All appear to have been made of local cherts.

Drills

One complete drill and two drill fragments were collected. They are relatively narrow bifaces with sturdy cross sections, and pointed tips that show circular damage. One fragment appears to have been made from a completely exhausted knife blade (Figure 35g). Other forms include a complete bipointed drill (Figure 35h) and a broken “T-drill” (Figure 35f). As drills are tools used to produce other tools, their presence at the site shows that tools and other objects were being produced and maintained here.

Projectile Points

As the name implies, projectile points were probably used to tip spears, darts (short spears thrown with a spear thrower or atlatl), and arrows. Projectile point shape is often a good chronological marker so points are valued by archaeologists because they can often be dated.

Expanding Stemmed and Notched Forms. These two forms were produced by removing flakes from the corner of the biface (in the case of corner notched bifaces and some expanding stemmed points) or along the biface’s lower edge (for some types of expanding stem points). It is often tempting to see variations in point forms as being clearly defined and exclusively determined by chronology, but these two types often grade into each other, and both styles were probably used simultaneously at some times. Most of the fragments in the Collier Lodge collection seem to represent roughly contemporary Late Archaic forms such as Bottle Neck stemmed (Figure 36f and g, a stemmed form in use between about 4000 to 3000 B.C. (Justice 1987)) or Vosburg Corner Notched (Figure 36b, c, and h), a type more common in the northeastern United States and in use between about 3200 to 2500 B.C. (Justice 1987). Expanding stem forms that grade into side notched points are also present in the form of a hafted scraper (Figure 36i) and a haft fragment (36j). These are similar to the Late Archaic type Matanzas side notched (Justice 1987).

In addition to the earlier part of the Late Archaic, corner notched point forms were also common during the Early Archaic period several millennia earlier (especially between about 8000 to 6000 B.C.). The corner notched fragments in the Collier Lodge assemblage are difficult to type because they are small. They share some attributes of
Early Archaic forms, such as corner notching and, in one case, a serrated blade (Figure 36a), but lack other attributes of the period such as basal grinding. As the typological framework for Archaic points of northwestern Indiana is poorly developed, especially for points from the Middle through the Late Archaic, interpretation of point typologies for the region has to be made on a very general level. This would clearly be a good topic for a future research project.

Middle Woodland period lithics are relatively rare in the assemblage, paralleling the pottery collection. One *affinis* Snyders point (Figure 36d) of Burlington chert was heavily resharpened. These are typical features of this type of point in the region. Snyders points were in use between 200 B.C. to A.D. 200 (Justice 1987). An expanding stem point (Figure 35m) fits the characteristics of the type Steuben Expanding stem, a point form in use at the very end of the Middle Woodland period and the earliest part of the Late Woodland. This style was manufactured between about A.D. 100 to 500 (Justice 1987).

**Late Woodland Corner Notched.** Small corner notched points were in use during the earliest portion of the Late Woodland period when the bow and arrow was first coming into use. One very small corner notched point (Figure 36e) was probably produced at that time. This point would have been in use at the time when the LWI pottery at the site was produced.

**Triangular Points.** Triangular points are characteristic of the late prehistoric, dating after about A.D. 600 (Figure 37a to k). Complete triangular points and point fragments are the singe most common point type present at the site. They date to the Late Woodland and Upper Mississippian periods. Most of the triangles are very refined, made by pressure flaking to produce a point from a relatively small flake. They exhibit three different shapes: relatively narrow triangles with flat bases (Figure 37a to d); wider forms with bases that range from concave to convex (Figure 37e to h); and one ovate form (Figure 37k) which could be a heavily resharpened example of the wider form. The two most abundant types are similar to Faulkner’s (1972:81-82) Type I and II triangular points from the Griesmer site. Faulkner suggests that the wider (Type II) forms may have been more common in the Late Woodland and early Upper Mississippian periods. That suggests that they may have been used by the people who produced the Late Woodland collared pottery.

The collection contained two unusually crude examples of triangular points. One was just very roughly made (Figure 37i), and the other was made on a flake (Figure 37j). It is tempting to see these artifacts as the products of someone learning how to produce stone tools. Another unusual fragment (not pictured) is probably a small haft fragment from a triangular point that bears flake scars from finely made oblique pressure flaking on just one side. This type of flaking, along with basal thinning, was most common during the Paleoindian period, and is found on point styles such as Agate Basin that were manufactured at the end of the Paleoindian period between about 8500 to 7400 B.C.
(Justice).  This artifact unfortunately does not provide good evidence of Paleoindian use of the site, which would be exciting because it would provide a very early date for the first inhabitation of Collier Lodge.  As the flaking appears on only one side of the fragment, and the base is thinned but not ground, it is likely that this artifact was a fragment of a Paleoindian point that was reworked into a triangular point at a much later date.  The fragment could have come from anywhere, so it does not necessarily suggest Paleoindian occupation at Collier Lodge.

Knives

Three large triangular bifaces were probably used as knives (Figure 37l and n).  One is made of silicified sandstone.  Another (Figure 37l) is very asymmetrical and probably dates to the Upper Mississippian period, based on the general appearance of the flake scars.

Ground Stone Tools

Very few ground stone tools or tool fragments were recovered from Collier Lodge.  The ground stone artifacts include two sandstone abraders and two fragments from a large birdstone.
**Sandstone Abraders**

Sandstone abraders are pieces of sandstone that were used as natural files or sandpaper. Two examples with obvious grooves from use were found at the site. The best example is shown in Figure 38a. It has grooves on two faces where it was clearly used to sand a rod or shaft, or perhaps to sharpen a bone tool.

![Figure 38: Ground stone.](image)

**Birdstone Fragments**

Two fragments of a large birdstone that had been broken by firecracking were collected. The fragments came from Levels 10 and 11 in Unit E 90-92 N 75-77 and both fit together (Figure 38b). Birdstones are ground stones that have been worked into a bird-like shape by pecking, grinding, and polishing. They are usually made of stones that can
take a high polish, especially banded green slate or colorful igneous rocks. The Collier Lodge example is made of a fine-grained igneous rock, but its light brown color is not particularly striking. Birdstones are highly variable in shape and size (Townsend 1959). They have been found locations widely distributed across the northern half of eastern North America, and are thought to have been manufactured in the middle Great Lakes region because the highest density of specimens (Townsend 1959) and most unfinished examples have been found there (Lilly 1937). Based on the general appearance of the Collier Lodge specimen, which consists of a head with rounded eye bumps and a blunt beak, the fragments probably came from a “bust-type” birdstone consisting of a head mounted on a rounded pedestal. Similar (but not identical) examples from Indiana are depicted and described by Townsend (1959:372-375). He also reviews the various theories about how birdstones were used, and concludes that “the bust-type specimens have always been an enigma” (Townsend 1959:113), but he does suggest that they have functioned as atlatl (spearthrower) grips.

Because birdstones are relatively rare they are not often encountered in professional excavations, and it has therefore proven difficult to find comparative examples that are described and provenienced using professional standards that include artifact dimensions. Three examples shown by Townsend (1959) are very similar in shape to the Collier Lodge specimen (see Plate 130c and d, pg. 373 and Plate 131, pg. 375) and are oriented in such a way that their size can be determined from the scaled photographs. The lengths from the tip of the beak to the back of the eye are approximately 2.9, 1.8 and 1.5 cm respectively. As the corresponding dimension of the Collier Lodge specimen is 5 cm, it appears to be an extremely large example, about 2.5 times the average size of this type of artifact (based on this very limited comparative sample).

Birdstones are often discovered as isolated finds or in association with other artifacts or burials dating to the Terminal Archaic and the start of the Early Woodland period (around 1000 B.C.) when mortuary ceremonialism was becoming increasingly elaborate throughout eastern North America. The fact that the Collier Lodge birdstone fragments were firecracked suggests a rather ignoble end for this artifact as a cooking stone, instead of evidence for a prehistoric burial at the site.

Hammer Stones

Hammer stones are conveniently sized stones that are used as hammers. Three examples of battered hammer stones were found at Collier Lodge. One was used as a cooking stone and is firecracked but still intact. One specimen has a battered edge and may have been used for knapping.
Historic Artifacts

Historic Ceramics

Ware Types

The historic ceramics were catalogued using the system previously used to organize historic ceramics from Marshall County, Indiana (Secunda and Schurr 2005). The definitions used in the catalog of the fine (Appendix 4) and coarse (Appendix 5) earthenwares are followed here because both regions are (and always have been) rural parts of northwestern Indiana. They can therefore be expected to follow the same general trends in ceramic use over time. Historic ceramics are first discussed by ware type and then by decoration to determine when the site was first occupied in the historic period and how it was used after that. The vast majority of the historic ceramics in the Collier Lodge assemblage represent domestic table and kitchen wares used for the production, storage, or serving of food. Exceptions include white clay tobacco pipes, fragments of porcelain dolls, and a few twentieth century ceramics used as electrical insulators.

Table 6 provides a list of the finewares present in the assemblage along with counts and weights for each ware. The table also shows the years when each type of ware was in common use. The earliest possible historic ceramic ware is represented by a single small sherd of what could be Manganese Mottled, a late eighteenth century type. However, no other contemporary late eighteenth century wares, such as creamware or green-edged ware, were collected. This sherd is a doubtful specimen that could easily represent an atypical example of a much later Rockingham glazed ware from an unusually thin bodied vessel such as a mug. At this time, there is no solid evidence for historic ceramics at the site pre-dating the nineteenth century.
Table 6: Relative Abundance and Manufacture Dates of Historic Finewares

<table>
<thead>
<tr>
<th>Ware</th>
<th>Number</th>
<th>Percent</th>
<th>Weight (g)</th>
<th>Percent</th>
<th>Dates of Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese</td>
<td>1</td>
<td>0.06</td>
<td>0.1</td>
<td>0</td>
<td>1680 – 1780</td>
</tr>
<tr>
<td>Mottled?</td>
<td>62</td>
<td>4.09</td>
<td>81.3</td>
<td>4.28</td>
<td>1780 – 1830</td>
</tr>
<tr>
<td>Pearl</td>
<td>53</td>
<td>3.5</td>
<td>86.4</td>
<td>4.55</td>
<td></td>
</tr>
<tr>
<td>Pearl or White</td>
<td>1239</td>
<td>81.89</td>
<td>1136.8</td>
<td>59.9</td>
<td>1830 – Present</td>
</tr>
<tr>
<td>White</td>
<td>6</td>
<td>0.39</td>
<td>45.7</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>White or Ironstone</td>
<td>11</td>
<td>0.72</td>
<td>76</td>
<td>4</td>
<td>1840 – Present</td>
</tr>
<tr>
<td>Ironstone</td>
<td>16</td>
<td>1.05</td>
<td>178.2</td>
<td>9.38</td>
<td></td>
</tr>
<tr>
<td>Soft Paste</td>
<td>36</td>
<td>2.37</td>
<td>205.9</td>
<td>10.84</td>
<td></td>
</tr>
<tr>
<td>Porcelain</td>
<td>3</td>
<td>0.19</td>
<td>2</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td>51</td>
<td>3.37</td>
<td>52.5</td>
<td>2.76</td>
<td>1825 – Present</td>
</tr>
<tr>
<td>White Clay Pipes</td>
<td>34</td>
<td>2.24</td>
<td>32.9</td>
<td>1.73</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1512</td>
<td></td>
<td>1897.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Early nineteenth century occupation of the site is clearly evidenced by pearlwares and sherds that are intermediate in appearance between pearlware and the slightly later whiteware. Pearlwares are an important but minor part of the assemblage, representing between 4 – 10 % of the historic finewares, based on how one handles the intermediate examples and whether the comparison is based on count or weight. The pearlwares show that the site was certainly in use by 1780 - 1830. Whiteware is the most common ware at the site by any measure. As these wares were most common during the middle part of the nineteenth century, most of them probably date to the era between the first Euroamerican settlement of the site when Sawyer and Baum occupied the property.

Like the pearlwares, ironstone and porcelain are minor components of the assemblage. Ironstone dates to the late nineteenth century (after the Civil Ware) and extends into the twentyfirst century. Although porcelains were manufactured much earlier, they tend to follow a similar pattern of abundance in northwestern Indiana. This result is not surprising, as porcelain sherds from porcelain vessels tend to be minor components of all assemblages because of their relatively high cost. However, ironstone china was relatively inexpensive and can be expected to be very common on late nineteenth century sites and throughout most of the twentieth century. As we know the site was occupied when ironstone was in common use, and indeed even had its heyday as a hunting lodge during that period, the absence of ironstone might seem surprising. It is very likely that the relatively low abundance of late nineteenth century and early twentieth century wares shows that a change in garbage disposal patterns occurred at the site during
the later part of the nineteenth century. During the first half of the nineteenth century, it appears that the broken ceramics were discarded on site, very close to where the ceramics were probably used and broken. In short, during the first half of the nineteenth century, when the cabin that once stood at the site was probably occupied, broken dishes were simply thrown out next to the house. In addition to the cabin at Collier Lodge, only one other pre-Civil War Euroamerican cabin site in northern Indiana has been investigated. That is the McCartney cabin site (12 Ko 313) in Kosciusko County, Indiana. A very similar disposal pattern seems to have been practiced at that site, so it might have been a common disposal pattern in rural areas of northern Indiana at the time of earliest settlement. The same disposal pattern seems to have been in use at Potawatomi cabin sites such as Pokagon’s Village (Schurr, et al. 2005) and at Benack’s cabin (Schurr 1997a). At McCartney’s cabin and Pokagon’s Village, some disposal occurred around the cabin, but there were also defined disposal areas (a trash pit at McCartney’s cabin and dumps in low areas at Pokagon’s village). The Benack cabin site produced no evidence of trash pits or dumps, but the site has been badly disturbed and it stood next to the Tippecanoe River, so disposal in the river cannot be ruled out (no evidence of a bankside midden has been found at the site to date). It seems reasonable that similar disposal patterns might have been practiced at the Collier Lodge site. If so, discrete trash deposits from the early nineteenth century such as trash pits or over bank midden deposits might be present at Collier Lodge if they were not been destroyed by later construction episodes. It seems clear that a more modern sensibility toward the disposal of household refuse appeared during the later half of the nineteenth century and was well-established by the hunting lodge era. Whether off site disposal at that time meant more over the bank dumping, disposal in the woods at the southern end of the property, or trash hauling will have to be investigated through field and archival research.

Decorated Fine Earthenwares

The decorated fine earthenwares provide a bit more information about the occupation chronology of the site that just ware types alone. That is because decorative techniques evolved more rapidly than ware types and were more diverse. As shown in Table 7, 72 different decorative types, based on technique and palette, are present in the assemblage (not including 36 indeterminate categories on very small sherds). All the decorations at the site date from the early nineteenth to the twentieth century, just as the wares did. However, decorative techniques provide more specific information about early nineteenth century occupations. The handpainted (Figure 39b to d) and transfer printed (Figure 39e to f) ceramics were produced in England and were common imports prior to the Civil War, during the later part of the Removal Period (between about A.D. 1820 – 1840) (Schurr 2006). These techniques extend into the period of early Euroamerican settlement, beginning into the late 1830s and extending up until the Civil War, but later transfer prints and handpainted designs use different palettes and motifs. In general, most of the sherds from Collier Lodge are too small to permit the identification of specific decorative motifs. Those that can be defined include monochromatic floral handpainting (especially common during the 1820s, Figure 39b), sprig floral hand painting designs in
the late palette (Figure 39d, dating between about 1835 to 1855), mocha ware (Figure 40d, dated from 1830 to 1860), and hand painted annular (banded) decoration (1820 to 1850). As the earliest documented Euroamerican occupation of the site began in 1834, the presence of early handpainted floral monochrome designs in conjunction with blue edged ware (Figure 39a) suggests that there was a Removal Period occupation of the site during the 1820s and the early 1830s. They were probably Potawatomi who gave the site its first known name of Potawatommie Ford. The later styles of blue edged ware, sprig hand painted wares, mocha wares, and sponge wares (Figure 40a to c) were all in common use during the Sawyer and Baum occupations of the site. Late nineteenth and early twentieth century ceramics include ironstone wares (sometimes with molded decorations or a pale blue wash), gilt decoration (usually in a thin line below the rim, Figure 40f), and a few sherds with floral decals (Figure 40g) that were probably manufactured between after 1830. Other late nineteenth century wares include yellowwares with brown Rockingham glaze (Figure 40e).

Figure 39: Early nineteenth century fine earthenwares.
Figure 40: Mid to late nineteenth century fine earthenwares.

Table 7: Relative Abundance and Manufacture Dates of Historic Decorated Finewares

<table>
<thead>
<tr>
<th>Decoration</th>
<th>Number</th>
<th>Weight (g)</th>
<th>Dates of Manufacture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese Mottled?</td>
<td>1</td>
<td>0.1</td>
<td>1830 – 1860</td>
</tr>
<tr>
<td><strong>Blue Edgeware</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue Edgeware; Scalloped Rim w/ Impressed Curved Lines</td>
<td>29</td>
<td>36.5</td>
<td>1780 -1891</td>
</tr>
<tr>
<td>Blue Edgeware; Scalloped rim w/ Impressed Straight Lines</td>
<td>5</td>
<td>19.2</td>
<td>1795 – 1845</td>
</tr>
<tr>
<td>Blue Edgeware; Impressed Curved Lines</td>
<td>1</td>
<td>0.1</td>
<td>1795 – 1845</td>
</tr>
<tr>
<td>Blue Edgeware; Impressed Lines</td>
<td>1</td>
<td>0.7</td>
<td>1795 – 1845</td>
</tr>
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</table>
Blue Edgeware; Scalloped rim  

<p>| | | | |</p>
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<thead>
<tr>
<th></th>
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</tr>
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<tbody>
<tr>
<td>Blue</td>
<td>103</td>
<td>125.7</td>
<td>1795 – 1830</td>
</tr>
<tr>
<td>Blue; Light</td>
<td>2</td>
<td>0.9</td>
<td>1795 – 1830</td>
</tr>
<tr>
<td>Black</td>
<td>17</td>
<td>22.3</td>
<td>1820 – 1840</td>
</tr>
<tr>
<td>Red</td>
<td>39</td>
<td>34</td>
<td>1829 – 1840</td>
</tr>
<tr>
<td>Red; Scalloped Edge</td>
<td>3</td>
<td>5.7</td>
<td>1829 – 1840</td>
</tr>
<tr>
<td>Brown</td>
<td>1</td>
<td>1.27</td>
<td>1829 – 1840</td>
</tr>
<tr>
<td>Blue, Green or Black</td>
<td>1</td>
<td>0.2</td>
<td>1795 – 1840</td>
</tr>
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</table>

Transfer Print  

Handpainted  

<table>
<thead>
<tr>
<th>Annular</th>
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<tbody>
<tr>
<td>Annular; Black</td>
<td>1</td>
<td>0.7</td>
<td>1820 – 1850</td>
</tr>
<tr>
<td>Annular; Blue &amp; Black or Brown</td>
<td>1</td>
<td>0.39</td>
<td>1820 – 1850</td>
</tr>
<tr>
<td>Annular; Red</td>
<td>2</td>
<td>3.3</td>
<td>1820 – 1850</td>
</tr>
<tr>
<td>Annular; Red &amp; Medium Blue</td>
<td>1</td>
<td>1.59</td>
<td>1820 - 1850</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Floral</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Floral, Blue; Medium</td>
<td>1</td>
<td>0.2</td>
<td>1825 - 1830</td>
</tr>
<tr>
<td>Floral; Monochrome Medium Blue</td>
<td>1</td>
<td>2.45</td>
<td>1825 - 1830</td>
</tr>
<tr>
<td>Floral; Green</td>
<td>8</td>
<td>10.3</td>
<td>1830 - 1835</td>
</tr>
<tr>
<td>Floral; Bright Green Leaf; Black Stem</td>
<td>1</td>
<td>1.1</td>
<td>1830 - 1835</td>
</tr>
<tr>
<td>Floral; Olive Green &amp; Black</td>
<td>3</td>
<td>8.7</td>
<td>1830 - 1835</td>
</tr>
<tr>
<td>Floral; Sprig</td>
<td>1</td>
<td>1.46</td>
<td>1835 - 1855</td>
</tr>
<tr>
<td>Floral; Sprig; Red, Blue, Green</td>
<td>3</td>
<td>1.33</td>
<td>1835 - 1855</td>
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<tr>
<td>Floral; Green; tiny red line on exterior</td>
<td>1</td>
<td>1.7</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Blue, Bright Green &amp; Black</td>
<td>1</td>
<td>0.08</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Dark Red</td>
<td>2</td>
<td>0.8</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Dark Red &amp; Green</td>
<td>1</td>
<td>1.38</td>
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</tr>
<tr>
<td>Floral; Dark Red, Blue, Lt. Green</td>
<td>1</td>
<td>2.2</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Dk. Red &amp; Muddy Dark Blue</td>
<td>1</td>
<td>2.5</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Green</td>
<td>4</td>
<td>2.6</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Green &amp; Red</td>
<td>2</td>
<td>1.42</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Green plus Pink Stripes</td>
<td>2</td>
<td>2.36</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Maroon</td>
<td>4</td>
<td>2.4</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Maroon &amp; Dk Green or Black</td>
<td>3</td>
<td>1.7</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Maroon, Cobalt &amp; Black or Dk. Green</td>
<td>2</td>
<td>4.1</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Olive Green</td>
<td>2</td>
<td>1.09</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Olive Green &amp; Black</td>
<td>2</td>
<td>1.1</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Red</td>
<td>1</td>
<td>0.71</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Motif Description</td>
<td>Quantity</td>
<td>Price</td>
<td>Date Range</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>----------</td>
<td>--------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Floral; Red &amp; Black</td>
<td>1</td>
<td>1.64</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Red &amp; Bright Green</td>
<td>3</td>
<td>2.16</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Red &amp; Green</td>
<td>4</td>
<td>4.5</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Floral; Red plus Black Stripe</td>
<td>1</td>
<td>0.3</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Black Line</td>
<td>1</td>
<td>0.23</td>
<td>1820 1855</td>
</tr>
<tr>
<td>Black Line; Tiny Blue Dot in Glaze</td>
<td>1</td>
<td>0.9</td>
<td>n.d.</td>
</tr>
<tr>
<td>Blue</td>
<td>3</td>
<td>1.7</td>
<td>1825 - 1830</td>
</tr>
<tr>
<td>Blue Line</td>
<td>3</td>
<td>2.3</td>
<td>n.d.</td>
</tr>
<tr>
<td>Blue; Medium</td>
<td>2</td>
<td>1.1</td>
<td>n.d.</td>
</tr>
<tr>
<td>Blue; Medium; Line</td>
<td>2</td>
<td>1.7</td>
<td>n.d.</td>
</tr>
<tr>
<td>Blue; Thin Line</td>
<td>1</td>
<td>1.2</td>
<td>n.d.</td>
</tr>
<tr>
<td>Brown; Dark</td>
<td>2</td>
<td>1.24</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Brown; Very Dark</td>
<td>1</td>
<td>1.1</td>
<td>n.d.</td>
</tr>
<tr>
<td>Burgundy</td>
<td>1</td>
<td>0.05</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Green</td>
<td>3</td>
<td>2.4</td>
<td>n.d.</td>
</tr>
<tr>
<td>Green Band; Dark Pthalo</td>
<td>1</td>
<td>0.57</td>
<td>n.d.</td>
</tr>
<tr>
<td>Green Stripe</td>
<td>1</td>
<td>0.77</td>
<td>n.d.</td>
</tr>
<tr>
<td>Green; Dark</td>
<td>1</td>
<td>2.78</td>
<td>1830 -1855</td>
</tr>
<tr>
<td>Medium Blue; Thin Line</td>
<td>4</td>
<td>0.8</td>
<td>n.d.</td>
</tr>
<tr>
<td>Red</td>
<td>1</td>
<td>0.82</td>
<td>n.d.</td>
</tr>
<tr>
<td>Red</td>
<td>1</td>
<td>0.5</td>
<td>n.d.</td>
</tr>
<tr>
<td>Red &amp; Black</td>
<td>1</td>
<td>0.83</td>
<td>n.d.</td>
</tr>
<tr>
<td>Red &amp; Black?</td>
<td>1</td>
<td>0.29</td>
<td>n.d.</td>
</tr>
<tr>
<td>Red &amp; Blue</td>
<td>1</td>
<td>0.77</td>
<td>n.d.</td>
</tr>
<tr>
<td>Red Line</td>
<td>7</td>
<td>5.6</td>
<td>n.d.</td>
</tr>
<tr>
<td>Red; Light</td>
<td>1</td>
<td>0.11</td>
<td>n.d.</td>
</tr>
</tbody>
</table>

**Yellowware**

<table>
<thead>
<tr>
<th>Motif Description</th>
<th>Quantity</th>
<th>Price</th>
<th>Date Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mocha Ware</td>
<td></td>
<td></td>
<td>1825 - present</td>
</tr>
<tr>
<td>Dark brown &amp; Light brown swirls</td>
<td>1</td>
<td>0.3</td>
<td>1830 - 1860</td>
</tr>
<tr>
<td>Dark brown/gold &quot;worm&quot; swirl pattern</td>
<td>1</td>
<td>2.7</td>
<td>1830 - 1860</td>
</tr>
<tr>
<td>Golden Yellow and Brown Swirl</td>
<td>1</td>
<td>0.74</td>
<td>1830 - 1860</td>
</tr>
<tr>
<td>Light blue band &amp; brown swirls</td>
<td>1</td>
<td>5.3</td>
<td>1830 - 1860</td>
</tr>
<tr>
<td>Mocha? Interior Yellow, Exterior White/Lt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td>1</td>
<td>2.45</td>
<td>1830 - 1860</td>
</tr>
<tr>
<td>Molded Design</td>
<td>23</td>
<td>44</td>
<td>n.d.</td>
</tr>
<tr>
<td>Molded Ribs; Annular</td>
<td>2</td>
<td>1.3</td>
<td>n.d.</td>
</tr>
<tr>
<td>Molded; Beaded Rim</td>
<td>1</td>
<td>4.4</td>
<td>n.d.</td>
</tr>
<tr>
<td>Rockingham Glaze</td>
<td>21</td>
<td>18.2</td>
<td>1840 - 1900</td>
</tr>
<tr>
<td>Bennington Glaze</td>
<td>2</td>
<td>0.6</td>
<td>20th cent</td>
</tr>
</tbody>
</table>

**Sponge Printed**  

<table>
<thead>
<tr>
<th>Motif Description</th>
<th>Quantity</th>
<th>Price</th>
<th>Date Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponge Printed</td>
<td></td>
<td></td>
<td>1835 - 1875</td>
</tr>
</tbody>
</table>
Blue  13  6.6  1835 - 1860
Blue; Cobalt  1  0.2  1835 - 1860
Green  6  2.7  1835 - 1860
Green; Medium  3  1.1  1835 - 1860
Red & Blue  1  1.24  1835 - 1860
Blue & Hand Painted Medium Blue Line  4  2  1835 - 1855
Green & Hand Painted Fine Black Lines  1  1.63  1835 - 1860
Green; Light & Hand Painted Black Thin Lines  1  0.1  1835 - 1860
Red & Hand Painted Red Line  1  0.78  1835 - 1860
Cut ; Dark Green Leaves Pattern  1  0.7  1845 - 1875

Floral Decal  1  3.6  1880 - present
Brown, Red & Blue Floral Decal; Gilt Trim (Mug)  14  167  20th cent

Gilt  17  37.9  1880 - present

Bright Green Glaze; Striated Texture  1  5.6  20th cent

Printed? Red & Blue Slightly Raised Floral Pattern  1  0.3  n.d.

Indeterminate Black Decoration  1  0.2  n.d.
Indeterminate Blue Decoration  27  22.4  n.d.
Indeterminate Red Decoration  6  5.7  n.d.

Coarse Earthenwares

The coarse earthenwares, or crockery, were also catalogued using the criteria presented in Secunda, et al. (2005). Sherds were categorized by paste color, interior and exterior surface, and portion of the vessel. An inventory of the coarse earthenware sherds is given in Appendix 5.

The earliest types of coarse earthenwares were redwares, with pastes made of red colored clay that can range in color from light orange to dark red. Redware vessels were often vasiform crocks with rolled or everted rims. The vessels used at Collier Lodge exhibited a number of different exterior surface treatments, including plain surfaces, brown slips, brown glazes, and various shades of yellow, orange, and red. The lighter colored glazes are often somewhat transparent, and mottled glazes of a single color with a transparent background or of several colors are also found. Plain exterior surfaces are very common and many sherds have eroded surfaces because redware vessels were often fired at relatively low temperatures and are therefore not very durable compared to the fine earthenwares and later tan and gray paste coarse earthenwares. Interior surface
treatments are also diverse, although all that were not eroded were glazed. Interior colors include various shades of brown, often mottled or speckled, sometimes combined with a transparent glaze. Other colors include various shades of yellow, olive, dark red and maroon, along with a few examples of clear salt glaze. Most of the redware sherds from Collier Lodge seem to predate the Civil War and therefore reflect the Eaton and Sawyer era occupations. Some could date to the Potawatomi Removal Period as redwares form part of the Pokagon Village assemblage. Representative examples of redware sherds from Collier Lodge are depicted in Figure 41.

Figure 41: Representative redware sherds.

Gray paste wares show a very narrow range of surface treatments. Exteriors are usually dark brown, often with salt or metallic glazes. A few sherds bear a transparent salt glaze, and two sherds may come from a single vessel that had a transparent or light gray glaze with blue decoration. The limited range of variation reflects the very small size of the gray paste collection, but it also indicates increasing standardization of manufacture after the Civil War when these wares were most common.

The tan paste wares are probably the latest in the coarse earthenware series. They are very well fired with a homogenous fine grained paste. Exterior colors include dark brown Albany slips or glazes, white Bristol glaze, a transparent or gray salt glaze, and a sienna brown glaze applied over a ribbed surface. Interior glazes generally replicate those of the exterior.

The chronological trends in the coarse earthenwares replicate those of the fine earthenwares, at least from a numerical basis. As Table 8 shows, pre-Civil War redwares are most common numerically, followed by tan paste wares and then wares with gray
paste. The proportions are slightly different based on weight, as the tan paste wares are the most abundant using that metric. That is largely due to the presence of some very large tan paste sherds, many of which can be fitted together to produce a single vessel—a milk pan with a wedge shaped rim. Milk pans were used for separating milk from cream by allowing the fresh milk to settle in the pan. When the cream had floated to the top, it could be poured off, usually from spout on one end of the pan. Perhaps this indicates that a milk cow was kept on the property, although the milk pan could have been used for other purposes. The vast majority of tan paste sherds came from a single feature, the disturbed area to the north of the Feature 1 brick cabin hearth, suggesting a late nineteenth century date for the disturbing feature.

### Table 8: Paste Colors of Coarse Earthenwares

<table>
<thead>
<tr>
<th>Paste Color</th>
<th>Number</th>
<th>Percent</th>
<th>Weight (grams)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>403</td>
<td>76.9</td>
<td>1028.3</td>
<td>43.0</td>
</tr>
<tr>
<td>Gray</td>
<td>20</td>
<td>3.8</td>
<td>191.8</td>
<td>8.0</td>
</tr>
<tr>
<td>Tan</td>
<td>101</td>
<td>19.3</td>
<td>1169.1</td>
<td>49.0</td>
</tr>
<tr>
<td>Total</td>
<td>524</td>
<td></td>
<td>2389.2</td>
<td></td>
</tr>
</tbody>
</table>

Porcelain

As noted above, porcelain is a relatively minor portion of nineteenth century ceramic assemblages in northwestern Indiana. The porcelain sherds in the assemblage represent three categories of artifacts: containers, toys, and electrical insulators. Three fragments of what is probably a single cup with a footed base made of soft paste porcelain are present (Figure 40h). They include a base sherd (2005.34.574), a rimsherd (2004.01.72) and a handle attachment area (2004.01.208). All probably came from the same cup, or parts of a single set of cups, based on their similar appearance and color. Other food containers include fragments of a thick heavy bowl and a thin sherd with a molded floral decoration. Base on its curved wall, the later sherd may come from a vase, probably dating to the last half of the twentieth century.

Three porcelain sherds represent the remains of toys. One is a fragment of a porcelain doll leg missing the foot (Figure 40i). A trace of black paint remaining on the ankle shows the doll was wearing a black shoe. The other two sherds appear to come from a single toy teacup, representing a very small rim (2004.01.83), and what is probably a handle fragment (2004.01.198). These artifacts show that a little girl once lived at the site during the late nineteenth or early twentieth centuries.

Fragments of three different electrical insulators were collected. These almost certainly date to after 1921, as that is when electricity was first available in the nearby

White Clay Pipes

White clay pipes are often found on nineteenth century sites as they were inexpensive and widely used. The Collier Lodge assemblage is badly fragmented, and consists of mainly of plain bowl (n = 11) and stem (n = 13) fragments. Six decorated bowl fragments show several different molded designs (Figure 42). These include vertical ribs or fluting (n = 2), faint horizontal ribs (n = 1), and some type of floral or garland motif (n = 2). One bowl sherd bears an impressed R and the portion of what could be a T and another appears to have been coated with a light orange slip. A heeled bowl bearing the letter “W” or “M” was also identified. Two decorated stems were collected, each with a different pattern. One is decorated with braided ovals and the other bears faint ribbed bands with a line composed of slanted lines along the axis of the stem. All of these patterns probably date to the nineteenth century, based on their similarities to pipes from the nineteenth century component at the Elam site (Jaekle 1992). Future archival research may be able to determine when and where these pipes were made.
Other Ceramics

Two unusual items were found. These include a fragment from a glazed earthenware door knob and a round clay marble. Both probably date to the later half of the nineteenth century.

Glass

Glass was first sorted by whether it was flat (window glass) or from a container (curved or an identifiable portion such as a base or a bottle neck). For each glass sherd, the color was described and any evidence of burning was noted. For flat glass, any unusually thin or thick pieces were also identified, and for container glass, the portion of the container was recorded, along with any other relevant information such as lettering, mold seams, etc. The glass inventory is given in Appendices 6a and 6b. They are presented in two different tables because the glass sherds from the two years were not catalogued with a consistent system, as was the case for the historic ceramics described above. Creating a single consistent glass inventory will be a future project.

Most of the glass sherds in the assemblage appear to date to the later part of the nineteenth century based on color and manufacturing methods (Lorrain 1968). That presents a contrast to the fine earthenware assemblage and suggests that glass underwent different patterns of use, breakage and discard than earthenwares did. Although it was not possible to study the assemblage in depth at this time, some general features of the assemblage are summarized below to establish topics for future study.

Flat glass sherds possessed tints ranging from very light green to colorless, with the colorless sherds probably dating to the twentieth century. Most of the flat glass probably came from building windows, although some fragments of automotive safety glass and a few possible mirror fragments are also present. It is sometimes possible to date glass based on its thickness (Roenke 1978), and a thickness study might be able to identify flat glass sherds dating to the early historic use of the site. Excavations at Pokagon’s Village (Herbe 2002) have shown that window glass was in use in the region by the 1830s, and perhaps as early as the 1820s. It is likely that some of the flat glass from Collier Lodge dates to the Eaton era and could be identified based on color (typically a light greenish yellow tint) and thickness (typically less than 1.5 mm).

Glass dating to the early nineteenth century tends to have a light green or very dark olive green tint because of impurities in the materials used to make the glass. Manufacturing processes in the first half of the nineteenth century required a relatively large amount of hand work (Lorrain 1968). Flat glass was produced by the crown or cylinder glass methods, both of which required hand production of glass sheets that were then cut into small panes called lights. Bottles were hand blown, often into a three-piece mold, with the neck being produced by hand in a separate operation, sometimes by adding a small
strip of extra glass to form a lip, or by rolling or folding the rim downward. One rim from a very small bottle was formed with a folded lip and probably dates to this period (Figure 43a).

Glass manufacture developed rapidly after 1850 with the development of the two piece mold and the snap case mold (after 1857) which eliminated the need for a pontil, and hence pontil marks. New colors were introduced and the glass was of greater purity and higher quality. Bottles still required a two step operation but necks and lips were increasing produced by using lipping tools, creating a diverse array of more standardized bottles. New molding methods allowed a greater diversity of bottle forms, such as square
bottles with molded patterns or labels. By the start of the twentieth century, the automatic bottling machine appeared, further reducing the cost of bottle manufacture. Threaded canning jars with metal lids lined with milk glass soon became common. For a brief period at the start of the twentieth century, manganese was used to produce a colorless glass. When exposed to sunlight (or other forms of radiation), the manganese discolors and produces an amethyst tint with that deepens with the extent of the exposure, a process called solarization. Because of this defect, the use of manganese was discontinued around 1917 when improved glass formulas became available. A suggested date range of common use for amethyst solarized glass is between 1880 – 1925 (Sutton and Arkush 2002). Amethyst colored sherds thus provide a horizon marker for the late nineteenth and early twentieth centuries. Mouths of bottles formed for crown caps (and the metal bottle caps themselves) were produced after 1892. Glass production continued to evolve and production volumes rose during the twentieth century until the last few decades when glass bottles and containers have increasing been replaced by plastic.

Dark olive glass sherds appear to have come from bottles and some could date to the first half of the nineteenth century. Most of the olive green sherds are lighter in color than what is typical for early olive glass and probably represent various types of green bottles from the twentieth century.

Light green container glass sherds could represent some early nineteenth century bottle fragments, based on color, but most appear to be relatively recent in date. By color, some of them grade into sherds described as light aqua (a color that appears in Mason jars after 1858 and in Putnam lightning stopper jars manufactured after 1882, Figure 43f). Quantification of wall thickness and color by comparison with color standards or by light transmission spectra might help further sort these sherds into better defined color categories in the future. Small amounts of amethyst glass are present in the assemblage, although other sherds of manganese glass that were buried before they had to the opportunity to become solarized are probably also present in the collection. Perhaps some type of chemical method could be used to identify these sherds if it ever became important. Vessel forms include small bottles, perhaps used for medicine, one neck from a larger bottle (43c), and lamp chimney sherds (solarized example, 43d, compared with colorless example, 43e).

Colorless sherds almost certainly date to the twentieth century. They represent small jars (probably for condiments, cosmetics, or unguents) and flasks that contained alcohol. Other colorless or light green tinted sherds came from kerosene lamp chimneys. Most can be identified because they are very thin and many are very weathered, perhaps as a side effect of being exposed to heat for long periods of time. Some of the chimneys had beaded rims. One large chimney made of relatively thick glass was partially reconstructed. This may be been used with a large lamp whose metal frame was also collected. One drinking glass (Figure 44) is largely intact. It has an etched decoration of what appears to be thistle plants. Similar shaped glasses with etched floral decorations were offered for sale by the Sears, Roebuck Company in 1897 (Israel 1993). However,
the glasses depicted in the catalog have more complex floral decorations, so they might date bit later in time.

Amber glass is primarily represented by beer bottle fragments, most of which seem relatively recent, except one complete example of a Miller beer bottle (Figure 45) manufactured with a post-bottom mold and an embossed label was probably made after 1892, when crown caps became available, and prior to 1903 when paper labels generally replaced embossing (Sutton and Arkush 2002). A few very light amber or honey colored sherds may have come from a drinking glass, based on rim form. It is possible that these represent amber solarized glass produced just after 1917 when manganese was briefly replaced with selenium because of supply interruptions during World War I (Sutton and Arkush 2002). Once again, perhaps chemical tests could be done to test this possibility in the future. One non-container example of amber glass is provided by a small amber glass shank button (Figure 43g).
There were a few unusual glass items. These include three very small sherds with a distinctive pale blue green tint with a hint of cobalt blue. One piece of flat glass has dark green paint on one side. It is probably from a window or a sign, and if it was from a window, it provides some information about what kind of trim colors might have been in use on buildings at the site. Other items, such as fragments of a tubular glass automotive fuse, are less interesting to contemporary archaeologists.

Additional studies of the glass assemblage could provide more information about dates of manufacture, types of vessels used at the site, and could be used to date features and levels. Studies of the distribution of broken and burned glass could also better define the site formation processes that operated at Collier Lodge.

Metal

The magnetic survey (Figure 6) indicates that ferrous artifacts are very common at the site. That was certainly confirmed by the excavations which produced a large array of metal artifacts, ranking from ones which date to the eighteenth century to all kinds of modern metal debris. Metal technology evolved very rapidly through the nineteenth and
twentieth centuries, and except for some well defined types of artifacts such as fur trade era trade goods (Quimby 1966) and nails (Nagy 1989), there is no overarching classification system in general use in the region. The Collier Lodge metal from 2004 was sorted and identified by members of the Kankakee Valley Historical Society. Having no general framework, and very little idea about what kinds of metal items could be expected from a site like Collier Lodge, the cataloging system used in 2004 was primarily descriptive and not very standardized. The goal was to inventory the artifacts, identify each one, and make them accessible for future studies. The 2004 catalog was then used to develop a dictionary of terms for common items that was used when the artifacts from 2005 were cataloged. In the future, it would be desirable to revise the 2004 inventory of artifacts catalogued to employ a consistent terminology matching the one used in 2005.

In 2005, the metal artifacts were sorted by metal type and then identified. Most metal artifacts are made of iron and probably date to the late nineteenth and twentieth centuries. As can be seen from Appendix 7, these include a very diverse array of fasteners (cut and wire nails, staples, tacks, bolts, nuts, railroad spikes, paper clips, etc.). In addition to nails of almost all sizes, tacks were also collected. Most of these are cut, and some with brass heads were probably used for decorative furniture or trunks. Some very large square bolts and very large nails were probably used in structures. These may date to the era when a sawmill was operated at the site in a large shed-like structure visible in a picture of the site dating to around 1890 (John Hodson, personal communication). Most large bolts and nails were broken under stress, perhaps when the building was demolished, or with the demise of one of the many bridges built nearby. Other building-related items date much later in time, especially washers and fragments of plumbing fittings and pipes. Wood screws of various types, along with hooks and eyes, were also found. Two horseshoe nails indicate that horses may have been kept at the site.

Sheet iron fragments were relatively abundant. Some of these have rolled rims or seams and most of the sheet iron fragments probably came from cans. The majority are so corroded that little information can be gleaned from them. The same can be said for most of the fragments of what appear to be fragments of various types of iron straps. Crown bottle caps were another metal container item that was relatively common. Some of these have plastic liners and are therefore relatively recent. Other iron items include clothing fasteners such as buttons and buckles. These are supplemented by brass eyelets, buttons, and clothing rivets.

Some very large iron artifacts were collected. These include a very large iron object that was probably a damper for a flue, and a round lid from a cast iron stove. Railroad spikes and short segments of what appear to be narrow rails provide a bit of puzzle. Perhaps some kind of rail system was used in the sawmill era. A large frame from a kerosene lamp was also found. It appears to be similar or identical to a lamp depicted in the 1897 Sears, Roebuck catalog and described as the R & H Mammoth Store and Hall Lamp, “...the strongest and best finished lamp on the market” (Israel 1993).
Many different kinds of wire were found. These include iron wires that could be fragments of fencing or bail handles, a few small fragments of barbed wire, and vinyl covered copper electrical wire dating to the last few decades.

Aluminum artifacts included scraps of aluminum foil, pop tops from beverage cans, rivets, fragments of automotive or boat trim, and what appears to be a metal grill from a toaster. All of these items probably postdate World War II.

Twelve coins, all of small denomination, were also found. They range in date from an 1892 dime to a 1985 nickel.

Brass artifacts are especially interesting to archaeologists because brass is one of the first easily identified metals to appear on sites when Native Americans have initial contact with Europeans. Sheet brass fragments represent scrap from the manufacture of items from brass sheet or pieces of brass kettles. The manufacture of items from brass sheet was an activity that extended into the late Removal period, based on the presence of cut sheet brass fragments from Pokagon’s Village. In addition to cut brass sheet, which is somewhat ambiguous, a tinkling cone (Figure 46a) and a rolled tube of brass (Figure 46b) are likely historic Native American brass artifacts, along with a fragment of an embossed brass sheet (Figure 46c). Quimby (1966:70-73) considered these types of artifacts to be most characteristic of the Middle Historic period from 1670 - 1760. Brass artifacts of
these types have not been found on late Removal period sites, consistent with Quimby’s chronology (although cut brass scrap has been found, as noted above). During the Late Historic period (1760 – 1820), silver largely replaced brass as the decorative metal of choice. A single piece of trade silver (Figure 46d), a small embossed triangular sheet with perforated corners, is very similar to parts of a composite pendant shown by Quimby (1966:94, Fig. 20).

Other brass artifacts, such as gun shells, a clip from a rubber boot, plumbing fixture fragments, gilded brass costume jewelry, and electrical contacts, are clearly of much later date. Numerous small buckles, clips, and twenty six buttons can provide information about the types of clothing that were worn at the site. Brass button forms range from simple four hole designs (Figure 47a & b), a four hole button with a sunflower-like border (47c), and floral and gilded shank forms (Figure 47d – f). Many spent gunshells and shotshell brasses were collected (representative examples are shown in Figure 48). These testify to the established use of the site as a hunting lodge and merit study in the future. Many of them are low profile brass shells that were combined with paper cartridges and charged with black powder. These date to the late nineteenth and early twentieth centuries (the Hunting Lodge period).

Figure 47: Brass buttons.
Metal fishing equipment was an expected component of the Collier Lodge assemblage (Figure 49). Fishing equipment includes an iron section of a rod with a line guide, fishhooks, lead sinkers, a brass swivel and other lure hardware, a short length of chain that could have come from a stringer, and a large lure spoon that appears to have been made from the bowl of kitchen spoon.
Lead items include molted blobs of lead, the leftovers of molding shot or sinkers at the site. The presence of a few musket balls suggests they could have been manufactured at the site.

Future analysis of the metal assemblage from Collier Lodge will focus on applying a standardized inventory system to all the metal artifacts and using chronologically sensitive artifact types to date deposits and understand site formation processes. The assemblage could also benefit from a functional analysis such as those commonly done in historic archaeology, where artifacts are studied based on the activities they were used for (fishing, hunting, clothing, construction, etc.). These will provide many topics for future research projects. Conservation of iron artifacts will also be an important task for the future.

**Gunflints**

Three gunflints were found. Two are of honey colored French chert and were made with the spall process (Figure 50). One (50b) appears to have been completely exhausted and heavily reworked. A third gunflint of the spall type (not shown) is of an unidentified chert and could be a Native American production.
Ground Stone Pipe Fragments

Two pipe bowl fragments were found at Collier Lodge (Figure 37c and d). Both came from the base of the bowl. A fragment of coarse sandstone (Figure 37c) came from a pipe with a rounded bottom, and probably came from a pipe with a vasiform bowl fitted with a wooden stem. The complete bowl was similar in shape to a pipe bowl, also made of a coarse sandstone, from the Pokagon Village site (20 Be 13) that was probably made between A.D. 1825 – 1839 (Bollwerk 2006). The pipe would have had a simple stone bowl fitted with a wooden stem. The second fragment (37d) is made of a fine grained gray sandstone or sandy limestone and probably came from the stem attachment area of an elbow pipe. The stem appears to have had a more complex shape than that a simple cylinder, but the fragment is too small to determine what the bowl shape might have been.

Hand-made pipes are a typical part of Removal period assemblages when these home-made forms were used alongside imported white clay pipes. They are often cited as evidence for ritual pipe smoking by Native Americans, in contrast to what might be called the recreational smoking of imported clay pipes (Trubowitz, 1992). They are routinely discovered in general midden contexts at Removal period Potawatomi sites, such as at Pokagon Village and at the Windrose site in Illinois (Wagner 2001).
Brick and Mortar

Both brick and mortar were found in abundance at Collier Lodge, as shown in Appendix 10. Over 7600 brick fragments with a total weight of almost 43 kg were collected from 319 different contexts. The brick fragments range in size from very small fragments to almost complete bricks. All are similar in appearance to the bricks of Feature 1, which were light in color, relatively porous, and fired at a relatively low temperature. Some of the larger brick fragments show clear layers of lamination produced when the clay was molded by hand to produce a hand struck brick. This is the earliest type of brick that was produced in the region and could easily have been produced on or near the site. This type of brick was most common between 1830 and 1860 (Mansberger 1981; citing Stelle 2001). This is consistent with the theory that the fireplace was part of the Eaton or Sawyer cabin. Eventual analysis of the brick fragments may make it possible to estimate the number of bricks that were used at the site (based on the density distribution of brick fragments across the site and the average weight of a brick). That may help determine whether the cabin also had a brick fireplace, something that seems likely as large amounts of daub (baked clay) should be present at the site if the cabin had a stick chimney (made of sticks plastered with clay) and a brick firebox or hearth.

Many fragments of mortar were also found (also listed in Appendix 10). Most of the almost 2000 mortar fragments are very sandy and relatively soft, and probably also came from the hypothesized cabin chimney. The mortar sample came from 167 contexts and weighs almost 4 kg. Some of the sample may include small fragments of concrete as the pieces are generally relatively small.

Faunal and Floral Remains

Faunal Remains

The faunal assemblage from Collier Lodge (Appendix 8) consists of over 10,000 fragments of bone and shell weighing over 7.5 kg. It will eventually be necessary to have a faunal expert analyze the assemblage to identify all the fragments. An afternoon-long workshop for the members of the Kankakee Valley Historical Society was directed by Terrance J. Martin, Illinois State Museum. The participants in the workshop identified a very small number of the fragments in the collection but even this short exercise showed that the collection is very diverse, including both domesticates (cow, pig, and chicken) and many different wild taxa. The wild taxa identified range from reptiles (turtles), fish, mollusks (snails and mussels), birds (ducks), and many different kinds of mammals (muskrat, beaver, squirrel, deer, raccoon, and black bear). Further identification of the faunal remains will make it possible to study changes in faunal use patterns over time, but that will require additional resources and the assistance of a faunal specialist.
Worked Bone and Shell

In addition to faunal remains that can provide information about diet and the local environment of the site, a number of artifacts made of bone or shell were collected, depicted in Figure 51. The only prehistoric bone artifact found was the shaft of a fishhook made of bone (51e). The hook portion has broken off, but the hook was clearly attached by tying a line around the groove near the end of the shaft. It is possible that additional fragments of bone tools will be discovered in the faunal assemblage during future studies.

![Figure 51: Bone and shell artifacts.](image)

All of the historic bone and shell artifacts were clothing fasteners, either buttons (n = 9) or a single stud, perhaps from a cufflink or for a dress shirt. Three of the buttons were made of bone. They include a two-hole button with very large holes (Figure 51b), one small single-hole button (51a), and one four-hole button (51c). Six buttons were made of shell (51d). They include a single one-hole button, two two-hole buttons, and two four-hole buttons, all of which came from the same context (as shown by their catalog number). The stud has a circular shell head attached to a brass shaft that appears to have been broken. No prehistoric shell artifacts have been identified in the collection.
Floral Remains

Because of the temperate climate of the upper Great Lakes region, floral remains are usually only preserved over long periods of time when they are carbonized. Numerous samples of carbonized plant remains were collected. These include 17 flotation samples which will need to be analyzed by a professional paleoethnobotanist. The contexts that produced flotation samples are listed in Appendix 1. The flotation samples are from feature contexts and may provide information about the local environment and the types of plants that were used during the prehistoric period. They may also be suitable for radiocarbon dating. In addition to flotation samples, charcoal was also collected during screening. These tend to be wood charcoal larger than ¼ inch in size. During screening, any charcoal fragments that were collected were placed into a foil pouch. The charcoal samples were then allowed to dry in the lab in opened packets and weighed. The inventory of charcoal samples is given in Appendix 9. Over 190 charcoal samples were collected, containing over 5,400 grams of charcoal, although this is probably an overestimate because the samples have not been cleaned. The charcoal samples collected by screening may date to any period in which the site was used, and can provide information about wood use at Collier Lodge. The charcoal samples also have the potential to provide radiocarbon dates. Unfortunately, coal was also abundant at the site, and therefore radiocarbon samples might give unreliable results if the coal has contaminated the wood charcoal, which is especially likely for samples of mixed coal and charcoal (41 samples totaling 1698 grams are listed in Appendix 9). In addition to the mixed samples, both unburned coal and coal slag (or “clinkers,” indicated with the letters CS in Appendix 9) were also collected. Coal was clearly an important fuel at the Collier Lodge, as 173 samples with a total weight of more than 16 kg were collected. It seems likely that wood, being locally abundant, was the most important fuel used during the early historic use of the site, and that coal became more important later in the nineteenth century, especially with the development of the railroad network after 1850. Archival research on the availability and use of coal in northwestern Indiana may help determine when coal became an important fuel in the region. It also possible that some of the coal slag was brought to the site to be used as gravel.

Rocks and Minerals

The Collier Lodge site is located within the Kankakee Valley Outwash and Lacustrine Plain (Schneider 1966). The valley was formed by glacial outwash at the start of the Holocene. The geological formation processes of the valley determined the kinds of lithic resources available in the vicinity of the site. The local bedrock lies buried below a deep mantle of unconsolidated materials deposited by flowing water. For the prehistoric inhabitants of the site, that meant that there were no bountiful sources of high quality chert located nearby. The local source of chert consists of chert nodules that were transported into the region by glacial activity. Because of their rough treatment during this process, which consisted of being ground and crushed and frozen and thawed for perhaps tens of thousands of years, glacial chert cobbles are usually heavily patinated and
often contain fracture lines that create unpredictable breaks during knapping. Glacial cobbles are also extremely hard, as they are the remnants of a very destructive process. These characteristics make them extremely difficult to work with, and sometimes they were apparently unusable, as shown by a chert nodule recovered in the excavation which had one flake removed from it. This nodule was probably tested and found wanting. Glacial chert cobbles are not very useful for the production of bifacial tools because of their difficult working characteristics and relatively small size, but they were probably used for that purpose at Collier Lodge. The assemblage contains many primary flakes from them and a few partially worked cobbles and crude bifaces that appear to have broken unexpectedly during manufacture, evidence that probably attests to the inhabitants desperation for suitable chert, given the lack of highly preferred bedrock sources in the vicinity. Glacial cobbles can produce useful flakes by bipolar reduction, a procedure which basically consists of smashing the cobble between two rocks and then picking out any useful flakes and leaving behind any unusable fragments. Many of the blocky chert fragments in the assemblage were probably produced as unwanted byproducts of this method. During the Late Woodland and Upper Mississippian periods, when projectile points were pressure flaked from small flakes, bipolar reduction of glacial cobbles would have been an efficient way to make use of them.

Sediments near the surface in the Kankakee Valley are relatively fine grained, showing they were deposited in a relatively low energy environment. Thus, large boulders are scarce and most rocks are relatively small and have been crushed or rounded by glacial and fluvial reworking. Although relatively small in size, they are extremely variable in type, representing cobbles derived from many different kinds of parent materials.

The assemblage from Collier Lodge contains many rocks (inventoried in Appendix 11), many of which were probably used by people at the site, and others which might not have any cultural significance, but were collected during excavation because they were unusual and caught the screener’s eye. Fire cracked rock (FCR) was the most abundant lithic artifact present at the site. Over 14,000 individual pieces were catalogued, with a total weight of over 176 kg. Much of the FCR came from the large prehistoric roasting pit discovered in 2005. As Figure 52 shows, the pit was lined with a thick layer of glacial cobbles that were obviously heated in situ because many of them were cracked in place. In addition to FCR, other cultural rocks included limestone gravel, some of which appeared to be relatively recent (mainly from shovel probes near the eastern edge of the site property, where a gravel drive runs). The modern gravel is very distinctive as it is made of crushed limestone. Other gravel-sized pieces of limestone that were collected are rounded and water-worn. It is not clear if these represent a natural component of the site matrix or whether they are an earlier form of gravel that was brought to the site. A future contextual analysis of the distribution and density of these fragments may help determine the source, along with some historic research on the sources of gravels that were used in the region at various times.
Other rocks and minerals that were collected are probably natural constituents of the soil. These include pieces of waterworn chalk, small flakes of slate (although these could have come from the manufacture of slate tools by the prehistoric inhabitants of the site), and crystals (which also could have been collected by anyone who lived at the site and had an interest in colorful or distinctive rocks). One piece of hematite, a very metallic iron ore, was also found. During the Late Archaic and Middle Woodland period hematite was sometimes used to make artifacts with ceremonial or symbolic uses. However, this appears to be an unaltered piece of natural hematite that could have been deposited at the site by natural processes.
Conclusions

Public Archaeology at Collier Lodge

The Collier Project of 2005 was conducted as a public archaeology project. Public participation ranged from visiting the site to actively participating in the field and lab work. The Kankakee Valley Historical Society kept a record of all visitors and KVHS members who worked at the site. Table 9 shows the number of volunteers that worked on the project and the hours that they contributed to make it a success.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number of Participants</th>
<th>Number of Hours Donated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excavation</td>
<td>121</td>
<td>1957.75</td>
</tr>
<tr>
<td>Laboratory Work</td>
<td>33</td>
<td>212.25</td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td>2170.00</td>
</tr>
<tr>
<td>Visitors</td>
<td>78</td>
<td></td>
</tr>
</tbody>
</table>

During the course of the excavation, there were an average of 33 volunteers working at the site each day, contributing an average of 163.25 hours per day (the average volunteer worked at the site for five hours per day, and some contributed over eight hours per day). The work at the site included twelve days of excavation and an additional seven days for backfilling, artifact washing, and sorting. These figures do not include the many hours spent preparing for the dig or compiling the participation data.

One of the best things about the project is that it attracted a diverse array of participants, with the youngest volunteer being a 7 year old boy and the oldest being an 85 year old female, although it was clear that age was just a state of mind for most of the volunteers at Collier Lodge. In addition to the KVHS members, two Boy Scout troops visited the site to obtain a total of eight archaeology merit badges. The Midwest Center Youth made two outings to increase awareness of local history. The total of non-participant visitors was 78 over 9 days. This was somewhat of a disappointment, as the excavations were held on Saturdays to try and attract more people than in the previous year (when the excavations were held on a Monday through Thursday schedule). It is possible that many people were so busy on weekends that they simply did not have time to visit the site. The weather was also extremely hot during the course of the project, and that may have discouraged many, especially the elderly or those with small children. On several days we were forced to end the excavations by noon because the heat and humidity had reached dangerous levels. In the future it was resolved to return to the Monday through Thursday schedule and hope for better weather.
Summary and Future Potential

It is clear that the Collier Lodge site contains a diverse and abundant archaeological record spanning approximately 3,000 years. Because of its unique location on the landscape near a convenient place to cross the Kankakee marsh, it has been an important settlement location during most of the last three millennia. With the proposed restoration of the lodge, it will remain a significant location for the local community for the foreseeable future.

Because the site has never been plowed, it exhibits an unusual degree of archaeological integrity for an archaeological site in the Kankakee valley of northwestern Indiana. With an approximately density of 0.44 features per square meter of site area, the 900 m² minimal estimate of the site area suggests that something like 400 features may be present at the site. The site is clearly a good candidate for the State and National Registers of Historic Places. The presence of identifiable features dating from at least the Early Woodland period (beginning around 800 B.C.) to the Upper Mississippian period (around A.D. 1600) provides an opportunity to examine changing adaptations to the marsh margin throughout the later part of prehistory when ceramics were in use. Historic period Native American occupations have not been identified in feature contexts, but are attested to by artifacts dating from as early as the 1700s up to the first two or three decades of the nineteenth century. Historic period Euroamerican features and artifacts span the full range of known historic occupation at the site, from the first recorded occupation by Eaton up to the very recent past.

This report has provided a summary of the abundant and diverse material culture at the site. There are clearly many research problems that can be approached with site collections, from basic ones of regional chronology, to issues of site formation processes, to analyses of changing economic and social patterns in the region over the last two centuries. The collections and their documentation are an important resource that will provide the bases for many future research projects and laboratory investigations.

Future field work at the site should be directed toward unsolved problems. These include finishing units that were opened but that could not be completed in 2005, determining the eastern boundary of the core area of the site, and determining the size and layout of the cabin associated with the brick hearth (Feature 1). Geophysical survey methods in addition to those previously used could also be evaluated. The preparation of nominations to the State and National Registers is an important priority for the future.

And finally, the work at Collier Lodge with the Kankakee Valley Historical Society has revealed a previously unsuspected interest in archaeology within the local community, amply attested to by the many people who gave so much of their own time and effort to the project. The archaeological project at Collier Lodge has proved to be a very effective way for the Kankakee Historical Society to generate interest in its goal of
preserving the Collier Lodge. It has helped to educate many people about archaeological methods and site conservation.
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