

Plan for Scientific Geophysical Surveys and Excavations
at the Collier Lodge Site (12 Pr 36)

Submitted to the
Indiana Department of Natural Resources,
Division of Historic Preservation and Archaeology

by

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Archaeological Background

Prior Field Work at the Collier Lodge Site

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. This location was first described as an archaeological site by McAllister (1932) as Porter County site number 36. At the time of McAllister's visit to the site, it was only one of two prehistoric sites in Porter County known to have produced pottery. From McAllister's description of sherds from the site, it is clear that they were shell-tempered, an artifact type characteristic of the Upper Mississippian period (ca. A.D. 1100 to historic contact) in northwestern Indiana (Faulkner 1972; Schurr 2003).

Today the site consists of a grassy lawn containing the Collier Lodge building and several small outbuildings. The site 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 this 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.

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 m². The results of the geophysical survey clearly revealed the foundation of a building that once stood at the 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 5 m intervals. Three lines of probes were completed. The contents of all shovel probes were screen 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 archaeological 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 dating as early as A.D. 1780 - 1830 (a rim sherd from a blue-edged pearlware plate) were also collected. This style of rim is 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 decorations that is similar to the types Koshoning Bold (Hall 1962) or Fifield Bold ([Faulkner 1972](#)), a style characteristic of the early Upper Mississippian period prior to about A.D. 1300. The recovery of such a large sherd (approximately 10 cm wide) suggested that prehistoric features are 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. It is possible that archaeological deposits predating the Upper Mississippian could be present at the site, but this could not be confirmed because the one inch soil probes into the shovel probe floors did not recover any diagnostics (as expected for such a small diameter probe).

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 are ubiquitous.

Bone preservation at the site was exceptionally good. Taxa preliminarily identified in the faunal assemblage include 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.

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 (Schurr in prep.). The 2004 field season was very successful. All of the 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 supervision of the P.I. 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 insects, sun, 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, 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 (Figure 1). The magnetic surveys were very 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 2). 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 m² to test for subsurface deposits. The units exposed seven features. These included a brick feature 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 storage pit that had been lined with marl clay and then used as a refuse pit before it was abandoned; several shallow basin-shaped stains that were prehistoric features of unknown function; and one large prehistoric feature whose function date and function are unknown 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.

Every unit contained at least one feature. Based on a feature density of 0.44 features per m² (7 features within the 16 m² area opened) and with a site area of 960 m² (from the midden limits according to resistivity survey), the site could contain over 400 features, an unusually high density for northwestern Indiana. The site is also unusual because it has never been plowed and contains un-eroded stratified deposits dating back to the Early Woodland period, with evidence of Middle Woodland, Late Woodland and both early and late Upper Mississippian (Fisher and Huber styles of pottery were both collected). With the addition of the historic occupations, this site offers the opportunity to explore research questions about human activities and adaptations adjacent to the Kankakee Marsh over the last three millennia.

None of the larger features were completely excavated because we ran out of time. The floors of units that contained unfinished features were covered with six mil polyethylene and backfilled to protect the features.

Proposed Investigations

The project will consist of three weeks on field work at the Collier Lodge site (12 Pr 36) from mid-June to early July in the summer of 2005. The project will be directed by the P.I. and labor will be provided by members of the Kankakee Valley Historical Society. If Notre Dame offers an archaeological field school in 2005, field school students will also participate.

The archaeological goals for the 2005 season will include:

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 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 suspect the feature is part of a post-Removal (post 1840) cabin that was demolished in the 1890s when the Collier Lodge building now standing at the site was constructed. It is necessary to completely expose the feature in its surrounding context to determine whether or not this interpretation is correct, given that it is based on an uncompleted excavation.
3. Complete Feature 3, an Upper Mississippian storage pit. The feature was cross-sectioned and profiled but approximately 30 percent of it was covered and backfilled. The remaining portions of this stratified feature will be removed and samples will be taken for water screening and flotation. A key goal is to determine what was stored in the pit. The shovel probe from 2003 that produced the Fifield Bold sherd was placed into this pit, dating the feature between A.D. 1300 – 1450.
4. Expose and excavate Feature 7, a prehistoric feature located at the midden/subsoil junction. The feature was defined but not excavated because it extended in the unit wall at a depth of 1 m below surface. It will be necessary to open the adjacent unit 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 suggests that it extends at least 25 cm into the subsoil. The feature contents are 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 will increase our knowledge of the regional archaeology.
5. Open at least one unit in the portion of the site south of the “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.
6. Open one excavation unit under an area that is now covered by a concrete pad (the floor of a former garage). This area of the site has been inaccessible because of the concrete covering, but the concrete will probably be removed before next summer.

Excavation Procedures

Investigation at the site will begin 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 will be maintained by reference to the grid coordinate system.

Geophysical surveys will be conducted in appropriately placed grid units indexed to the areas surveyed in 2003 and 2004. Grids will be shaped and placed as necessary to avoid obstacles. Test excavations will then be conducted to test hypotheses about feature distributions developed from the geophysical data and to assess the depth and integrity of midden deposits. All excavation will be done by hand, using either shovels or trowels. The maximum size of any single excavation unit will be 2 meters square. The units will be 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 will be subdivided into arbitrary 10 cm levels to maintain additional stratigraphic control. Soil colors will be described using the Munsell system (1990 edition). All excavated soil will be screened through 1/4 inch hardware cloth, except for soils which appear to contain high concentrations of microbotanical or microfaunal remains. Soils from these contexts will be processed using flotation recovery techniques. Additional soil samples will also be water screened to test whether very small artifacts (such as seed beads or gunshot) are present). Soil samples will also be collected from each archaeological stratum. Each archaeological level and feature will be 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 will be piece-plotted. All artifacts collected will be recorded in a field specimen log to maintain associations between specimens and their archaeological contexts. Color slides and black and white photographs will be taken to document the excavations and a log book of all excavation photographs will be maintained. Standard film photographs will be supplemented with digital images. The completed field records and the photographs will be curated at the Archaeology Laboratory, University of Notre Dame. All artifacts collected during the excavation will be processed, catalogued, and will also be curated at the Archaeology Laboratory along with their associated documentation where they will be used for research and teaching.

It is now estimated that a maximum total area of approximately 10 m² will be excavated over the course of the project. At the conclusion of the excavation, all units will be backfilled and the site contours will be stabilized to prevent erosion. The methods used in the field investigation will meet or exceed the standards described in Department of Natural Resources 312 IAC 22.

The scientific investigation will be conducted between June 15 and July 2, 2005. Personnel for the project will consist of a volunteers from the Kankakee Valley Historical Society, at least two field assistants supported by a project grant from the DHPA, at least three Notre Dame students conducting directed field research, and at least one Boy Scout

troop. The excavations will be directed by Dr. Mark R. Schurr. He has extensive experience in Indiana archaeology and human osteology (vita attached). The members of the KVHS will receive an orientation session in early May to prepare them for the basics of work at an archaeological site. Inexperienced KVHS members will be paired with more experienced people. They will begin by assisting with screening, flotation, and artifact processing, and will take on additional tasks as they are trained.

A report of the results of the excavation along with an amended copy of the state archaeological inventory form for the site will be submitted to the Division of Historic Preservation and Archaeology one year after the excavations are completed. Further reports describing laboratory analysis of cultural and biological materials from the site will be submitted as these analyses are completed.

Statement on Human Burials

McAllister (1932) reported that several burials were found in the “immediate vicinity” of the site prior to 1931. Their cultural affiliation is unknown but it is assumed they were prehistoric. Local oral history holds that burials were found under the area of a porch on the Lodge. Based on a picture of the Lodge dating to the early twentieth century, the burials may have come from the river bank along the western edge of the lodge. This area is now heavily overgrown with vegetation and will not be investigated during the project.

The collection of human bone is not a goal of the project and all reasonable attempts will be made to avoid disturbing human burials. If human bone is accidentally encountered during excavation, all work in the excavation unit containing the bone will be immediately halted, and the Division of Historic Preservation and Archaeology will be notified within two working days. Any human remains encountered will be treated in accordance with IC 14-21-1 and 312 IAC 22. We would then prefer to conduct the minimum amount of excavation necessary to determine the age and cultural affiliation of the burial (i.e., does it represent a prehistoric burial or a recent forensic case?), to document these findings, and to then cover the burial with soil and preserve it *in situ*. The landowners of each site have also requested that any burials that are accidentally encountered be preserved.

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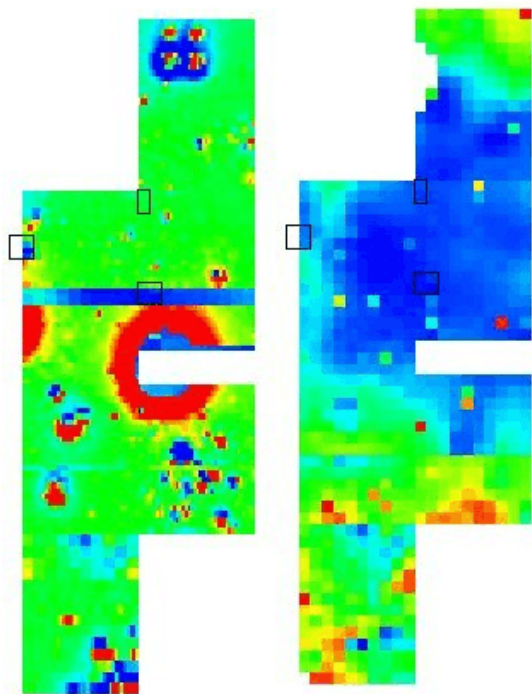


Figure 1: Magnetic and Resistivity Surveys

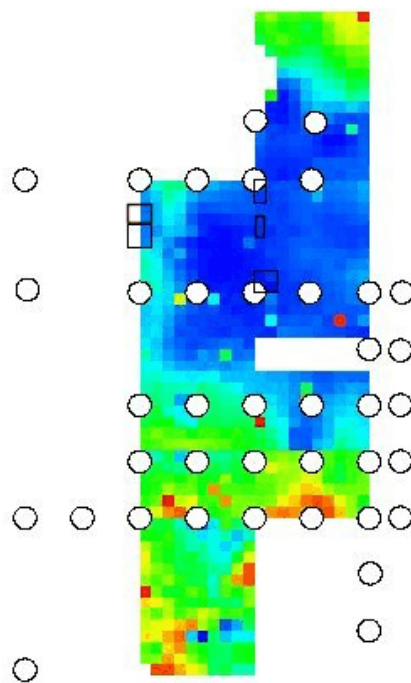


Figure 2: Shovel Probe Locations