Archaeological Investigations at the Prather Site, Clark County, Indiana:

The 2003 Baseline Archaeological Survey

by
Cheryl Ann Munson & Robert G. McCullough

August 2004

ARCHAEOLOGICAL INVESTIGATIONS

AT THE PRATHER SITE,

CLARK COUNTY, INDIANA:

THE 2003 BASELINE ARCHAEOLOGICAL SURVEY

by

Cheryl Ann Munson
Department of Anthropology
Indiana University - Bloomington

and

Robert G. McCullough
IPFW Archaeological Survey
Indiana University-Purdue University, Fort Wayne

Prepared for
Indiana Department of Natural Resources,
Division of Historic Preservation and Archaeology

and

National Park Service
U.S. Department of Interior

August 2004

Forward to the Digital Version
August 2004

This is a digital version of the Indiana University–Purdue University at Fort Wayne Archaeological Survey (IPFW-AS) Report of Investigations 402, originally published in August of 2004. This digital version was produced by the IPFW-AS using Adobe Acrobat 5.0 software and may be viewed or printed using Adobe Acrobat Reader. The digital version of ROI 402 is identical in content to the original paper version of the report. However, due to changes in format, there may be some differences in pagination from the original.

This report contains archaeological site location information that is not intended for public disclosure. This report is solely for distribution to professional archaeologists and others who would normally have access to this kind of information. Therefore, the contents of this report should be treated with discretion.

Sarah Surface-Evans

***To Dr. T. Harold Martin*,**
who has helped to preserve and protect the Prather site
for more than three decades.

Abstract

Archaeologists from Indiana University and the Indiana University-Purdue University Fort Wayne Archaeological Survey conducted a baseline survey in 2003 of the Prather site (12-CL-4) to map the site's topography, identify the range and distribution of artifact types, assess site size, integrity, and structure, and provide a foundation for future investigations. The Prather site in Clark County is an important but poorly understood Mississippian mound center on the easternmost border of Mississippian influence. Unlike other Mississippian mound centers, it is located in an upland setting some distance from a major waterway. The site was reported to contain one to three mounds and recorded as covering about 3 ha. It has been minimally excavated on several occasions in the past century. Using primarily auger sampling, the 2003 survey mapped site topography and soil stratigraphy, established the size of the site at over 9.5 ha, and the size of the Mississippian component at more than 5.2 ha. The survey confirmed the presence of four mounds. Soil profiles in auger samples combined with the distribution of artifacts indicate a central plaza surrounded by four mounds and a core residential area for the Mississippian occupation of the site. There may have been a palisade surrounding the core. Outside the core, small residential areas or specialized activity areas are indicated. As a result of this baseline survey and mapping, future researchers can carry out more focused investigations at the Prather site to answer specific research questions concerning the Mississippian occupation of the Falls of the Ohio River region.

Acknowledgments

If archaeologists are lucky, their projects closely follow the work plan, with only a few adjustments needed in schedule or methods. At the end of the 2003 Prather site survey, it was very gratifying to realize that real work fit with the ideal: our methods and work plan were right on target, and we were able to achieve each objective.

We greatly appreciate the assistance of many people who supported the 2003 archaeological survey.

Foremost is Dr. T. Harold Martin, who has owned and cared for the site for more than 30 years. Dr. Martin, along with his family and Donna Kinser, welcomed our research project and provided gracious hospitality. Dr. Martin also loaned us equipment, including tractor, posthole auger, and mower. Moreover, he lent his time to operate equipment, and we consider him to be part of the research team.

Key members of the research team in the field and laboratory were: Mr. Scott J. Brish, Mr. Jonathan C. Criss, Mr. G. Perry Harrell, Mr. Sean C. O'Brian, Dr. Michael Strezewski, Dr. Jocelyn C. Turner, and Mr. Andy A. White. Criss, O'Brian, and Turner also assisted with tables, photographs, and maps for the report. Dr. Dorothea McCullough provided technical editing, and White oversaw the production of printed and CD copies.

Archaeologists and other researchers who lent their expertise at various times during the project included: Dr. Leslie Bush, Archaeobotanical Analysis, Austin, TX (fieldwork); Dr. Della Collins Cook, Indiana University (bone identification); Rexford Garniewicz, Curator of Prehistoric Archaeology (faunal identifications); Dr. Donald E. Janzen, Louisville, Kentucky (consultation on previous research); Dr. George W. Monaghan (soils); Dr. Patrick J. Munson, Indiana University (fieldwork); Dr. C. Russell Stafford, Indiana State University (soils).

Additionally, Phillip J. DiBlasi, University of Louisville, welcomed our review of the 1971 excavated Prather site collections which curated at this institution, arranged for us to have guest-researcher internet connection while we were in the field, and loaned us tents.

The survey work was supported by a grant to Indiana University from the National Park Service, Historic Preservation Fund. This grant was administered by the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology. Special thanks to Malia Savarino of the DHPA Grants Section for administrative work, to James R. Jones III, DHPA's State Archaeologist, for his comments on this report; and to all the archaeologists at DHPA who appreciate the importance of gaining knowledge about the Mississippian mound center at the Prather site.

We appreciate the support of individuals and organizations in the Jeffersonville and Clarksville, Indiana region and Louisville, Kentucky who commented positively on our survey proposal and encouraged our work: U.S. Congressman Baron P. Hill, Indiana 9th District; Indiana State Representative, James L. Bottorff, House District 71; Ms. Anne T. Bader, Falls of the Ohio

Archaeological Society; Ms. Jeanne Burke, Clark County Historian; Ms. Bett Etenohan, Falls of the Ohio State Park; Dr. Carl Kramer, historian, IU-Southeast; Mr. Gregory Sekula, Southern Regional Office, Historic Landmarks Foundation; Mr. Robert E. Gallman, Clark's Grant Historical Society; Ms. Jane Sarles, Clarksville History Society; and Mr. Elmer L. Hoehn, Jeffersonville.

Volunteer workers contributed enormously to what the survey accomplished both during fieldwork and laboratory work. They included professional, student, and avocational archaeologists, many of whom are members of the Falls of the Ohio Archaeological Society.

James Allgood
Craig Arnold
Anne Bader
Anthony Baker
Jeanne Burke
Leslie Bush
Bett Etenohan
Tom Ciskowski
Michael French
Justin Hazuga
A. Gwynn Henderson
Emory Hostetler
Bill Huser
Christopher Kokojan
Victor Lewis
Richard Lyons
Andrew Martin
Katie McWhorter
Mark Milliner
Ed Mundy
Sundea Murphy
David Pollack
Robert Prather
Sarah Ross
Leslie Rumbley
Joel Ruprecht
Susan Spencer
Joshua Wells
Mariah Yager

Several individuals contributed information about the Prather site and nearby sites: Ms. Jeanne Burke; Mr. Justin Hazuga; Mr. Richard Lewman; Mr. Troy McCormack; and Ms. Lois Mauk.

Our heartfelt thanks to everyone for their part in helping the 2003 survey meet our ambitious goals.

Cheryl and Bob

Notices

This project has received federal financial assistance for the identification, protection, and/or rehabilitation of historic properties and cultural resources in the State of Indiana. Under Title VI of the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, age, or disability in its federally assisted programs. If you believe that you have been discriminated against in any program, activity, or facility as described above, or if you desire further information, please write to: Office of Equal Opportunity, National Park Service, 1849 C Street, N.W., Washington, D.C. 20240.

This project has been financed in part with federal funds from the U.S. Department of the Interior, National Park Service. However, the contents and opinions contained in this publication do not necessarily reflect the views or policies of the U.S. Department of the Interior, nor does the mention of trade names or commercial products constitute endorsement or recommendation by the U.S. Department of the Interior.

Table of Contents

List of Figures

List of Tables

CHAPTER 1
Introduction

The Prather archaeological site (12-CL-4), between Jeffersonville and Charlestown in Clark County, Indiana, is without question the least-known Mississippian mound site in the state and perhaps in the central Ohio Valley. It is also the best preserved of the small number of known Mississippian sites in the Falls of the Ohio region, and lent its name to the poorly understood group of Mississippian sites termed the "Prather Complex" (Griffin 1978).

While the site area was used at least intermittently by Native Americans throughout most of the prehistoric era, and again in the early historic period of Euroamerican settlement, the Mississippian habitation and the mounds at Prather are key to understanding the origin and characteristics of the Mississippian occupation in the Falls region. Located on the boundary between Fort Ancient societies to the north and east and other Mississippian societies to the west and south, Prather is the northeasternmost Mississippian "mound center" in the Eastern Woodlands (Honerkamp 1975; Janzen 1971; Munson et al. 1977). Its borderlands setting provides an opportunity to examine regional Mississippian adaptation on the frontier. Furthermore, the location of Prather in the uplands, at a distance from the alluvial setting of many Falls region Mississippian sites, presents an unusual setting for a "mound center." The anomalous character of both the intra- and interregional settings indicates that the social, political, and economic adaptations of Prather and related sites are understandable only at the regional level.

Until recently, land use in the Prather site locality has been primarily agricultural but in the last decade has become increasingly developed for residential use. Although the site has been generally known since the late 19th century (Williams and Company 1882:398; Baird 1909; Borden 1874; Cox 1874) and several excavations have been made, there has been no previous systematic survey of this important site. Moreover, the reports of earlier excavations are either lost or not yet written. To create a baseline archaeological survey that would guide future investigations of Prather site's structure, artifacts, and features, archaeologists from Indiana University-Bloomington (IU-B) and Indiana University-Purdue University, Fort Wayne (IPFW) teamed up to carry out a survey comprised of detailed topographic mapping and transect auger sampling. With the support of grant funds from the National Park Service's Historic Preservation Fund program and matching funds from both universities, fieldwork for the survey project was conducted in the summer and fall of 2003, and laboratory study in spring 2004.

This report describes the survey project with respect to its scope and structure and background. The following chapters cover the natural and cultural settings, survey methodology, results, distributions, assessments and discussion, and future research directions. Four appendices present technical information.

Scope and Structure of the Investigations

We have characterized our survey project as a "baseline" study, because our work fits all the meanings of the term in some way, according to Merriam-Webster's (Gove 2002) unabridged dictionary: a known measure used to calculate or locate something; a line leading from one point to another; a boundary line; a set of critical observations or data used for comparison or a control; or a starting point.

The survey was structured to achieve the following goals: (1) to map the topography and the above-ground natural, modern, and prehistoric

features of the site area; (2) to identify the range of artifact types and how these might reflect internal and external cultural relationships; (3) to assess site size, soil and artifact distributions, and integrity to learn about community scale, configuration, and preservation; and (4) to provide a foundation for future studies that would address major research questions about the Mississippian occupation of the Falls region.

With baseline information future research at Prather can be focused to better understand site structure, artifact assemblages, subsistence, duration and dating of the Mississippian occupation, and its relation to nearby Mississippian sites in the Falls region. Because Prather is the only Mississippian site in the region with multiple mounds, it may represent the pinnacle of the regional Mississippian settlement hierarchy (Anderson 1990; Muller 1997). Knowledge of the nature of the relationship between the Prather "mound center" and neighboring contemporary Mississippian and non-Mississippian populations living beyond the Falls region will be an additional key to understanding social complexity (Gibbon 1995; Graybill 1981, 1984). Understanding the origin, development, and complexity of the Mississippian occupation at Prather site and in the Falls region along social, economic, religious, and political dimensions is the fundamental, long-term research objective toward which our initial study at Prather is but a small step. Given the multiplicity of populations that may relate to this development– Mississippian polities to the west and south, Fort Ancient to the northeast, and local Late Woodland–the political and social dimensions are especially intriguing.

Project Support, Schedule, and Personnel

The survey research was funded by a grant to IU-B from the Historic Preservation Fund program (FY2002) of the National Park Service. The Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, administered the grant. IU-B contracted with IPFW for part of the work on this project.

Fieldwork for the survey was carried out over ten days in July and fifteen days in October and November of 2003. Laboratory work followed in winter 2003 and spring 2004 at IU-B. The records and collections resulting from the project will be curated at IPFW under accession number 660.

Cheryl Ann Munson of IU-B and Robert G. McCullough of IPFW served as co-directors of the project. Size of the research team expanded and varied considerably because of volunteer workers, but the core included two co-directors and an average of three research assistants in the summer and four to five in the fall. Research assistants included personnel from both institutions: Perry Harrell, Jocelyn Turner, Jonathan Criss and Sean O'Brian (IU-B); and Andrew White and Michael Strezewski (IPFW). White and Harrell handled much of the mapping, Turner most of the Field Specimen assignments and logging. Criss and O'Brian carried out most of the cataloging; White and Turner prepared topographic maps; Turner prepared artifact distribution maps and other graphics; Criss assisted with illustration of soil profiles; and O'Brian took artifact photographs and helped with other illustrations for the report. Scott Brish designed the website. Dorothea McCullough edited the report, and Andrew White and Sarah Surface-Evans provided layout and formatting for printing. The IPFW Archaeological Survey printed the paper copies of the report, and IU-Bloomington prepared the CD version.

Prior to our field survey, Dr. Donald Janzen graciously read us information from field notes made during his 1971 excavations at Prather, described his work at the site, and provided a copy of a scaled sketch map showing his grid orientation and excavation units. During fieldwork, Dr. C. Russell Stafford of Indiana State University spent a day examining soil profiles and consulting on geoarchaeological research prospects for future investigations, and Dr. G.W. Monaghan of the Glenn Black Laboratory of Archaeology also visited the site and discussed soils with the

investigators.

There were 29 volunteers who worked more than 340 hours to assist the project, primarily in the field but also in the laboratory. Among the volunteers who helped the project were members of the Falls of the Ohio Archaeological Society, professional archaeologists from Indiana and Kentucky, and students from the University of Louisville, IU-B, and IPFW.

Dr. Philip DiBlasi of the University of Louisville generously loaned us shelters for equipment, arranged for us to have local internet access, and allowed examination of the stored collections from Janzen's 1971 Prather site excavations. Equipment for hand excavation and screening of auger samples and for mapping was provided by IU-B and IPFW.

The landowner, Dr. T. Harold Martin, who has cared for the site since 1970, not only gave permission for the study but supported the work in many ways, including his time in operating a tractor-mounted auger and the loan of equipment (mower, tractor and auger) that we operated. We consider Dr. Martin another member of the research team.

Literature and Collections Review

In addition to the fieldwork and laboratory processing, an extensive literature and collections review also was undertaken to assemble as much information as possible for the baseline survey. Reviews began before the field survey was initiated and were carried on throughout the course of the project. E. Y. Guernsey conducted both excavations and surface collections at the Prather site beginning in 1934. Unfortunately, no map of his excavation has been located. To further complicate the use of Guernsey's observations, his multichapter manuscript on the archaeology of the Falls region, which he sent chapter by chapter to Eli Lilly, is missing. The manuscript has been repeatedly searched for at Indiana University and the Indiana Historical Society without success (Jeanne Burke, personal communication 2004), but the correspondence about the manuscript suggests it may have been sent to Glenn Black or to someone at another state historical organization for review. In any case, details about Guernsey's work at the Falls are found primarily in the Guernsey-Lilly correspondence. The Guernsey-Lilly correspondence from 1934-1937 is curated at the Glenn A. Black Laboratory of Archaeology (GBL) and contains general information about the locations of sites, artifact characteristics, and Guernsey's interpretations. Copies of some of the correspondence are also on file with the Clark County Historian, Jeanne Burke. The Lilly-Guernsey correspondence is key because Guernsey's report on his excavations has never been found, despite searches by any number of archaeologists and historians. Correspondence between Guernsey and Lilly held by various institutions and provided by interested historians was copied and reread to find clues to the location and size of Guernsey's investigations and the materials and features discovered.

The bulk of Guernsey's collection from Prather is curated at the GBL, but most artifacts lack specific records to interpret associations. While there is probably little reason to be optimistic that Guernsey's 1937 report of his research at Prather and related sites will be found, his collections from Prather still hold information. The materials were cataloged at the Indiana Historical Society (accession number 221), and transferred in the 1960s to the Glenn Black Laboratory of Archaeology, Indiana University. The excavated materials derive from the largest mound, which he called "Mound 1" (probably the Northwest Mound), and the surface collected materials come from "Mound 2" (either the Northwest or the Southeast mound). The University of Michigan Museum of Anthropology curates the reconstructed vessels from Mound 1, plus other ceramics (accession 1261). Additional smaller pottery sherds from Prather are in the collections of the Michigan museum and were donated by Guernsey and the Indiana Historical Society in 1935 (Karen O'Brien, personal communication 2003). The

correspondence between Guernsey and the Museum has not been reviewed and may hold important information on the excavated contexts; research among James B. Griffin's papers may also identify the context of the donated material.

Munson's initial examination of the ceramics, lithic tools, and other objects in the GBL collection in the 1970s indicated that it warrants systematic description in a manner comparable to our survey collections. A re-examination of the materials in June 2004 confirmed the information potential of this collection. Lacking detailed provenience, however, Guernsey's collection must be treated much like a large surface collection. Also, many of the artifacts need to be washed before being analyzed. The Mound 1 materials are the most important to document, but the pottery vessel rims and appendages from surface contexts are also informative because some rare examples are included (e.g., fabric- impressed "pan" sherds; a triangular Fort Ancient-style handle).

In 1971 Janzen held an archaeological field school at the Prather site while he was on the faculty of Centre College, Danville, Kentucky. Janzen's large excavated collection of artifacts and ecofacts has not yet been systematically analyzed, described, or cataloged but includes materials associated with features and a rectangular structure on the "central mound." The uncataloged materials from Janzen's investigations are curated at the University of Louisville and were checked bag by bag on two days in May and November 2003 (by Munson, Turner, and McCullough) to assess what level of work would be required to inventory and catalog these materials and prepare them for curation in an Indiana facility. Our examination of the collection from Janzen's 1971 excavations showed that it is in reasonably good shape but held in fragile paper bags that may soon disintegrate and lose label information. These collections most definitely deserve to be cataloged, but this would be a substantial undertaking because of the large amount of material. The collection is presently stored in 18 boxes (about 36 cu ft). Janzen wrote that the collection of sherds alone may exceed 22,000, since 19,965 had been washed and sorted (D. Janzen to J. H. Kellar, letter, Oct. 2, 1972, GBL). How this collection might be analyzed and used in research depends on the availability of excavation maps, excavation unit profiles, and feature records. Janzen has expressed his plan to write up his excavation at Prather as part of a book on his work in the Falls region, and we heartily encourage him in this important endeavor. Beyond the sketch map of the 1971 excavations provided to the authors by Janzen, we were able to find more precise information about the situation of the excavation areas in copies of Janzen's field notes that had been photocopied at the Louisville Museum of Science in 1986 by Thomas Wolforth and provided to the authors. If a more detailed map of the site showing excavation units and features can be found, then these collections have tremendously important research value.

In the unpublished records of these investigations, both the number of mounds recognized and the reported size of the site are variable. Janzen's observations are the most recent, and his site records refer to one mound, designated a "central mound," but his field notes show his three largest excavation areas in relation to the position of two mounds. Guernsey and Lilly discuss three mounds, but Guernsey's catalog records from the Indiana Historical Society's collections, which were transferred to the GBL refer to Mounds 1 (excavated materials) and 2 (surface collection). Baird (1909), the earliest writer, mentions three and possibly four mounds. Previous estimates of site size range from Janzen's report of about 3 ha to about 12 ha noted by the present landowner.

CHAPTER 2
Project Background

Natural Setting

Site Location

The Prather site (Munson et al. 1977) is located in the greater Louisville metropolitan area, which includes the Indiana cities of Jeffersonville, Clarksville, and New Albany. It is situated in Grant 52, between Jeffersonville and nearby Charlestown (Figures 1 and 2). The site lies immediately west of the former Indiana Army Ammunition Plant (INAAP), a state highway, and a railroad track, in a once rural area that is rapidly being transformed by residential and industrial development. Prior to the development of the INAAP in the 1940s, the large Prather family farm extended south of SR 62 and into the area that was developed for the INAAP (Figure 3). The INAAP area is presently the subject of industrial development plans; outside the INAAP residential expansion has exploded on private lands. The planned construction of a new bridge across the Ohio River is located near the Prather site and will increase the scale and pace of development. Consequently, this site should be considered threatened by multiple modern developments until a specific long-term preservation plan can be established.

Historically, the Prather family homestead was built by Basil Prather along the Salem-Noble Road (formerly Prather Road) in the early 1800s. The house was a brick structure, located near the western part of the archaeological site, and was associated with a spring house, multiple farm outbuildings, and livestock pens. Air photos, as well as early USGS topographic maps show the location of the Prather house (see Figure 3.) The Prather house was demolished in the late 1960s after it fell into ruin. The present landowner placed a trailer near the Prather house location while he built a new house at the northeast part of the archaeological site. Aerial photos (1937-1975) of the Prather site may be a source of further information about the location of the early outbuildings and other disturbances such as roads, lanes, and railroads. Possibly the location of early excavations may have been recorded in air photos.

Historically, land use in the site locale was primarily row crops and pasture. Over the decades, plowing for crops has been responsible for deflating the mounds observed previously. Today, the site locale is used for pasture and no-till agriculture, and the mounds are suggested only by several slight elevations.

Environment

The multicomponent Prather site occupies one of the upland ridges in the dissected Muscatatuck Flats and Canyons Section of the Bluegrass Natural Region (Homoya 1997). The site is situated 4.9 km (3.0 mi) west of the Ohio River. The nearest water sources are permanent springs, one located on the immediate west margin of the site and two situated a short distance to the north. These springs water the valleys to the west and north of the site and were undoubtedly the main water source for the site's occupants. The streams flow into Pleasant Run, a tributary of Silver Creek. Silver Creek, located 2.4 km (1.5 mi) west of the site is the second largest waterway in the Bluegrass Natural Region, but a much smaller stream than the Ohio River.

Broad regional studies have shown that most Mississippian mound centers and large villages in the Eastern Woodlands are situated adjacent to large expanses of alluvial soils that are advantageous for maize agriculture, and near aquatic resource areas such as lakes, sloughs and rivers that concentrate fish and waterfowl. While the middle Ohio Valley lacks the numerous sloughs

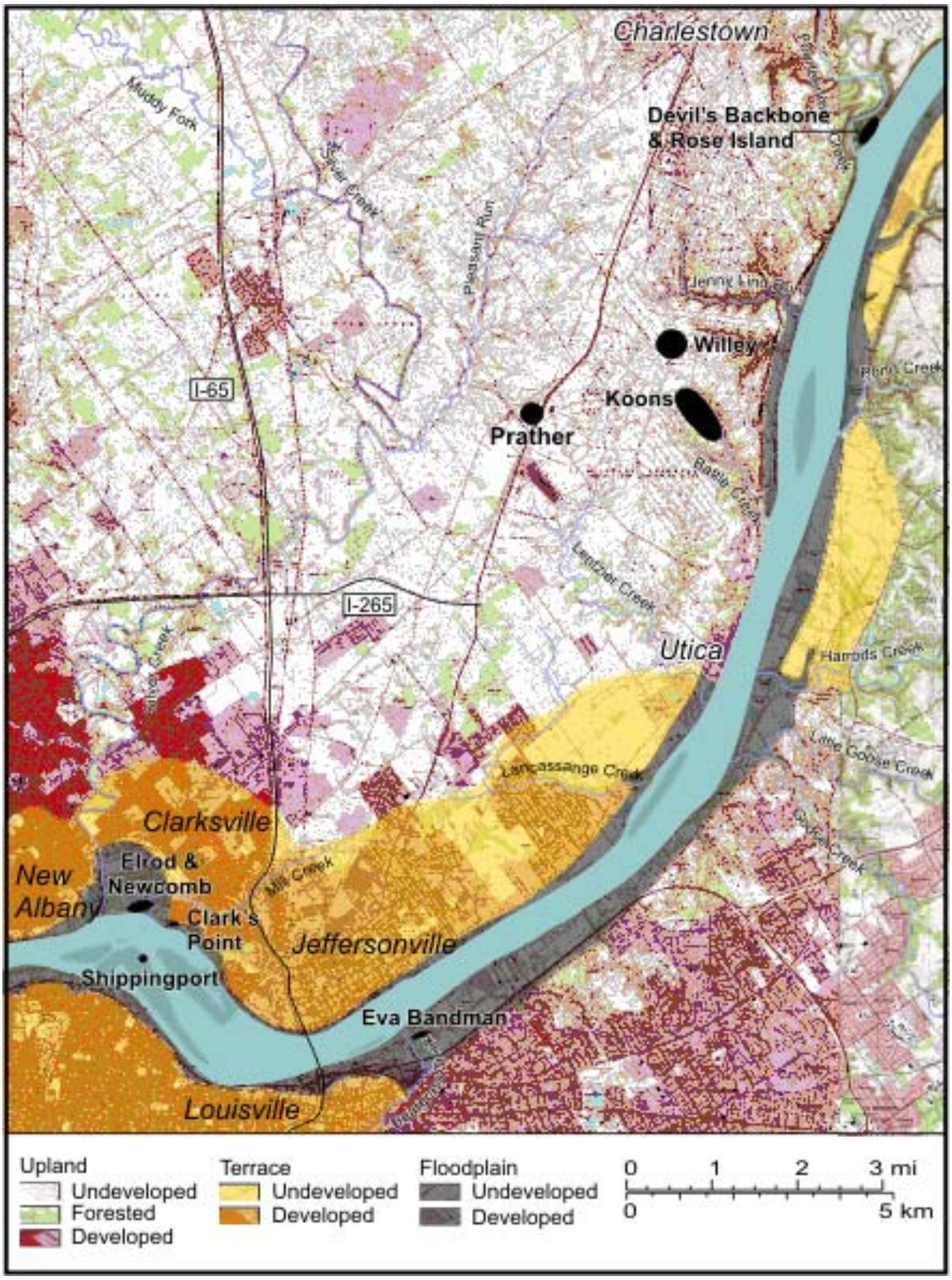

Figure 1. Location and general topography of the Prather site and nearby Mississippian sites in the Falls of the Ohio region, showing developed and undeveloped areas (modified from the 1993 USGS 7.5 minute Charlestown, IN-KY and Jeffersonville, IN-KY quadrangle maps). The site name is also the name of a small rural community, which today is a cluster of houses.

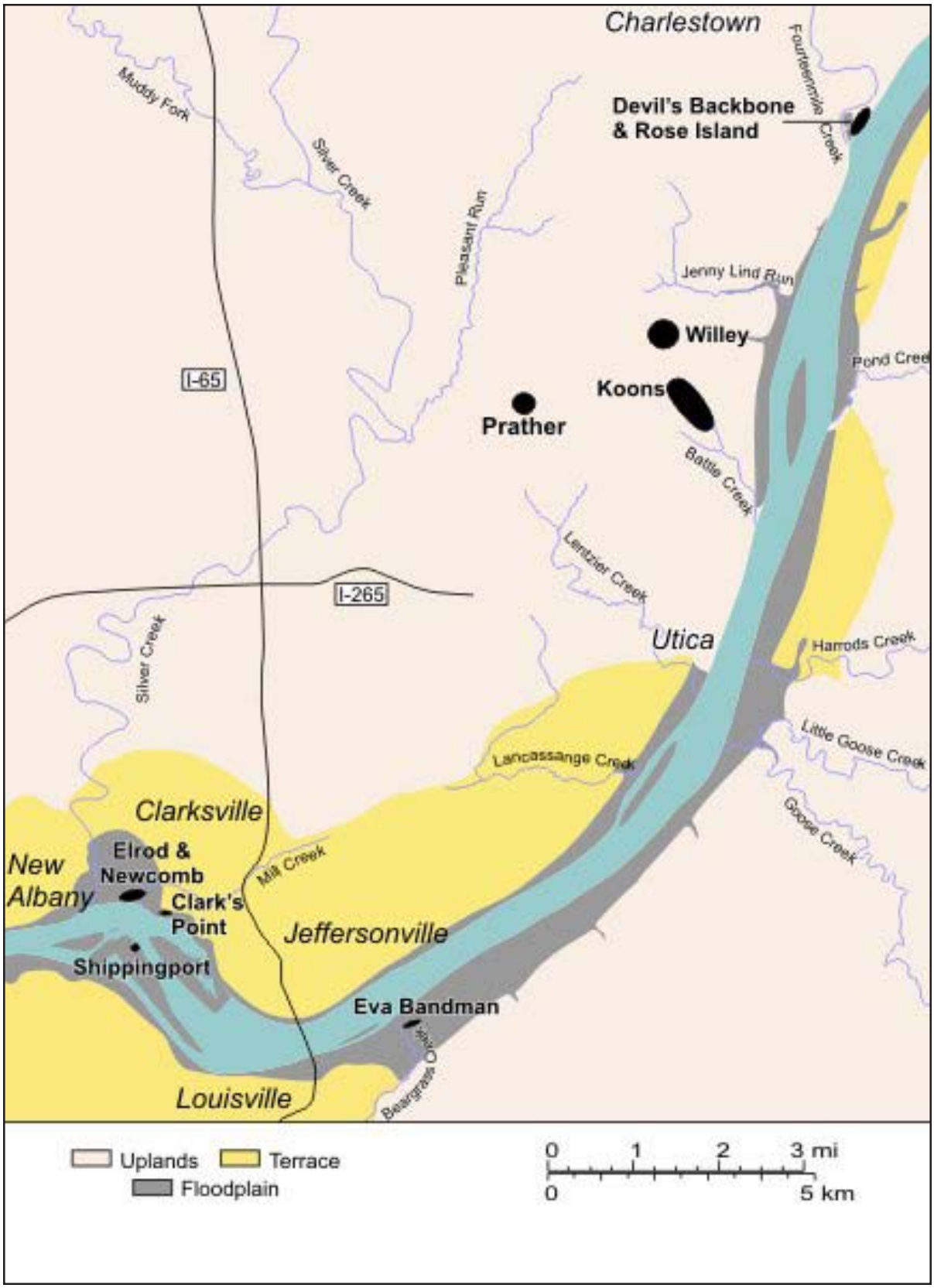

Figure 2. Landforms and streams in the vicinity of Prather site (modified from the 1993 USGS 7.5 minute Charlestown, IN-KY and Jeffersonville, IN-KY quadrangle maps).

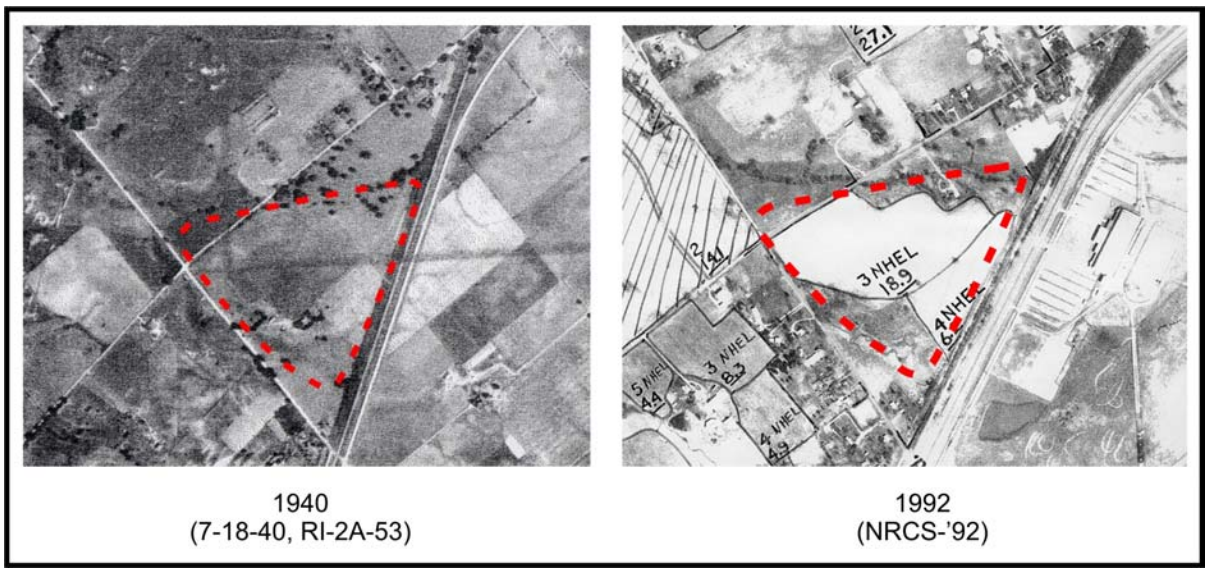

Figure 3. Aerial photos taken of the site area in 1940 and 1992 illustrate some of the changes in the landscape and site preservation. The Prather house is evident in the 1940 photograph.

Figure 4. Aerial photos taken of the site area in 2003. Note the expansion of residential development.

and backwaters found in the lower Ohio Valley and other river valleys to the west and south, the Falls provided areas of slow water and a high concentration of fish and other aquatic resources. Prior to alteration by historic dams and channelization for navigation, the Falls itself was not a cataract but a series of rapids around a cluster of islands, which provided an abundance of aquatic resources. Furthermore, to the south and east of the Prather site, the soils and other resources of the Ohio River floodplain and adjacent terraces contributed to the "ideal" Mississippian habitat (Muller 1986:188-189; Smith 1978). This locality was described by the early Euroamerican settlers as vast canebrake with abundant game (Anonymous 1882:395). The occurrence of a number of Mississippian sites in the Falls region in floodplain and near-floodplain zones further illustrates the anomalous, away-from-the-river, upland setting of the Prather site and its multiple mounds.

The mapped soils at the Prather site are grouped into the Cincinnati-Trappist Association, which are described as deep to moderately deep, well-drained, gently to strongly sloping soils having medium to fine-textured subsoils over shale on uplands (Nickell 1974). Although soils on the most elevated and flatter areas of the site are mapped as Jennings silt loam with 0-2 percent slopes, Jennings series soils are described as forming in thin loess over loam or clay loam glacial till, with the underlying bedrock being black shale. While shale is present at the site as bedrock in some locations, the observed bedrock is predominantly limestone, including dolomite and cherty limestone. No evidence of glacial till was seen. The only nonsedimentary rock, or hardstone, recovered in the survey was clearly fire-cracked rock (FCR), and hardstone FCR is rare compared to the abundant residual limestone

in the soil. We suspect that the USDA mapping of Jennings soil is in error in the Prather site location. It is entirely possible that artifacts of granite or other hardstone were seen by soil scientists during their mapping at the Prather site and mistaken for glacial erratics.

The slopes on the north and west of the site are mapped as eroded variants of Crider silt loam, with slopes of 6-12 percent and 12-18 percent, respectively. The Crider soils formed in loess underlain by limestone. These characteristics match well the limestone outcrop on the west side of the site and the soil profiles observed during our survey.

Cultural Setting

The Prather Complex

The Prather site has long been recognized as fundamental to understanding the nature of the Mississippian occupation in the central Ohio River Valley, which is essentially restricted to the Falls of the Ohio River region (Bader 2003; Granger et al. 1981; Griffin 1978; Guernsey 1939, 1942; Janzen 1972). Prior to historic modifications, the Falls themselves were a series of rapids located between Louisville, Kentucky, and Jeffersonville, Indiana. Since Prather is the best preserved of a small number of known Mississippian sites at the Falls, the term "Prather Complex" has been used by several archaeologists (e.g. Griffin 1978; Green and Munson 1978) to refer to the Mississippian occupation in the Falls region. Another term is "Falls Mississippian" (Muller 1986: 249-250). The use of the term "complex" is deliberate, since it is premature to use the term "Prather phase" (or "Falls phase"), given the unknown temporal, spatial, and formal dimensions of the occupation. Further investigations at Prather, combined with current research by others in the Falls region (particularly Anne Bader and Dr. A. Gwynn Henderson and associates), most likely will lead to the delineation of multiple Mississippian phases in the region.

Past research over a broad geographic area shows that the Prather Complex represents the northeastern limit of Middle Mississippian culture in the Ohio Valley (Figures 5 and 6). This complex is also situated at the southwestern limit of the Upper Mississippian Fort Ancient culture. Given the paucity of archaeological data, the complex is presently an enigma of considerable importance to research concerning the population dynamics of the Late Prehistoric period, which included widespread population movements and dispersals, territorial abandonment, and settlement-subsistence shifts occurring throughout the Eastern Woodlands (for recent overviews, see Brose et al. 2001; Emerson 1991; Green 1997).

The Prather site and complex may represent an early Mississippian expansion into the central Ohio Valley. To the northwest, and west of Prather (Figure 5), population movements during A.D. 1050-1150 emanated from the Mississippian center at Cahokia, appeared in a number of distant regions of the midcontinental U.S. (e.g., most distantly, Steed-Kisker, Aztalan, and Collins), and produced mixed settlements of Mississippians and local Late Woodland populations that ultimately developed into local Mississippian centers (for summaries, see Emerson 1991; Goldstein and Richards 1991; Green 1997). Beyond the Ohio Valley to the southwest, "cultural influences," though not necessarily population movements, from Cahokia are thought to have played a role in the transformation of the local population (Garland 1992; Morse and Morse 1990). East of Prather, some degree of Mississippian interaction is evident at early Fort Ancient occupations in southwestern Ohio. There, the Turpin and State Line sites have produced limited examples of pottery with Ramey Incised-like designs (Riggs 1986; Vickery et al. 2000), but none of the regional specialists believes these ceramics represent an intrusion of Cahokians or other Mississippian peoples.

Perhaps the Mississippian presence at the Falls relates to an increasingly traveled avenue of communication between Cahokia and a local Late Woodland population. Such may have been the

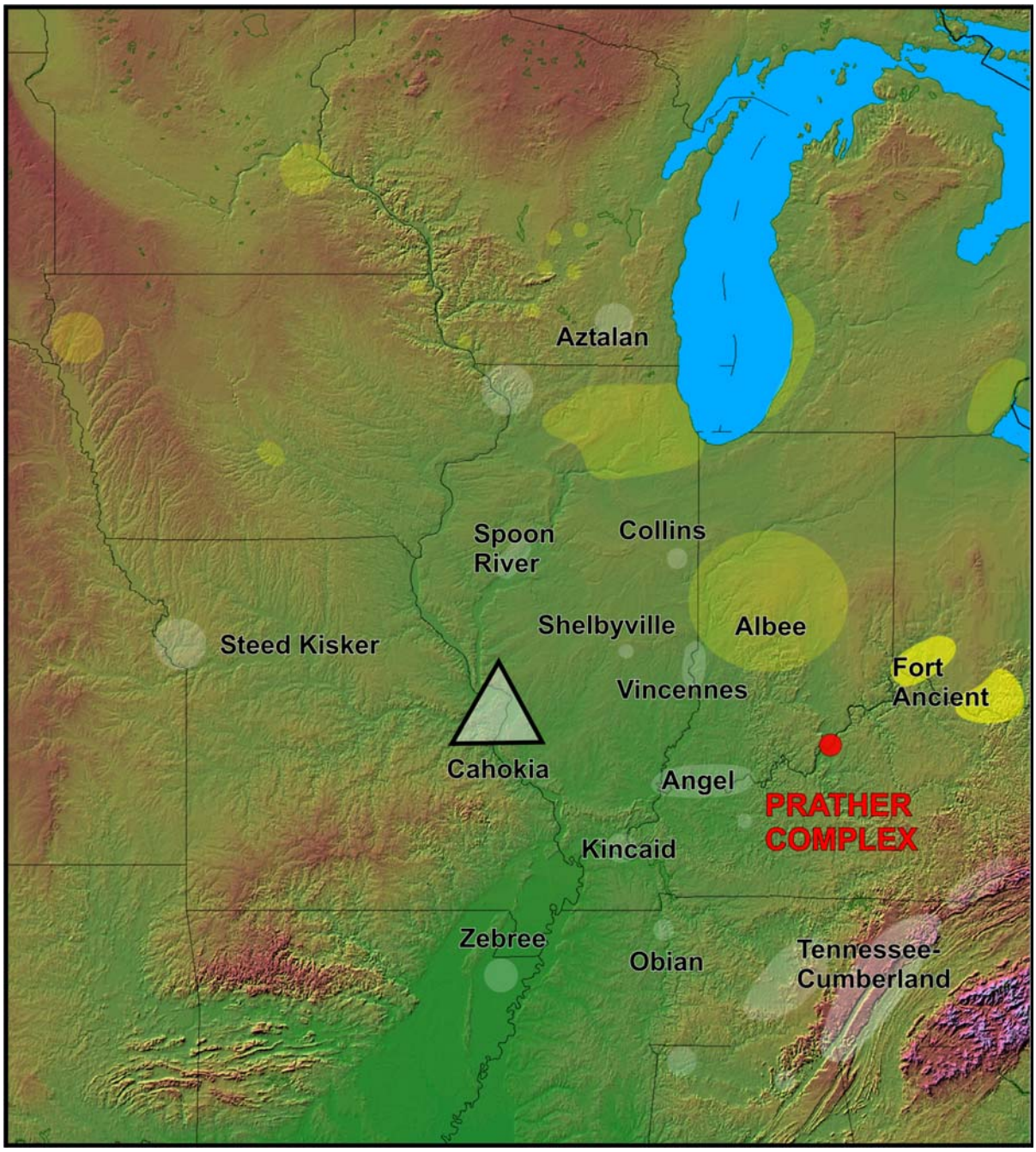

Figure 5. Location of the Prather site and neighboring Mississippian, Upper Mississippian, and Late Woodland populations, ca. A.D. 1100. (Adapted from Green 1997; Garland 1992; Morse and Morse 1990; Hollinger 2002, personal communication 2003.)

case west of Prather, where around A.D. 1100 the lower Ohio Valley Mississippian center at Angel (Black 1967) shows some evidence of interaction with Cahokia in the form of a variety of Ramey Incised pottery (Hilgeman 2000:107-111). Prior to Angel, diagnostic ceramics of the antecedent Late Woodland/emergent Mississippian Yankeetown phase (A.D. 700-1100) (Redmond 1990) of the same southwestern Indiana region appear at Cahokia in contexts dating ca. A.D. 950-1000 (Muller 1986:165).

Alternatively, does the Prather Complex represent an intrusion of Mississippian peoples into the Falls region that followed the demise of

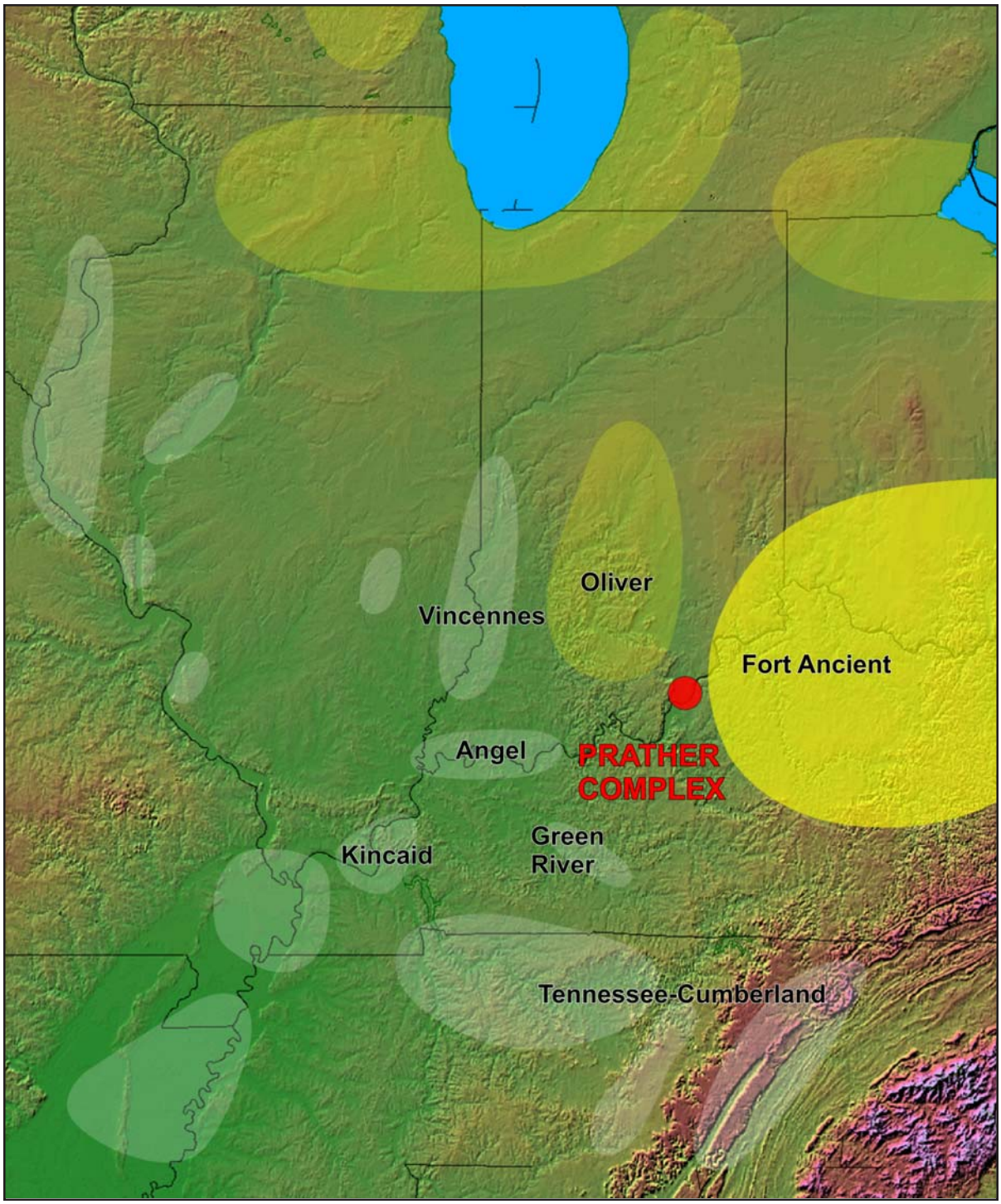

Figure 6. Location of the Prather site and neighboring Mississippian and Upper Mississippian populations, ca. A.D. 1300. (Adapted from Drooker 2000; Green and Munson 1978; Hollinger 2002, and personal communication 2003; McCullough 2000; Pollack and Henderson 2000.)

Cahokia and the emergence and expansion of Oneota and Fort Ancient? Around A.D. 1300, many regional cultures and sites north of the Ohio River in Illinois, Indiana, and beyond, are associated with archaeological evidence of increased social risk and sometimes conflict (Figure 6) (Hollinger 2002, personal communication 2003; McCullough 2000; Milner

1992; Milner et al. 1992; Santure et al. 1990). South and east of Indiana, Fort Ancient settlement also was expanding at this time (Drooker 2000; Drooker and Cowan 2001; Pollack and Henderson 2000). Widespread population movements may have brought Mississippian settlement into the Falls region, but the Fort Ancient population to the east may have blocked further expansion up the Ohio Valley.

The borderlands location of the Prather Complex also relates to the nature of frontiers (for an overview, see Rice 1998). As heirs to an American tradition in which frontiers are considered to be arenas of conquest, North American archaeologists most often have characterized frontier zones as "areas of unremitting violence" (Emerson 1999:38). But frontiers can also be arenas of adaptation, interdependence, and cultural change (Rice 1998:52). At the peripheries, far from core control, a middle ground (White 1991) may arise where culture brokers and mediators have a certain autonomy and may express creative possibilities. Within Mississippian societies King and Freer (1995:280) speculate that "polities in these boundary zones . . . stood more in the status of ally rather than tributary . . . were located too far away from cores for effective military dominance . . . and therefore were able to develop new and different social institutions." When viewed as a "border polity," the Prather Complex presents an important archaeological case study of borderlands dynamics.

Previous Research in the Falls Region

Much of the early archaeological work at the Falls has been summarized by Janzen (1972). He described the theories of the antiquarian era, as well as the legend of Welch-speaking invaders (who sometimes were equated with "White Indians") and the "Red Indians" who defeated the Whites, with the final battle taking place at the Falls. George Rogers Clark relayed this legend to others, who thought that a large "burial ground" eroding along the river at the Falls lent supporting evidence. Apart from legend, archaeological investigations actually began in Clark County, Indiana, with the surveys of early geologists Edward T. Cox (1874, 1875) and William Borden (1874). They reported–and speculated about–a "stone fort" located on top of Devil's Backbone, a steep bluff spur at the confluence of Fourteen Mile Creek and the Ohio (also Lilly 1937:50). Cox (1875:126) recognized long, artificial walls ten feet in height built at the edge of a 75-foot-high cliff that provided a natural stone wall. He also noted interior ditches and a series of at least five small stone mounds within an enclosed area of about ten to twelve acres. Further, Cox and Borden both reported shell-tempered pottery and stone box graves at the site, which point to a Mississippian use of the locale, though not necessarily one associated with the stone mounds or the stone walls. The site locale, itself a naturally fortified area on the Ohio River bluff, offers a high vantage point for tracking movements along the river.

These features were subsequently reported by F. W. Putnam of the Peabody Museum of American Archaeology and Ethnology (Putnam 1875) but later questioned by Gerard Fowke (1902:65-66), another geologist interested in archaeology. Fowke (1902:65-66) was highly critical of Cox's assessment of the walls, saying his report was: "The worst publication of this character which has ever appeared in a scientific disguise. . . . It seems incredible that a person connected in any capacity with a geological survey, even as a cook or mule-driver, could ever have made such a ridiculous blunder as to suppose them artificial." Cox's description is not unambiguous, but it does recognize that the artificial walls relate to the natural walls of the cliff.

To the west of Devil's Backbone and closer to the Falls, the reports of Borden and Cox also describe the exposure of many burials along the Ohio River in "Old Clarksville." Again, the reports refer to stone box graves and distinctive ceramics that signify Mississippian interments (Cox 1875:185-186). The ceramics included a hooded

water bottle (possibly an "owl"effigy), fabric-impressed pottery, and ear-shaped vessel attachments or lugs. Subsequent work in this locale by Guernsey (1939, 1942) and Janzen (1977a) demonstrated that these sites contain deep Middle-Late Archaic shell mounds with numerous flexed burials of that era. Recent mitigative excavations at the Clark's Point site (12-CL-3) in the area of the restored Clark cabin confirmed the great depth of the Middle-Late Archaic deposits (White 2003). Other stone box grave sites in the Falls region were reported in 1896 in downtown Louisville (Bader 2003:16) and in 1910 on the Armstrong farm in the uplands south of Louisville.

Williams and Company's 1882 *History of the Ohio Falls Cities and Their Counties* attributes a number of archaeological sites around the Falls to the Moundbuilders, but it is the first publication to specifically mention the Prather site by name: "Among the mounds of note in Utica township is one on the farm of David Prather. It often gives up bones, pottery, and articles which are evidently implements of war" (Williams and Co. 1882:398).

Baird's (1909) history of Clark County is the next report to mention the Prather site:

> ...the old Prather homestead, now occupied by these worthy brothers [sons of patriarch Basil Prather], is of interest to archaeologists. The ground is thickly strewn with Indian arrowheads and other relics of the red men, skeletons having been found which are known to have belonged to the original occupants of this part of Indiana. Still earlier and more interesting relics are remains of the Mound builders, going back to pre-historic times. Three mounds, with indications of a fourth have been found on the Prather place. They are arranged in a semi-circle, connected by a strip of black earth overlying the natural soil. Two burial mounds yielded potsherds, stone pipes, bone needles, pestles, axes, a color cup and a stone from which red color was made, spear and arrow heads in great variety, besides skeletons of the vanished race lying on a quantity of charcoal [Baird 1909:675-676].

In 1934, Guernsey was employed by Indiana's first noted prehistorian, Eli Lilly, to carry out archaeological investigations in Clark County (Madison 1989). Based on the presence of shell-tempered pottery, including effigy vessels and fabric-impressed pans, and stone box graves, Guernsey identified Mississippian components at seven Falls area sites in three locales, which he summarizes in two brief reports (1937, 1942). In the uplands between Silver Creek and the Ohio River are three sites: Prather (12-CL-4), Willey (12-CL-16), and Spangler-Koons (re-identified recently as 12-CL-701 [Adams et al. 2004:111-113]). Along the Ohio River terrace and floodplain in the "Old Clarksville" locality are Clark's Point (Collins, 12-CL-1), Newcomb (12-CL-2), and Elrod (Kelly), a continuation of Newcomb. Finally, above the Falls on a precipitous bluff top ridge overlooking the Ohio River is the naturally fortified Devil's Backbone, which may have once held Mississippian defensive constructions as well as stone box graves. Guernsey (1939) considered there to be an earlier and later Mississippian occupation in the region and noted both flexed burials, extended burials, and stone box burials at Mississippian sites. Additional reports of Mississippian villages in adjacent Floyd County (Lilly 1937:102) are yet to be confirmed by modern archaeological surveys.

Prather is the best preserved of the identified Mississippian sites. Willey and Spangler-Koons are located in the general vicinity of World War II-era bunkers constructed at the INAAP. Willey has not been relocated, but Spangler-Koons may be partly intact between and perhaps adjacent to two bunkers (Adams et al. 2004:Figure 54). The hilltop at Devil's Backbone was also highly disturbed many years ago (Janzen 1977b; James

H. Kellar, personal communication 1979), even before the construction and use of Rose Island Park and the acquisition of the area by the INAAP. Clark's Point and Newcomb/Elrod were substantially disturbed by the 1937 flood and later construction of a flood wall, but a portion of the Newcomb site area remains and may extend onto adjacent property that formerly belonged to the Hale family. While many of these Mississippian sites are large, smaller sites or camps of Mississippian or Fort Ancient hunters are indicated by discoveries of arrow points at multiple Clark County locations. Also, in developing areas immediately to the south and east of Prather, recent reports and examination of shell-tempered ceramics at multiple sites (e.g., Ellingsworth [12-CL-127] and Smith Northwest and Smith Southeast [12-CL-130 and 12-CL-129]) point to the presence of additional Mississippian habitations located along the edge of the uplands and along small streams associated with salt springs (Perry Harrell, personal communication 2003). If these sites are small, permanent Mississippian settlements without mounds, then they would provide important evidence of a hierarchical settlement system.

In addition to the small number of known Mississippian sites in the Falls region in Indiana, there are at least 13 recorded sites south of the Ohio River that have components attributed to either Mississippian or Fort Ancient cultures (Granger et al. 1981:170), based on the occurrence or reports of triangular arrow points. Most of these smaller sites are probably hunting stations, but several additional recently investigated sites reported by Bader (2003:28-33) show evidence of more intensive use. About 6.7 km (10.7 mi) southeast of Louisville in the uplands of the South Fork Beargrass Creek drainage, two open habitation sites near Six Mile Lane (15Jf650/651) and the Miles Rockshelter site (15Jf671) produced Mississippian ceramics as well as the ubiquitous triangular arrow points (Bader 2003:32-33). Also in recent years, two sites with highly disturbed but abundant Mississippian habitation remains have come to light as a result of construction projects in Louisville and on one of the "islands" at the Falls. These are the sites of Shippingport (15Jf702) on an island at the Falls (Keeney and Hemberger 2003; Anne Bader, personal communication 2003) and Eva Bandman (River Road 15Jf668) on the Ohio River terrace margin in downtown Louisville (David Pollack, personal communication 2004; Henderson 2004).

Finally, there is Joseph Granger's reconstruction of a large Mississippian mound site based on a series of historically reported mounds, burials, cemeteries, and possible borrow pits or historic ponds located in what is today downtown Louisville (Bader 2003:18). He designated this extensive series the Green Street site (15Jf95). Although the area has been extensively altered by historic and modern development, Granger's plotting of the reported 19th-century locations on modern maps shows an area that covers about 73 ha (180 ac). Referring to the greater incidence and intensity of identified Mississippian occupation in the Louisville area compared to Woodland components, Bader (2003:18-21) argues that the reported mounds and burials in this area are Mississippian. If this is true and all artificial constructions are associated with each other, then the historically reported series of archaeological features is slightly larger than the Mississippian mound center at Kincaid (Muller 1978:276) and nearly twice the size of that at Angel (Black 1967; Green and Munson 1978). We can only hope that some portion of the site area at Green Street has been covered with fill that would protect cultural deposits and allow confirmation of Granger's Mississippian cultural assignment.

Previous Investigations at the Prather Site

As discussed in chapter 1, Guernsey's interest in the Mississippian occupations in the Falls region led him to carry out limited excavations at the Prather site, where he had identified three flat-topped mounds. He later remarked in one of his weekly 1934 reports to Lilly that the mounds had

become much reduced in elevation, presumably as a consequence of plowing. Over the course of several days of excavation at Prather he explored one of the smaller mounds and discovered three burials. Burial 1 was accompanied by a perforated stone discoidal, a short-necked water bottle, and a two-handled pot at the head. Burial 2, which was photographed, was extended and had more elaborate grave goods: two Mississippian vessels (the jar and a wide-mouth bottle curated at the University of Michigan Museum of Anthropology); a circular gorget; and other materials including a bone pin and conch shell beads (Figure 7a). Griffin (1978:551) notes that the burial was a male and the gorget was made of shell; the size of the gorget suggests the artifact was made from conch shell. The most unusual artifact, placed at the head, was a carved wooden bird (curated at the GBL) that had been covered by copper, thus preserving the wood (Figure 7b). Fired clay and carbonized wood indicative of burned structural remains overlay the burials. Guernsey later wrote to Lilly that he uncovered in the mound a central hearth a portion of one wall (E. Y. Guernsey to E. Lilly, letter, July 16, 1935, GBL site files). In a later published report he noted that burials were found beneath the prepared clay floors of rectangular structures built without wattling (Guernsey 1942). With no extant map, Guernsey's brief descriptions do not provide many clues for interpreting the nature of the small mound, since both structural and mortuary features are indicated.

In addition to his excavations in a small mound, Guernsey also excavated a test pit in the center of the largest mound at Prather, whose dimensions he gives as 200 feet by 100 feet (60 m x 30 m) (Honerkamp 1975:160). The test showed a portion of a "fire-hearth" with many animal bones and broken pottery (E. Y. Guernsey to E. Lilly, letter, July 16, 1935, GBL site files).

Although most of the artifacts in the GBL collections from Guernsey's excavations and surface collection lack specific records to interpret association, Honerkamp (1973:163-168) prepared a brief description. Notable in her identifications are: the minor percentage of Bell

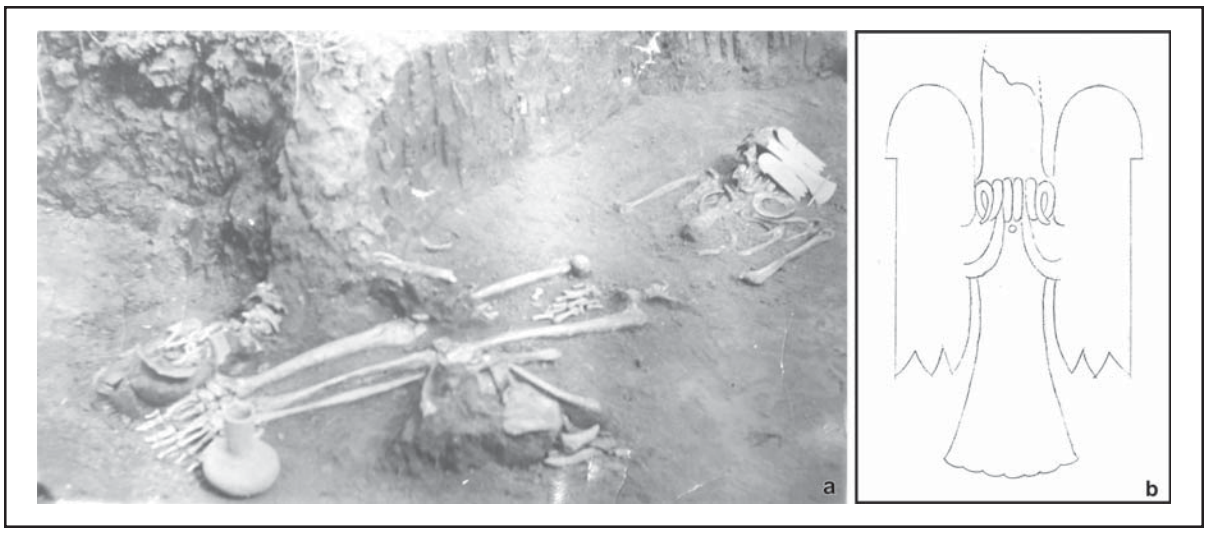

Figure 7. E.Y. Guernsey's excavation of burial 2 in the largest mound (Northeast) at Prather site: (a) Photographic copy of Guernsey's photograph showing the burial and associated artifacts: a copper-covered wooden eagle at the head; copper-stained bone pin over eagle's tail; pottery jar and bottle at the feet; and a circular gorget near the shoulder. A cut-out piece of paper was used in the photograph to show the location of the copper-covered "eagle." (b) Photocopy of outline drawing by E.Y. Guernsey of the copper-covered bird or "eagle" found at the Prather site, reproduced approximately half size; the head of the bird is fragmentary; the length of the artifact in the original drawing is 22 cm (from site records and photographic collections of the Glenn A. Black Laboratory of Archaeology, Indiana University).

Plain compared to Mississippi Plain; the rare occurrence of shell-tempered, fabric-impressed sherds; cordmarked sherds having combined shell and grit temper; and one sherd with sandy paste. In 1976, Munson also examined the Guernsey ceramic collection from Prather as part of a review of Ohio Valley collections (Munson et al. 1977). The types of temper, surface treatments, and vessel shapes confirmed Guernsey's and Honerkamp's attribution of the bulk of the collection to Mississippian rather than Fort Ancient. Other than the several decorated sherds noted by Honerkamp, which have not been recently identified in the collection, Munson recognized only a single long, tapered strap handle as the best indicator of a Fort Ancient vessel.

Several decades after Guernsey's work, probably in the 1950s, other excavations were made at Prather by a group of local artifact collectors. One person excavating then was Ruth Strothers, a school teacher, who years later described excavating in one of the mounds and in another area where quantities of charcoal were found (Troy McCormick, personal communication 2004; R. Strothers to T. McCormick, interview report, Falls of the Ohio State Park files, Jeffersonville, Indiana). It may be possible to learn what these early excavators found, if some of the people involved are still living in the Falls region.

In 1971, Janzen, formerly of Centre College, Danville, Kentucky, held an archaeological field school at the Prather site and excavated three blocks plus a number of small test pits (1 x 1 ft) (Donald Janzen, personal communication 2003; D. Janzen to J. H. Kellar, letter, Oct. 2, 1972, GBL). He found abundant pottery sherds in two different excavation blocks. A third area contained a 19th-century historic refuse deposit. His test on the largest mound revealed a portion of a rectangular wall trench structure (Janzen, personal communication 2003), although this mound is probably not the same mound where Guernsey excavated burials and clay floors in 1934. Janzen obtained a radiocarbon date of A.D. 1045 + 70 (uncalibrated, UGa-309) from a sample associated with the wall trench structure in the mound. Unfortunately, the large standard deviation makes this assay difficult to compare with more precise, modern dates. Calibration results (Calib 4.3) (Stuiver and Reimer 1993; Stuiver et al. 1998) provide a date range of more than two centuries: cal A.D. 1025-1217 at 1 sigma and cal A.D. 998-1276 at 2 sigma. The date range places the Mississippian occupation in the Late Prehistoric period and generally early in the period of Mississippian development in the midcontinent. Janzen considered Prather to be "a diluted form of Mississippian"(D. Janzen to J. H. Kellar, letter, Oct. 2, 1972, GBL).

Janzen's large excavated collection has not yet been systematically analyzed, described, or cataloged but includes materials associated with features and the rectangular structure on the "central mound." The examination in May and November 2003 of the collected materials curated at the University of Louisville revealed abundant ceramics: shell tempering and plain surfaces predominate; cordmarking is well represented; red slipping is rare; negative painting is very rare; and incised guilloche designs are absent. Bone was well preserved in some areas, and the excavators recovered both carbonized corn and amaranth, according to the labels on containers.

Prather in Regional Context

Several archaeologists have commented on the environmental characteristics of the Falls' region, and Jon Muller (1986:250) has characterized the environmental resources here as "sufficient to allow people to survive . . . but were perhaps marginal enough in terms of the Mississippian adaptation in the narrow sense . . . and *not* the standard environment for Mississippian" [emphasis in the original]. Yet the Falls of the Ohio created a concentration of aquatic resources and also was associated with considerable expanses of alluvial soils. In fact, the environment around the near-river Mississippian sites in this region parallels the characteristics of the "classic" Middle Mississippian

environments to the west and south (see Muller 1986:188-189; 1997; Smith 1978).

The alluvial environment of the Falls region is the only broad expanse of floodplains and terraces between the mouth of the Great Miami near Cincinnati and the lower Ohio Valley region occupied by the Mississippian Angel population, which extends from the Anderson River on the east to the Wabash River (Green and Munson 1978). The "ballooning" of the valley width around the Falls stands in sharp contrast to the narrow, entrenched valley, both upstream and down from the Falls region. In the narrow sections of the valley, floodplains are merely slim discontinuous arcs, alternating north and south between Indiana and Kentucky and lacking broad expanses of ridges and swales. However, for Mississippian populations the key difference between the wide and narrow sections of the valley is not the size of the valley, but the extent of the alluvial soils and the quantity and diversity of aquatic resources. In contrast to the narrow valley locales, the wider section of the valley around the Falls has allowed the river channel to migrate, leading to the development of wider terraces and floodplains, plus backwaters, sloughs, and islands.

Although the character of the environment in the Falls region is similar to that settled by Mississippian populations to the west and south, the alluvial valley around the Falls certainly differs in scale from these areas. Quantification of the extent of alluvial soils is not available for all of the Ohio Valley, but inspection of geologic maps (Ray 1974) suggests that the balloon of the valley at the Falls is about one-fifth the size of the alluvial valley occupied by the Angel population downstream.

More than the smaller size of the area of occupied, it is the occurrence of a number of Mississippian communities of substantial size and complexity in the uplands–including Prather–that distinguishes the Mississippian occupation in Falls region from the lower Ohio Valley populations centered at Angel (Green and Munson 1978) and Kincaid (Muller 1978). The evidence of mounds at Prather, stone box graves at Prather and other upland sites, and defensive constructions at Devil's Backbone suggest that many of the larger sites had more than a residential function.

Even though the settlement distribution of the Prather Complex is poorly known and difficult to document, given the extent of urban development at Louisville, Jeffersonville, Clarksville, and New Albany, the locations and characteristics of recorded sites suggests something of their interrelationships to each other and to the environment. Like Prather, the Willey and Spangler-Koons sites were reported to have stone box graves and are situated back from the Ohio River on upland ridges. However, the other stone box grave sites at Newcomb/Elrod and Clark's Point, and perhaps Floyd County and downtown Louisville, are located adjacent to the Ohio River at the Falls.

Like the settlement distribution, the size of Mississippian sites in the Falls region is little known. Nonetheless, based on estimated sizes or historic reports, there are clearly larger sites like Prather, Willey, Spangler-Koons, and Newcomb/Elrod and smaller sites like Ellingsworth, Smith, those in the Six Mile Lane area, and Miles Rockshelter. The larger sites occur both in the uplands and the bottomlands. The smaller sites are located in the uplands or on the bluff margin overlooking the alluvial valley. The limited data at hand regarding diversity of site size and locale suggest the possibility of a hierarchical settlement structure, but the lack of temporal control precludes interpretation of settlement variation.

The unusual upland siting of Prather and other sites suggests that their inhabitants may have been wary of people traveling the Ohio River, and that this settlement strategy was worth the economic costs. Intuitively, for Mississippian farmers, hunters, and fishermen, the economic costs of settlement in an upland location would have involved increased travel time to aquatic food resources and the rich alluvial soils, or the substitution of less concentrated, upland fauna and less fertile (when used for repeated cropping), upland soils. Although intriguing, the variation in

the settlement locations of Prather Complex communities simply cannot be interpreted in the absence of radiocarbon dating for multiple settlements.

Finally, the partly destroyed Devil's Backbone site certainly could be interpreted as another defensive structure, but not one that was necessarily associated with a substantial habitation. It is located at the most defensible location along the Ohio River near the Falls and may have been a special use site. Further mapping (Christopher Baltz, personal communication 2003) and assessment at this important site is needed.

Prather is the only Mississippian site in the Falls region to have confirmed mounds, and both Guernsey's and Janzen's descriptions indicate that these are structural mounds that also contained some burials. Prather appears to be a mound center, or, at least, a pivotal place in the Falls region in some aspects of political and religious authority. However, it is noteworthy that the site is not central but geographically marginal to the distribution of known Mississippian sites. And it is located farther from the river–the assumed main avenue of communication within and beyond the region–than other large Mississippian habitations. Equally relevant is the geographically wide occurrence of reported stone box graves in the region–present at Prather but also at seven others. Unless each of the stone box grave sites was occupied at a different time, this arrangement indicates that authority for Mississippian mortuary ritual *per se* was regionally dispersed rather than centralized at Prather or another of the regional sites.

General Research Questions

Given the status of present knowledge, the general research questions for the Prather site and the Prather Complex are fundamentally cultural-historical, but essential for an understanding of the origin and development of the Mississippian occupation in the Falls region. These basic questions can be grouped into four areas: the chronology of the Mississippian presence in the region; the characteristics of the material culture assemblage; the subsistence economy of the Mississippian occupation; and their settlement system.

Dating

What is the dating and duration of the communities that make up the Mississippian occupation at Prather and in the Falls region? Is there a sequence of phases that can be recognized materially? Does the Prather site and complex represent an early Mississippian population expansion into the central Ohio Valley? Or does the Mississippian presence in the Falls region relate to an increasingly traveled avenue of communication with Cahokia or perhaps with closer centers such as Angel to the west in the lower Ohio Valley or with the Hiwassee Island locale to the south in the Tennessee Valley (Lewis and Kneburg 1946; 1995).

Material Culture

What are the physical and stylistic characteristics of the locally manufactured tools and containers? How does the material cultural of the Prather site compare to other Mississippian sites at the Falls? Does the material culture of the complex reflect interactions with neighboring Mississippian and Fort Ancient populations, or with more distant groups? Ceramics are the primary artifact category for addressing questions about internal cultural connections and external relationships, regardless of scale of inquiry, because Mississippian and Fort Ancient ceramic traditions outside the Falls area are distinguishable. Hypothetically, the earliest communities in the Prather Complex might have ceramics that include some mix of Mississippian, Fort Ancient, and possibly local Late Woodland traditions. For example, at the Eva Bandman (River Road) site south of Prather in Kentucky, Henderson has found that the dated fourteenth century ceramic assemblage is characteristically Mississippian, but a small proportion has diagnostic Fort Ancient designs.

Lithic assemblages from Falls region Mississippian sites are yet to be studied, but may reveal external connections since cherts from southern Illinois (Mill Creek and Kaolin) and Tennessee (Dover) were widely exchanged throughout the Mississippian period in the lower Ohio Valley and far beyond (Brown et al. 1990; Cobb 1989).

Economy

Does the subsistence economy of Prather and other regional sites differ from other Ohio Valley Mississippian and Fort Ancient societies? Do the Prather site and the Prather Complex represent a "backwoods kind of Mississippian" or a "marginal form" as Muller (1986:250) suggests? Rossen and Edging (1987) have shown that differences between Mississippian and Fort Ancient botanical remains reflect different adaptations to the local environment. Is the subsistence economy of the Prather Complex sites more similar to Fort Ancient than to the Middle Mississippian societies in the lower Ohio Valley?

Settlement

What are the characteristics of the Mississippian settlements in terms of community scale and configuration, types of residential structures and other domestic facilities, mortuary behavior, mound construction, and defensive works? Are residential areas arranged around a central plaza? Are mounds used for structures and burials, as the early Prather excavation data indicate? Do communities have formal cemetery areas, as the reported stone box graves might suggest? Is residential area burial another mortuary alternative? How can the hierarchy of site size and settlement characteristics be explained in terms of social and political complexity? Once phases are defined for the Mississippian Prather Complex, will we recognize a transition to a simple chiefdom, however long it may have endured, or the development of a less complex political structure?

CHAPTER 3
Methodology

The current state of knowledge about the Prather site and its current condition and land use guided the design of survey goals and methods. Prior to this survey, the Prather site had never been intensively surveyed by archaeologists, nor were detailed topographic maps available. Currently, the site area is used for no-till agriculture, obscuring the land surface. Comprehensive maps and reports of the excavations made by Guernsey in 1934 and Janzen in 1971 are not available, although Janzen filed a sketch map of the site with his site survey record.

Janzen's site survey records note a size of 200-300 m north-south by 100 m east-west, about 3 ha, with a central mound surrounded by a village, but Dr. Martin, the Prather site's landowner since 1970, has estimated that prehistoric materials at the site cover a much larger area than that noted by Janzen, since they extend over an area that previously was a cultivated field. Based on these reports and the relief shown on USGS topographic maps, the site area was thought to be possibly as large as 12 ha (30 ac) within a rough triangle of uplands. Part of the triangle is created by a wide railroad embankment that parallels State Highway 62 on the east side of the site (Figure 8). The railroad was formerly both a local and interstate line, but now primarily serves the growing industrial area at the INAAP.

Given the unknown but estimated large size of the Prather site and the absence of surface visibility in pastures and hay fields, the initial survey goals were realistically limited to collecting baseline data. This survey was envisioned as the first step in a series of site investigations to answer some of the general research questions outlined above and to help plan the preservation of the site. Our initial survey results are intended to be a guide for future, more detailed surveys as well as test excavations.

Six steps were employed in conducting the baseline survey; discussed below are the methods and work plan employed for each.

(*1) Review existing reports, documents, and available site collections to assess site size and configuration, types of materials, and the future research potential of these records and collections.*

The literature review was carried out over the course of the project; personnel are listed in chapter 1 and the results are incorporated in chapter 2.

(2) Establish a site grid for recording observations made in 2003 and future years.

A total station was used for all mapping. The site grid was laidalong arbitrary north-south, east-west axes to correspond to property lines and major modern geographic features. Magnetic north is 37.7 degrees east of grid north, and the declination of true north is an additional 1.5 degrees farther east. The zero-zero point on the grid is off-site to the south and west. (Discussion in this report references directions used in the archaeological grid, unless true north is noted.) To reference the grid, three horizontal and vertical datums were set. The datums are rebar placed in cement, approximately flush with the ground surface, and located near fence rows. The holes for the datums were excavated as shovel probes, with the removed soil screened similar to the auger samples. In the future, additional reference points should be set for additional security of the site grid.

(3) Prepare a detailed topographic map.

Elevations for the topographic map of the site are referenced to a USGS benchmark located west of the old Prather School, which has been adapted into an apartment building. In addition to topography, our mapping addressed the locations

of existing modern cultural features (structures, roads, gravel driveways, fences, and gates), intermittent and permanent streams, springs, bedrock outcrops, bedrock grinding facilities, and exposed historic Euroamerican features such as foundations for a corn crib and spring house (Figure 9). Surface walk-over of the site during mapping identified bedrock outcrops containing chert of an as yet unclassified type. Secondary deposits of chert in stream beds contain identical as well as distinctive cherts, including look-alike for Wyandotte chert which outcrops higher in the stratigraphic section and 60 km to the southwest (Bassett and Powell 1984). The location of the bedrock mortars and metates near the west margin of the site was mapped and photographed (Figures 10 and 11), but making a detailed map and description of this bedrock area was postponed

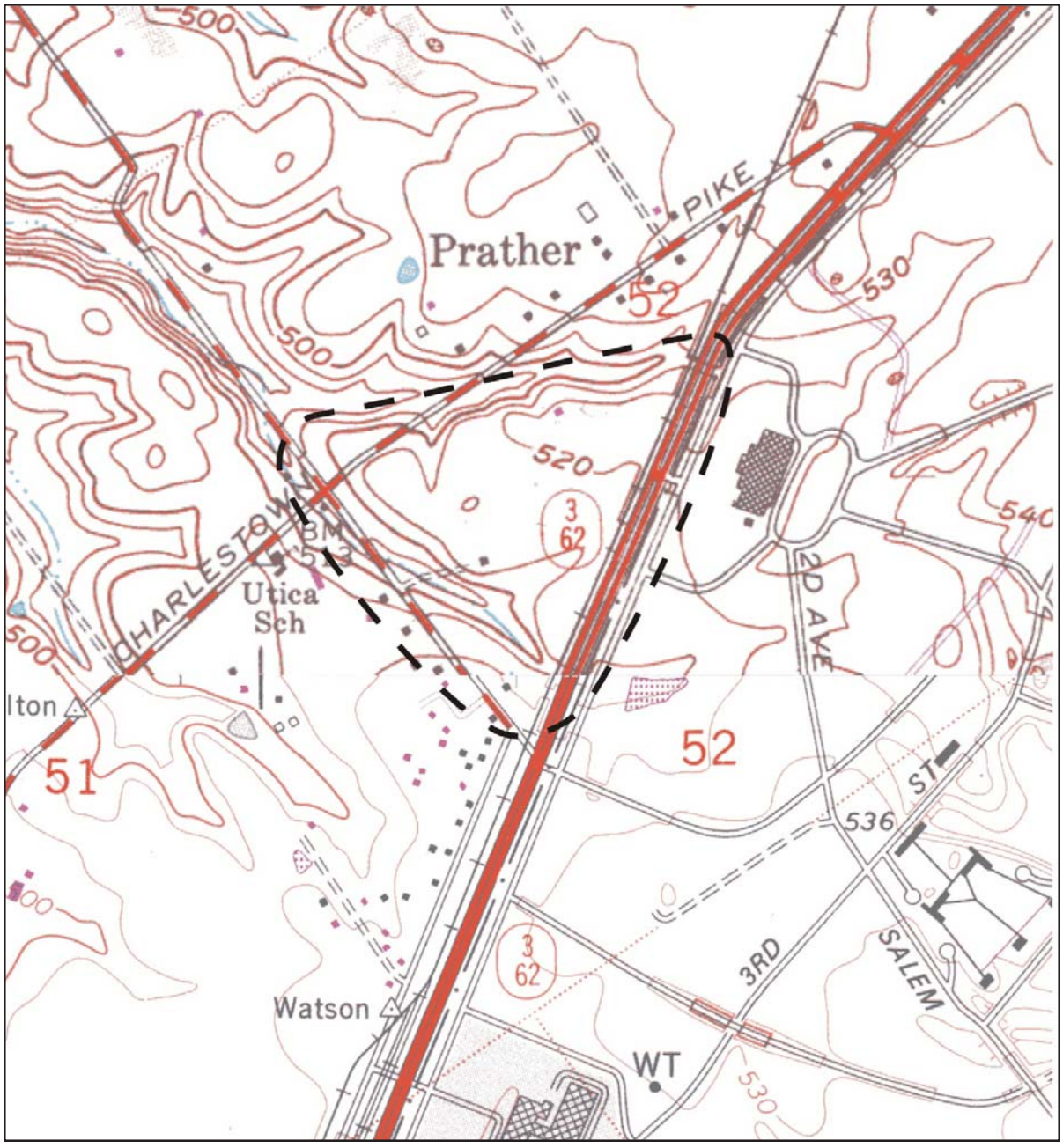

Figure 8. Estimated extent of the Prather site, 12-Cl-4, based on topography and reported artifact distributions (from USGS 7.5 minute Charlestown, Indiana quadrangle).

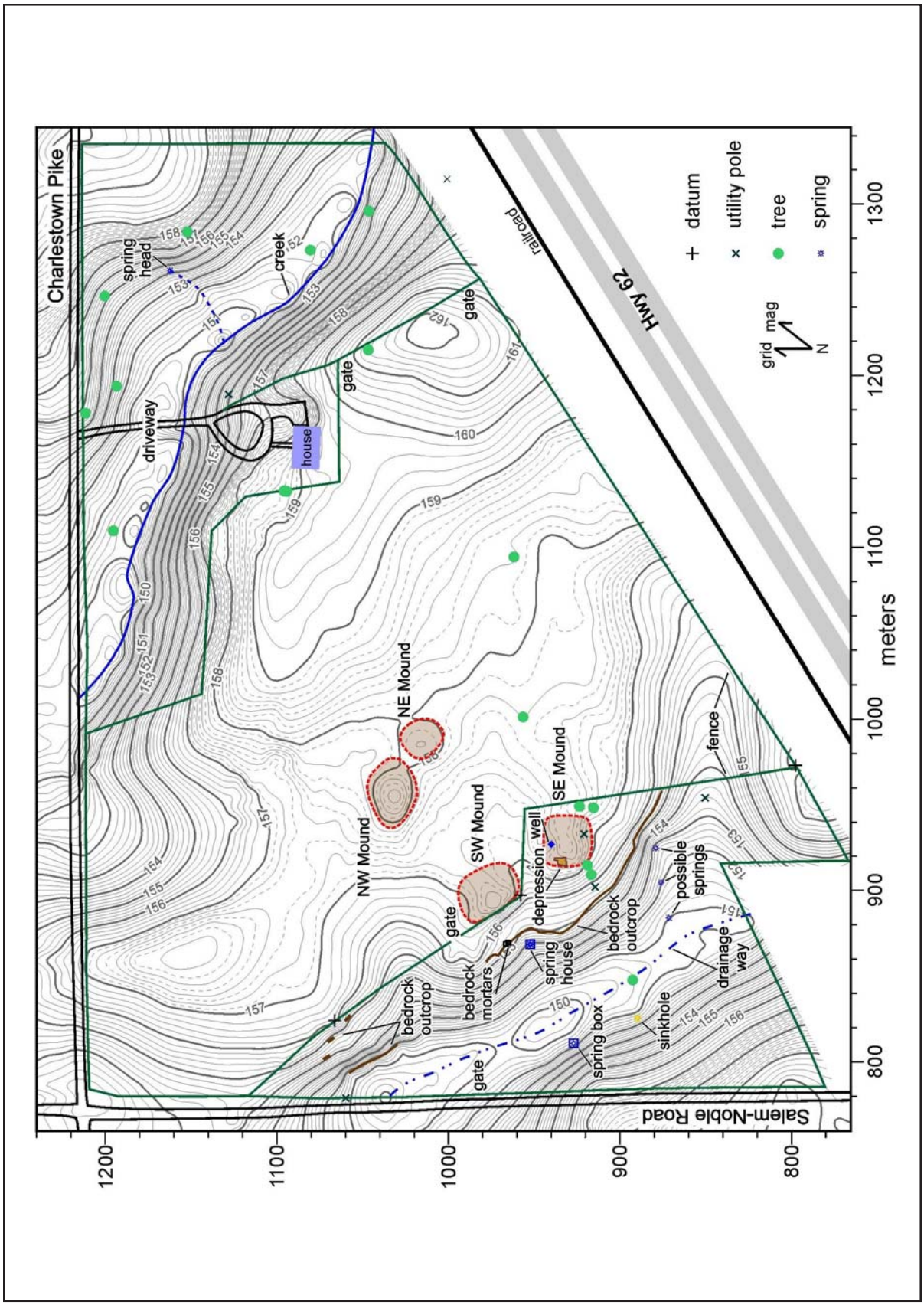

Figure 9. Topographic map of the Prather site.

for a future survey. North of the bedrock mortars and metates and west of a gate, large rocks from a historic corn crib are clustered on the slope. A hog lot is reported to have been present in this general area. An existing railroad embankment immediately outside the fence on the southeast was not mapped, although the site probably extends under this embankment and may well extend farther in this direction. It is possible the site extends south of the right-of-way for State Highway 62 and onto the former INAAP property. Unfortunately, the area of INAAP closest to Prather site has been considerably disturbed.

Three seemingly unnatural, slight elevations were observed in the western portion of the fenced pasture, with the largest and most elevated being the mound excavated by Janzen, based on his measurements from the former fence. We believe that all three mounds in the field are the same three deflated mounds referred to by Guernsey and others. The present-day fence is in the approximate location as the one referenced by Janzen. The highest of the slight prominences is designated the Northwest Mound, the next highest the Northeast Mound. Fence lines are located along the west and south sides of the Southwest Mound, but the west side of the western fence and the mound has been severely eroded along a cattle path. Historically, this path may have been a drive to the former Prather house, or a farm lane between the house and outbuildings and pens.

In addition, a fourth prominence was visible south of the Southwest Mound and along a zigzag in the fence. Probably a prehistoric mound, this high spot was the former location of the Prather house, which was built in the early 1800s but demolished by the present landowner in the late 1960s. Construction of the Prather house, and later demolition and grading of the house debris, undoubtedly flattened and disturbed this location, as our auger samples showed. When Guernsey was at the site, the Prather house most likely obscured the fourth mound.

Figure 10. Bedrock mortars.

(4) Survey multiple transects across the site by excavating small, subsurface samples or "probes" to identify the types, densities, and distributions of cultural materials and to begin to document site boundaries.

Hand-excavated, conical shovel probes or 50-cm-square units along transects are the standard subsurface exploration techniques used for archaeological site survey when soil visibility is limited. Because the Prather site area was primarily in pasture/hay field and the site was expected to contain both pottery and bone, as well as lithic materials, an alternative to shovel probing or small, 50-cm squares was needed. Munson's (2000a, 2000b) experience in archaeological survey using hand-held mechanical augers and tractor-mounted posthole augers had shown this method to be efficient for excavation, but the areas investigated did not contain ceramics or bone. Questions posed to colleagues about the impact that auger sampling had on fragile artifacts did not yield good comparative data. Nonetheless, the observed nature of soil displacement during augering suggested that this small-sample excavation technique would not only be more efficient but more gentle to fragile materials than shovel probes or small shovel tests. Rather than repeated chopping or slicing as is done with a shovel blade, the auger excavates soil partly by twisting and lifting with a minimum of slicing by the metal blade of the bit. For control of excavated volume of samples and visibility of soil profiles, previous experience showed that augering would be comparable to 50-cm squares and more precise and revealing than conical shovel probes. The main drawback to the auger is that the exposed soil profile is curved rather than straight, making it slightly more difficult to map.

The initial transects in July bisected the site with one north-south and one east-west line of samples

Figure 11. Bedrock metate.

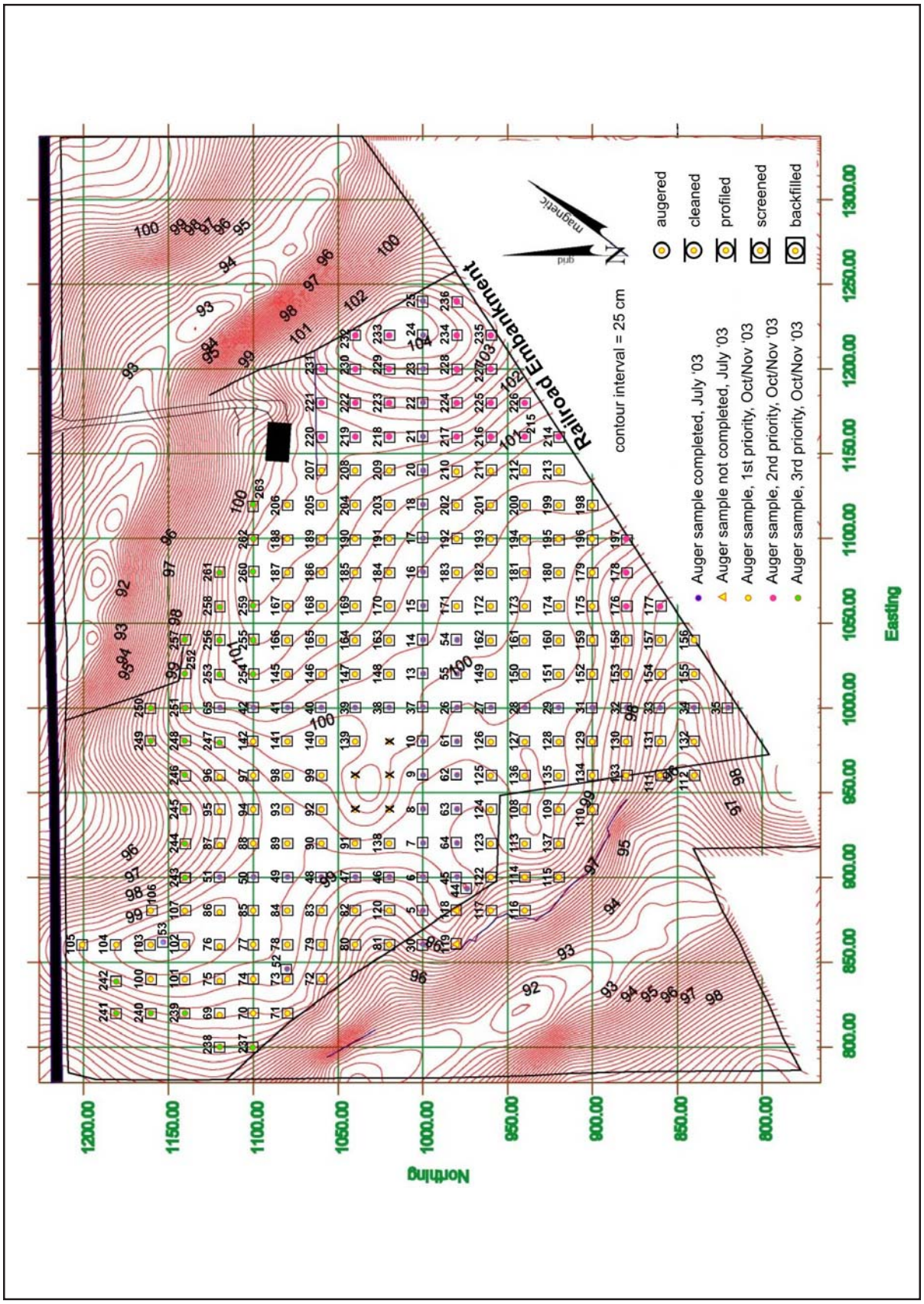

Figure 12. Auger sampling sequence; this map was used to log progress while excavating samples.

(Figure 12). The July schedule allowed excavation of additional auger samples but not an additional complete transect across the site. With but a few exceptions, the samples were excavated on grid at 20-meter intervals. The largest prominences, designated the Northwest and Northeast mounds, were not sampled because there was little doubt that these were artificial constructions. Auger samples in what were later designated the Southwest and Southeast mounds, which have more gentle rises and have been eroded and otherwise altered, revealed that stratified cultural deposits remain in these slight prominences.

Auger sample locations were set by total station and tape, using both a nail with flagging tape and a pin flag to mark each sample location. Elevations were recorded at each auger location to relate soils and stratigraphy from one sample to another. During July when cattle were grazing the field, curious cows and calves often pulled out flags; the redundant marking with nails and flagging tape proved necessary.

After the first day's work, the auger sample procedure became straightforward, but it is useful to describe it so others might benefit from what was learned. The process involved five steps: drilling, "cleaning," profiling, screening, and backfilling. As the work progressed, each completed work stage at each of the sample holes was marked on a field map (Figure 12) to plan the course of further sampling. In this way, sampling priorities were set and filled so that the sampling interval extended over the entirety of the least sloping portions of the central fenced area of the field (from the railroad embankment on the southeast to the steep drop on the north, and from the steep slope on the west to the fence on the east).

Drilling. We used a tractor-mounted posthole auger with a 12-inch (30.5 cm) diameter bit. This diameter was sufficient to allow us to put our faces (or heads) into the holes to examine the soils and to reach the base and lower walls of the exposed soils with hand tools in samples that extended as deep as 1 m. The deeper auger samples, however, did raise the question whether a 14- or 16-inch (35.5-cm or 40.6-cm) diameter drill bit might not have been better.

To keep the auger-loosened soil from falling into the tall grass and being hard to collect, the immediate area around each auger sample was mowed, and then a rubber mat (or rubber-backed rug) with a hole large enough to accommodate the auger was laid on the short grass and centered over the sample point. The tractor moved the auger to the sample point and centered the tip of the bit on the location (Figure 13). The marker nail was pulled and the hole drilled until the estimated target depth was reached. Archaeologists monitored the

Figure 13. Drilling auger samples: (a) Dr. Robert McCullough guiding auger, and Dr. T. Harold Martin driving tractor; (b) Cheryl Munson cleaning soil from auger bit.

depth by the position of the horizontal arm of the auger and the distance between the top of the bit mount and the ground surface. The target depth was to auger beyond cultural deposits or the A/B Horizon into lower B Horizon soils, so that the maximum vertical extent of cultural materials in the soil profile could be observed. The depth of the cultural deposits in one sample helped to guide plans for adjacent auger samples. When the target depth was reached, the auger was lifted over the hole so the loosened soil adhering to the bit could be scraped into the hole or onto the mat. Then the tractor took the cleaned auger bit to the next sample location.

The deepest auger hole reached 0.99 m, and several were close to this depth (Appendix I). In the case of one auger hole with deep deposits, drilling and cleaning was carried out in two stages, with the resulting samples approximating excavation in arbitrary levels. The entirety of the upper level was screened. Part of the lower level was collected as a flotation sample, the remainder being screened. This two-stage excavation procedure, while presenting some vertical control for the samples, offers less precision than solid-earth coring, such as Giddings rig samples, because it is possible to have some mixing of the lower level soils with materials from the upper level. If soils are either very moist, or very dry and hard, however, mixing when augering multiple levels may present little problem.

To guide the drilling, the depth of cultural materials in cleaned and profiled auger holes was carefully tracked in order to drill deep enough in adjacent samples to extend the augering past the vertical extent of artifacts and anthrosols. We also wanted to drill no farther than necessary, to avoid loosening large quantities of sterile soils that would have to be cleaned out and screened.

Cleaning. Before further work began on any auger sample, a Field Specimen (FS) number was assigned to the sample and a record form was begun that noted the sample's grid location and FS number. A zip-lock bag was used to protect the form from rain and dew, and the bag was clipped to the flag next to the hole. If the excavated soil at the hole wasn't slated to be cleaned out the same day it was excavated, it was covered with a folded plastic tarp to protect it from rain or drying out. When team members were available to clean the soil from an auger hole, they placed the plastic on the ground, scooped up and removed the loosened soil with hand tools (shovel, posthole digger, trowel, scoop, bowl, cup) until the sides and base of the auger hole exposed the *in situ* soils (Figures 14 and 15). After a few rain-muddied samples, we developed a protective method. If the auger hole was not ready for profiling the same day, two people used the plastic tarp to carry out the "Prather burrito wrap" (Figure 16). The excavated soil was wrapped into a giant, heavy burrito and the burrito was dragged over the auger

Figure 14. Cleaning auger samples to remove loosened soil, using shovels and posthole diggers. (a) Cheryl Munson; (b) volunteers Sundae Murphy and Richard Lyons; (c) Patrick Munson.

Figure 15. Removing loosened soil from the base of an auger sample.

Figure 16. Wrapping the augered soil in plastic to make a "burrito" to cover the hole and the soil.

hole, thereby protecting both the collected soil and the exposed face of the auger hole from rain or drying. The team members cleaning the holes recorded their observations on the sample record form about dates of work, who did what tasks, and what artifacts or possible features were observed during cleaning, and then placed the form back in the zip-lock bag for the next workers.

Appendix I presents the Field Specimen log for the survey project. In all, 271 samples were logged for the project.

Profiling. To maintain consistency in observations and soil descriptions, only four members of the team recorded soil profiles, and all used a standard key. After examining the entirety of the exposed soil profile at one sample, the archaeologist chose one or perhaps two curved faces for mapping and description of soils (texture, color, mottling); cultural features, masses, or strata; stratigraphic transitions; heat alteration; and any *in situ* artifacts or residues (Figure 17). In some cases, cultural deposits extended below the base of the auger sample, and an Oakfield sampler was used to core below this depth to check the vertical extent of features or other anthrosols.

For mapping, it was convenient that the circumference of one-half the drilled hole equaled about 0.5 m. Profile maps were recorded on graph paper on the back of the sample record form, using a scale of 1 inch = 0.1 m and treating the curving face as if it were a straight face. For example, the soil profile of auger hole FS 61 (Figure 18), about midway between the Northeast and Southeast mounds, shows a thick cultural stratum beneath the plowzone and two features above the subsoil. When profiling was complete, the record form was re-bagged and clipped to the flag, ready for the next stage of work.

Some artifacts and samples of charcoal from the exposed profiles or the base of the sample holes were collected while profiling, and these were treated as piece-plotted specimens. The

Figure 17. Mapping a soil profile.

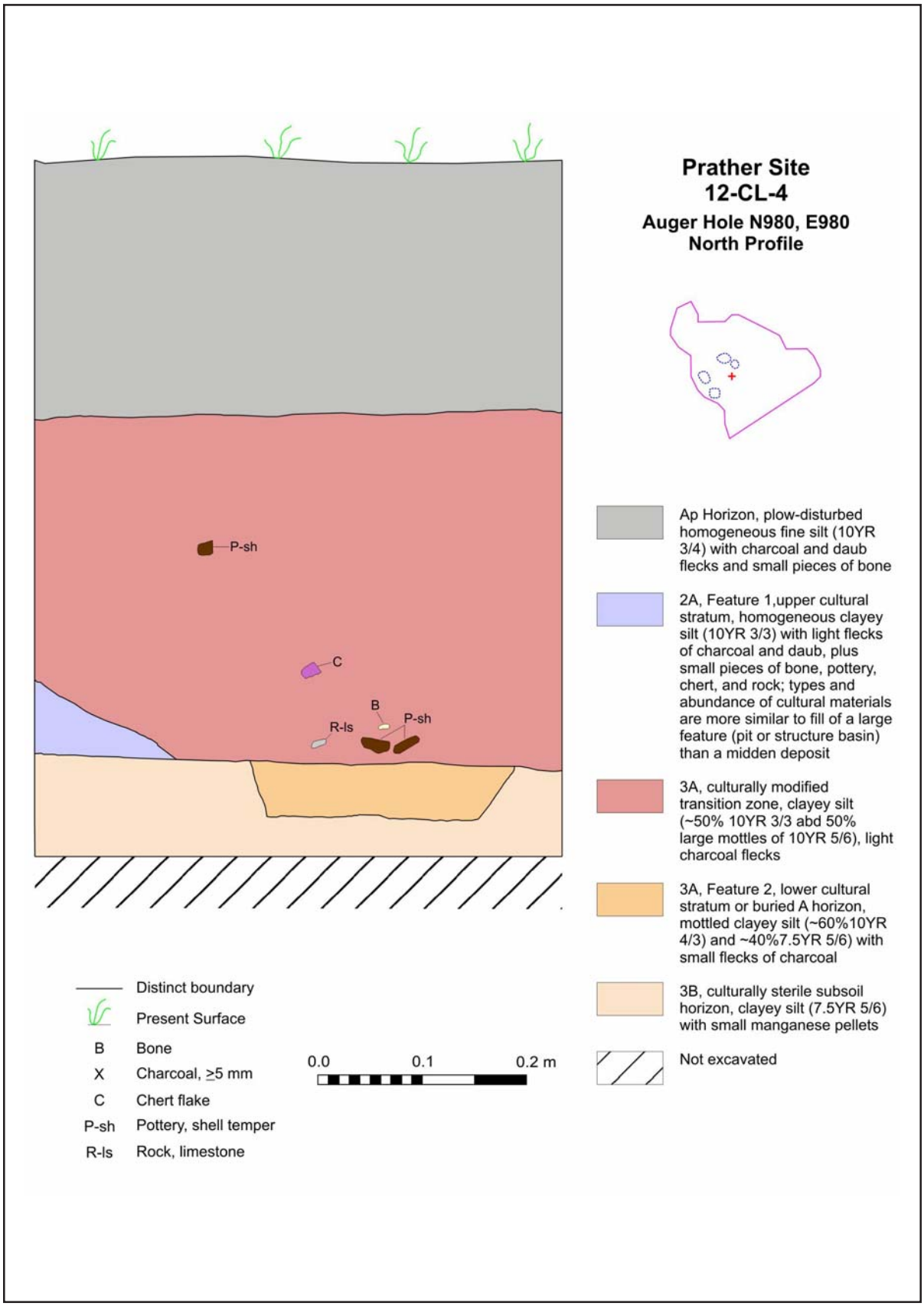

Figure 18. Soil profile in area south of the Southeast Mound; auger sample at N980, E980 (FS61).

most unusual specimen is a reconstructed Mississippi Plain pottery jar recovered from the base of an auger hole that intersected a deep feature (Figure 19). We knew that abundant ceramics would be found when the soil from this sample was screened, because of the unusual number of sherds observed when cleaning. The tip of the auger did damage the rim of the jar, but the greater part remaining in the ground was hand excavated and then removed as one large unit, albeit one that had many fine cracks due to ground pressure. Several of the small cracked pieces disintegrated as the pot was cleaned in the laboratory, making reconstruction a painstaking job (Figure 20). Interestingly, this jar had been deposited with one intact handle and an opposed handle that had been broken off previously. The context of this one-handled jar is unknown except for stratigraphic indications of a feature (Figure 21).

Screening. All excavated soil, both from the auger samples and from the three shovel probes made for the grid datums, was screened through ¼-inch hardware cloth (Figure 22), using either table screens or screen boxes on saw horses, each of which were cumbersome to transport from one auger hole to the next. Artifacts were collected in plastic zip-lock bags labeled with the FS number, grid coordinates, and dates of excavation. The screeners completed the sample record form to note observations about the materials collected. One of the research team logged in the FS samples and forms daily to monitor progress and plan the next day's work (Figure 23).

Backfilling. The backfilling of the auger holes was generally conducted while screening, with the screen placed over the hole, tamping the soil occasionally, and mounding any excess over the hole. At the end of the project, grass seed was

Figure 19. Partly exposed ceramic vessel at the base of the auger sample at N1080, E920.

Figure 20. Reconstructing the vessel in the laboratory.

Figure 21. Reconstructed Mississippi Plain jar from auger sampling at N1080, E920 (660.264.1).

Figure 22. Screening samples along the N1140 line.

sprinkled over the bare soil to return it to pasture, and the flags were pulled.

Other. All diagnostic artifacts found along exposed paths on the surface were point-plotted and collected as planned.

(5) Following field work, clean, identify, catalog, and analyze recovered materials with respect to documented contexts and spatial distributions, and prepare materials for curation.

These standard laboratory procedures were accomplished at IU-B in the winter and early spring of 2003. In addition, two flotation samples were processed using a miniature version of the SMAP device that included a bucket, PVC pipes, window screen mesh to collect the heavy fraction, and a paint filter bag to collect the light fraction. Cataloged artifacts and samples will be curated at IPFW under accession number 660.

Fifty-one auger samples were excavated in July, and 192 in October-November, for a total of 243 screened sample locations. Screened shovel probes at the datums provide three additional samples, for a grand total of 246 screened samples. One FS number was canceled, and 22 other types of samples were collected: piece-plots (n=7); surface collections of diagnostic artifacts (n= 5); surface collections of nondiagnostic artifacts (n=1); soil samples (n=3); rock samples (special collections, n=3); miscellaneous samples of unidentified material (from inside pottery vessel, n= 1); and flotation samples (n= 2).

In addition to the survey samples, the project received the donation of a Mississippi Plain ceramic bowl (Figure 24) reported to have been found in the spring on the west side of the Prather site (Perry Harrell, personal communication 2003). The name of the person who found this vessel is not known.

After cleaning, artifacts and residues from each field specimen and from the heavy fraction of the single flotation sample were first size-graded into four categories as measured by mesh openings

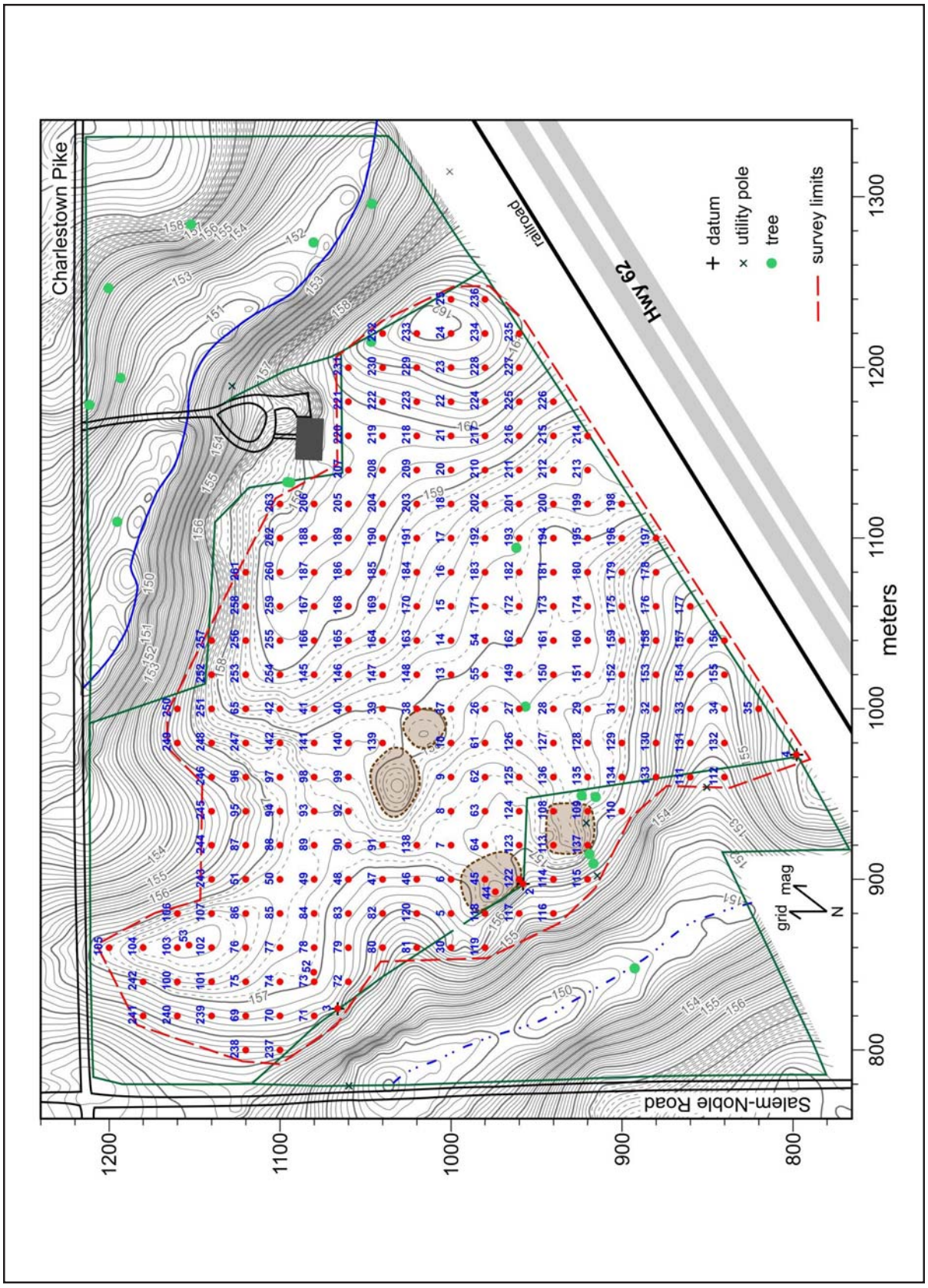

Figure 23. Location of screened samples with respect to topography (FS number noted for samples; contour interval = 0.1 m).

Figure 24. Mississippi Plain bowl reportedly found in a spring at the Prather site (660.1.1, donated to the project).

(<¼-inch mesh, <½-inch mesh, < 2-cm mesh, > 2-cm mesh) (Figure 25). Within each size-grade, artifacts and materials were identified and sorted by five variables: form or category (Var. 1); raw material type or temper type for ceramics (Var.2), surface or secondary characteristics (Var. 3), segment (Var. 4), and other properties (Var. 5). Artifacts that shared attributes of variables 1-5 were grouped together and placed in plastic cups arranged on trays. After identifications were checked, the attributes of each sorted group, plus their count and weight (to the nearest 0.1 g), were recorded (Figure 26). Artifacts were labeled with catalog numbers written in ink and then placed in

Figure 25. Size-grading artifact samples in the laboratory.

Figure 26. Cataloging (tagged cups of artifacts are stored temporarily on trays in baker's racks).

zip-lock plastic bags, along with the same number on a paper tag, for curation. Storage bags also were labeled with provenience information. Data entry of the handwritten catalog was done in Excel for use as a spreadsheet or to export into an Access database program.

Catalog numbers are actually a string of numbers separated by periods, such as 660.10.15.3. The first number in the sequence, 660, is the IPFW accession number. The second number, 10, is the FS number, which relates provenience information recorded in the FS log (Appendix I). The third number in the series is the catalog number; 15; catalog numbers are assigned within each FS, beginning with number 1, to each unique group of material (sorted for all five variables) regardless of the number of items in the group. The last number, 3, is a subcatalog number that is used to create a unique identifying number when there is more than one item in the cataloged group. Subcatalog numbers are assigned to all materials that may be analyzed further, such as decorated sherds, rim sherds, lithic tools, and faunal objects. For example, two similar decorated sherds in Figure 36 are distinguished by their subcatalog numbers 660.10.15.3 and 660.10.15.4.

(6) Communicate the results of the project to the general public, professional audiences, and the granting agencies.

This report is the main form of communication of the survey's results. The project's website, http://www.indiana.edu/~archaeo/prather, was an important means of sharing information about the research with the general public. Additionally, the authors presented a public lecture about the Prather site survey at the Falls of the Ohio State Park in June 2003.

CHAPTER 4
Results of the Survey Project

The auger sample survey extended over an area of about 95,800 m^2, or about 9.58 ha (23.68 ac). The 246 screened samples encompass an irregular area from grid N820 to N1200 and E800 to E1240.

Topographic Mapping

The detailed topographic mapping combined with the auger sampling clearly showed the location of four probable man-made mounds that await formal confirmation through test excavation (Figure 27). Walking over the mounds in the former plowed field, the rises are very subtle in most cases. As shown with 0.05 m contour intervals, the mounds stand out as prominent elevations.

At ground level, however, the Northwest and Northeast mounds appear to merge into one mound, and the Southwest Mound is distinct only along the fence-line along the edge of the field where the slope has been eroded by cow paths and perhaps a former farm lane. These three mounds were under cultivation for a long time, possibly 15 decades, prior to Dr. Martin's purchase of the farm.

The Northwest Mound covers an area approximately 45 m by 32 m, oriented with the longer axis roughly true east-west. The same approximate orientation applies to the Northeast Mound, whose size is about 35 m by 32 m. The Southwest Mound, again with the same approximate alignment, is 37 m by 28 m. The estimated topographic extent of each of the mounds is probably greater than their original size, given the forces of erosion and redeposition. The size of the largest mound noted by Guernsey (about 60 m by 30 m) does not compare with our mapping of any of the four mounds. One possibility is that Guernsey included two of the mounds we mapped into his "largest mound." Another possibility is that the size of one or more of the mounds has been substantially reduced in the seven decades since Guernsey's excavation. In either case, it is presently impossible to figure out which mound is the small mound Guernsey excavated and which is the largest mound that he tested, based on his brief descriptions.

The Southeast Mound is the former site of the Prather family home, which may have been built before 1840 (Baird 1909:674-675), and is probably the most altered in elevation and form. Until the home was demolished in the 1960s, Baird (1909) was the only person to suspect a fourth mound at the Prather site, probably because the house and associated outbuildings obscured this prominence from easy view. The mound's contours are distinct on three sides, but not on the east. To what degree the mound's elevation and shape has been altered by construction and demolition of the Prather house is unknown, but auger samples showed intact deposits in several locations. Historic and modern modifications may well have changed not only the shape of the mound but its size, which presently measures about 38 m by 35 m..

Our sampling in probable mounds was limited to the least mound-like elevations, with three auger samples in what we subsequently termed the Southwest Mound (FS 44, 45, and 122) and four in the Southeast (FS 108, 109, 113, and 127). Soil profiles in the Southwest Mound at auger samples FS 44 (Figures 28 and 29) and FS 45 (Figure 30) show deep (0.91 to 0.94 m), stratified deposits containing ash, charcoal, shell, and small pieces of daub. The soil profile at FS 122 on the south edge of the mound showed two cultural strata overlying a buried paleosol (A Horizon) (Figure 31). In contrast, the deep soil profile at FS 108 (Figure 32) at the Southeast Mound shows historically disturbed deposits to a depth of 0.58 m

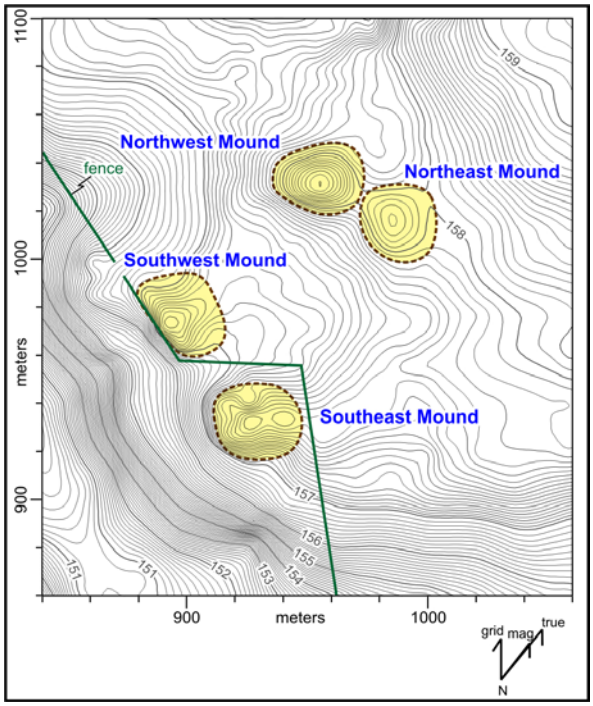

Figure 27. Detailed topographic map of the Prather site showing four identified mounds (contour interval = 0.05 m).

which truncate narrow cultural features that are probably postholes or wall trenches. The screened samples from these locations contain comparatively large quantities of shell-tempered pottery, minor amounts of Woodland pottery, abundant bone, daub, and chert debitage. Recovered cultural materials are discussed in the final section of this chapter.

The Southeast Mound samples additionally produced large numbers of historic artifacts, reflecting the use of the mound for the former Prather house and signifying the substantial disturbance of the mound's upper levels. Janzen may have unknowingly excavated in a portion of this mound in 1971 (near FS 108 at N960, E960), but his maps and profiles are needed to understand that work and the collections obtained. Three of the four soil profiles we obtained in this locale showed that archaeological features (primarily narrow postholes or wall trenches) remain intact below the level of disturbance. The fourth soil profile (FS 113) contained poorly compacted soil and historic and modern artifacts to a depth of more than 0.81 m; although the base of this deposit is not known, we suspect that this sample intersected the filled-in basement of the Prather house. It might be possible to expose a long profile of this mound's stratigraphy for study without intruding on the remaining mound deposits by simply re-excavating the eastern portion of the house basement and removing part of the basement wall. Another possibility is that FS 113 is located at a filled-in well. Future investigations in this location should attempt to identify the limits of the historically filled pits, as a step toward discovering remnants of the prehistoric deposits in the Southeast Mound.

Our survey shows that the mounds are approximately oriented to true north, with the present-day summits of the Northwest and Southwest mounds having the best match to this celestial marker. Knowledge of the original size, construction sequence, dating, and functions of the mounds would require detailed subsurface investigations. For now, we know from

Figure 28. Southwest Mound, soil profile at N973.9, E892.8 (FS 44).

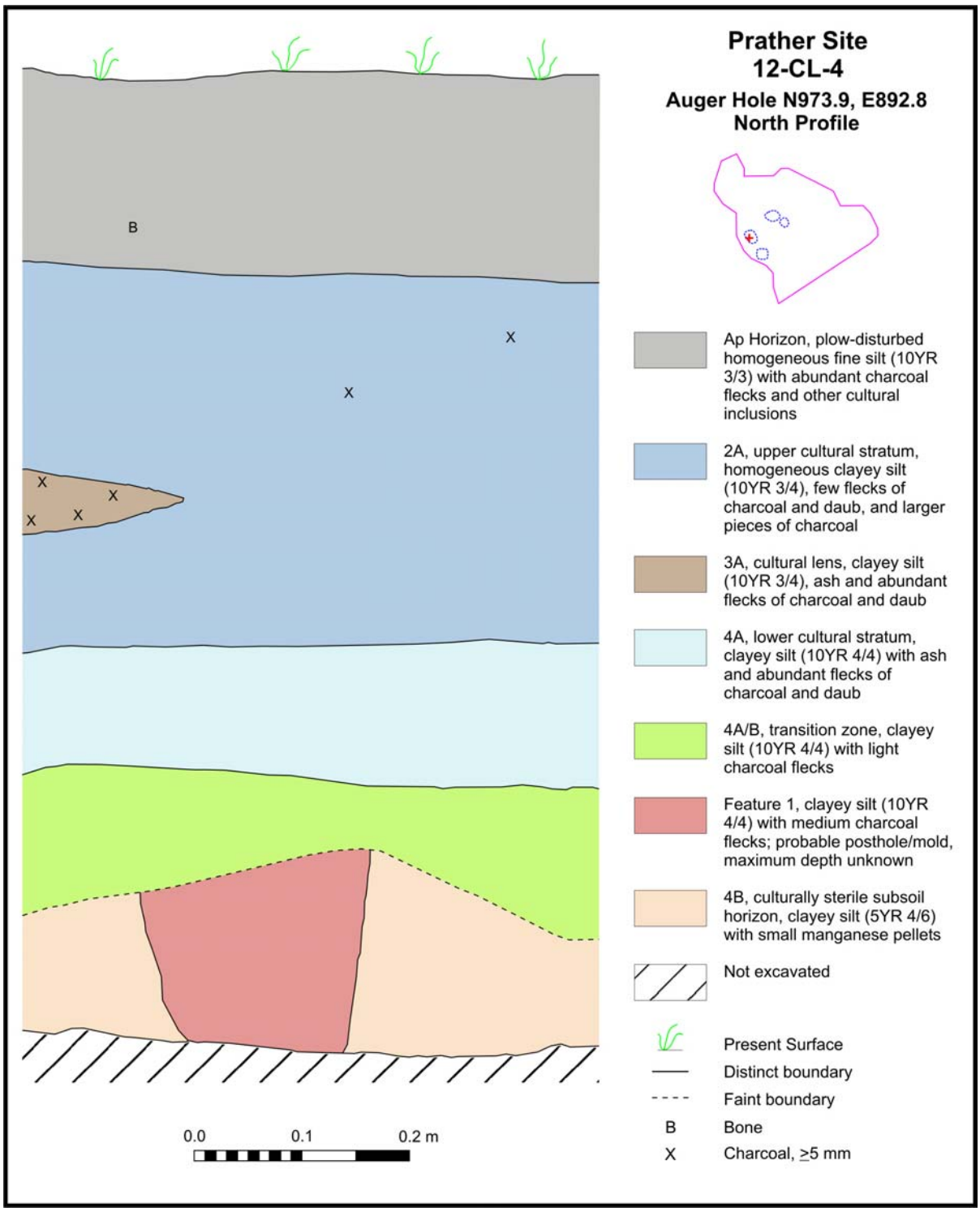

Figure 29. Southwest Mound, mapped soil profile at N973.9, E892.8 (FS 44).

Guernsey's 1934 excavations, augmented by Janzen's 1971 work, that at least the Northwest Mound was used for burials of individuals with symbolically powerful artifacts (the copper-covered wooden eagle and conch shell ornaments) and for structures with clay floors (or fallen wall plaster?) and wall trenches.

Last but not least, our topographic mapping

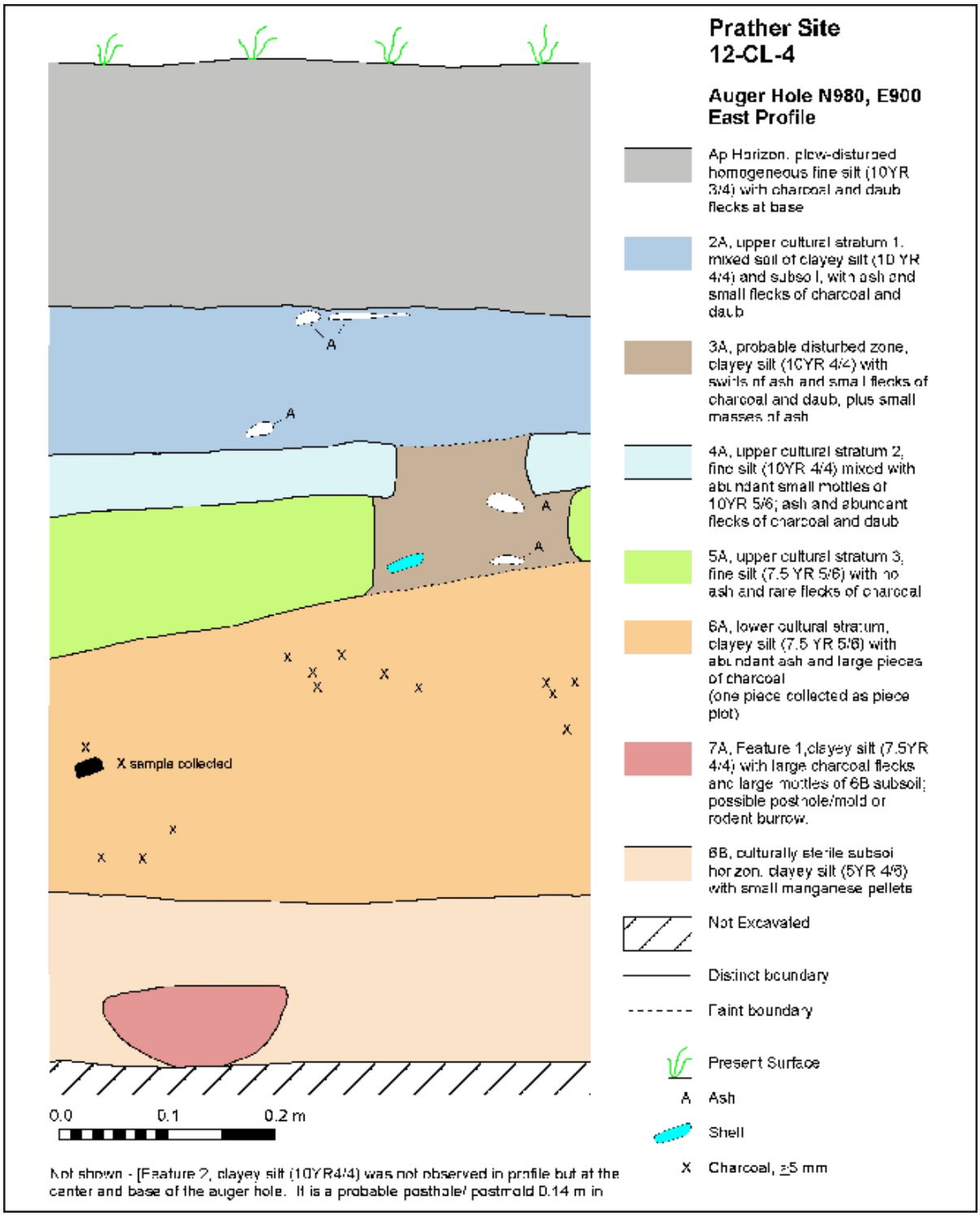

Figure 30. Southwest Mound, mapped soil profile at N980, E900(FS 45).

helped us estimate the approximate locations of Janzen's 1971 excavation areas and units, which are shown in Figure 33. Estimation references the approximate position of a fence post used by Janzen as a datum. After Janzen's work, the landowner replaced the fence post near its previous location.

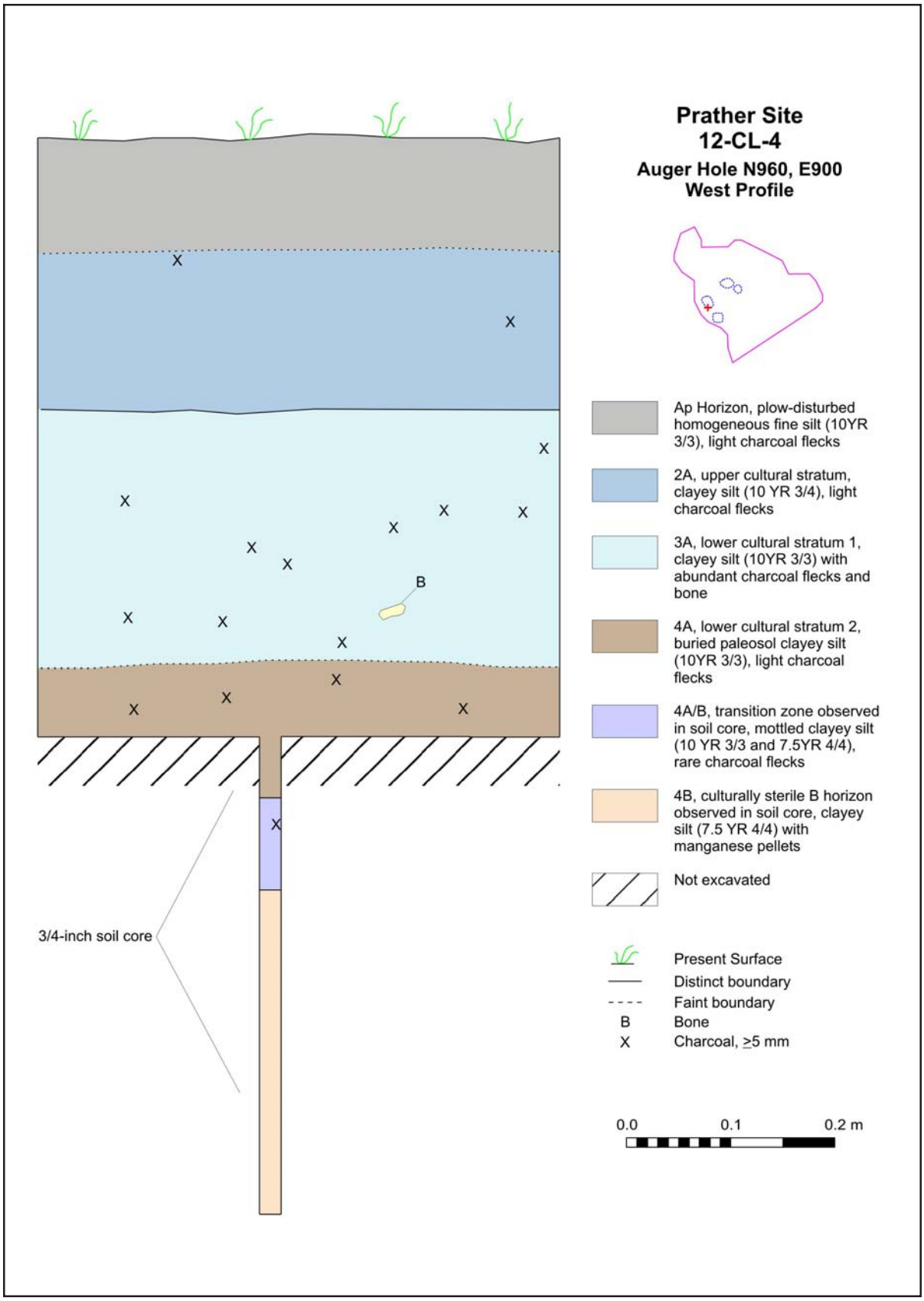

Figure 31. Southwest Mound, mapped soil profile at N960, E900 (FS 122).

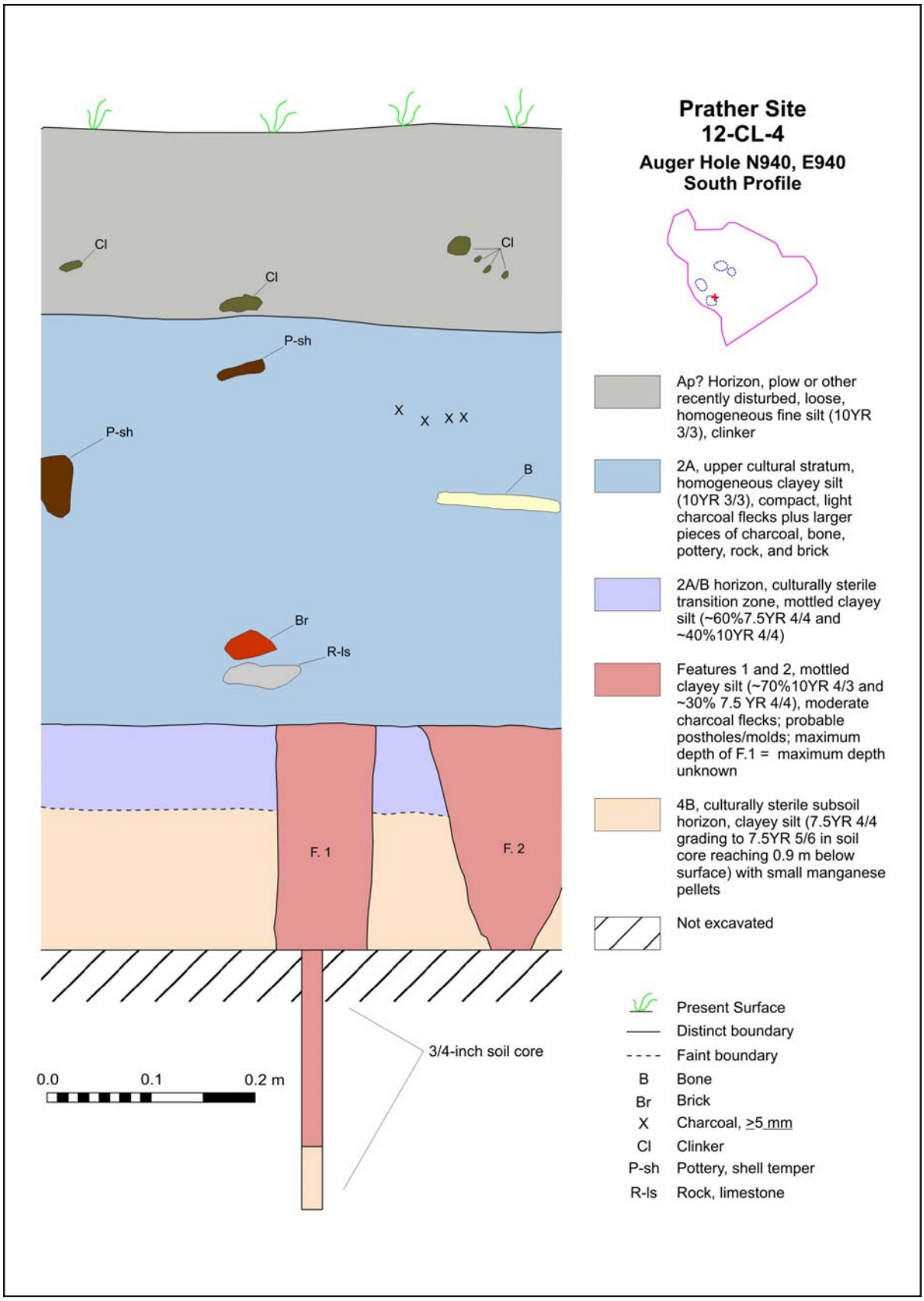

Figure 32. Southeast Mound, mapped soil profile at N973.9, E892.8 (FS 108).

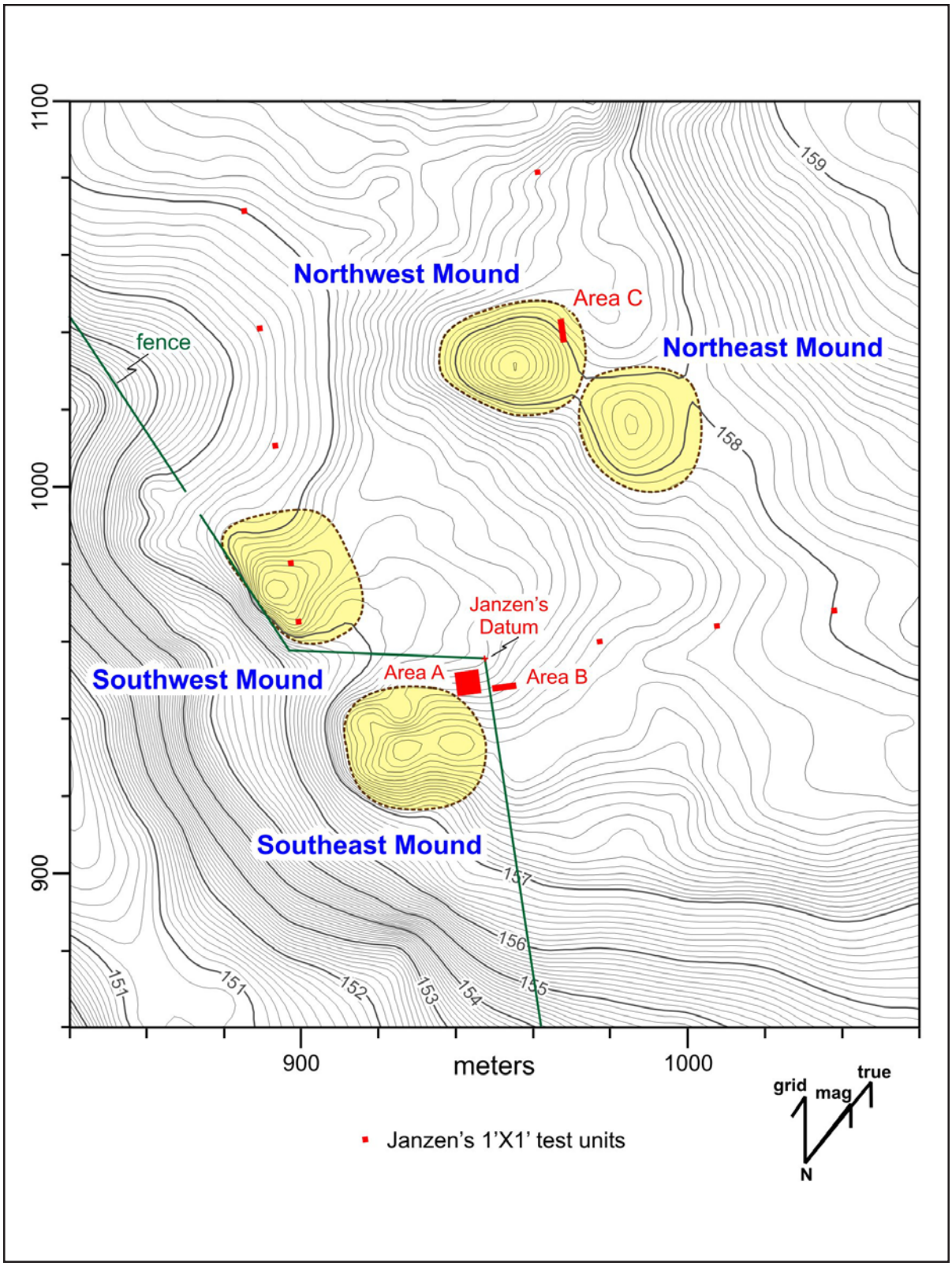

Figure 33. Detailed 0.05-m contour map of the Prather site mound area, showing the estimated location of Jansen's 1971 excavation areas and test units. Estimation is based on his sketch map, fencepost datum, and illustrated magnetic north arrow. Ten additional 1-by-1-foot test excavation units were located beyond the limits of the map to the north and east.

Recovered Collections

Recovered materials and samples number 17,791. They include both identified and unidentified materials sorted according to size class. The overwhelming majority of the materials derive from ¼-inch screening, but a small number came from the heavy fraction of processed flotation samples or were collected as piece-plotted specimens. Special collections include rock and soil samples, plus artifacts collected from the surface in the few exposed areas of the site. Other samples include the unsorted material that is smaller than ¼ inch, and the light fractions of flotation samples. Table 1 presents a listing of materials and samples by group and category. The most abundant groups, in decreasing order, are natural rock, ceramics, faunal material, chipped stone artifacts, and historic artifacts.

Natural Material (N=2,382 and 4,379)

Most of the collected rock is natural. All pieces larger than ½ inch (N=2,382) were identified to distinguish the culturally modified or manuported rock from the natural rock. Natural rock includes rock (limestone, ironstone, shale, unmodified chert, and geodes), small pebbles (as opposed to cobbles), and crinoid fossils, all of which appear to be present as residua in the soil. Dolomite is the dominant form of limestone, and it is distinguished from the more calcareous limestone by the lack of effervescence in dilute hydrochloric acid.

Most pieces of rock smaller than ½ inch (N=4,379) were not identified to raw material but are probably natural material. Undoubtedly, a small number of the small pieces are sandstone or hardstone, but the ratio of identified natural material to cultural rock and mineral is about 61:1.

Ceramics (N=3,520)

Ceramics include pottery sherds, the Mississippian Plain reconstructed ceramic vessel, a single ceramic object, and several pieces of indeterminate daub or sherd. Sherds (N= 3,517) and ceramic objects (reconstructed vessel, unknown object) in all size classes were identified according to temper and exterior surface treatment (Table 2). It was necessary to analyze the numerous small sherds in the <½ inch-size class (N=2,787) because relatively few specimens in the larger size classes (>½ inch-class, N=641; >2 cm class, N=89) were recovered. The small size of sherds is not surprising, given that most were recovered from plowzone and midden contexts rather than features. Exterior surfaces of sherds are: cordmarked; cordmarked or fabric impressed; incised; noded; plain; red slipped; or unknown (Table 2). Temper categories number 13. Temper was observed on freshly nipped edges of sherds with a 10X hand lens.

Temper and Group Classification

Sherds with shell temper or a mixture of shell and other materials were assigned to the Mississippian group (N=3,296). Sherds with grit, grog, or grit/grog combination tempers represent the informal group "Woodland" ceramics (N=188). These sherds primarily have plain surfaces and are possibly Middle and/or Late Woodland types based on the range of vessel wall thickness observed. In a small number of the grit-tempered sherds the grit is rounded and could be classified as sand. In other cases, however, both angular and rounded grains are present, suggesting that crushed rock was added to a somewhat sandy clay. Microscopic examination is needed to distinguish sand, however, and this was not attempted for the survey project. In cases where temper could not be identified, the group was listed as Unclassified (N=32).

Because shell was sometimes mixed with grit, identification of temper for sherds in the <½-inch size class is less secure. It is entirely possible that either a small piece of shell or a small piece of grit would have been the only temper particle observed in a sherd that had combined shell and grit temper, and then the sherd would have been

Table 1. Collected Artifacts and Samples by Type of Collection and Size Class.

Group	Artifact Category	Type of Collection and Size Class												Total All Sizes
		Flot. <1/4"	Flot. <1/2"	Flot. <2 cm	Flot. >2 cm	Piece Plot, >2 cm	Screened, <1/4"	Screened, <1/2 Inch	Screened, <2cm	Screened, >2cm	Screened, Charcoal	Special Collection	Surface Collection	
Ceramic	Ceramic Object	-	-	-	-	-	-	1	-	-	-	-	-	1
	Ceramic Vessel With Attachments	-	-	-	-	1	-	-	-	-	-	-	-	1
	Daub/sherd	-	-	-	-	-	-	2	1	-	-	-	-	3
	Sherd	-	33	12	5	2	-	2753	629	81	-	-	-	3515
Ceramic Subtotal		-	33	12	5	3	-	2756	630	81	-	-	-	3520
Chipped Stone	Amorphous Core	-	-	-	-	-	-	4	28	53	-	-	-	85
	Biface	-	-	-	-	-	-	12	14	2	-	-	2	30
	Debitage	-	8	-	-	-	-	2021	298	18	-	-	-	2345
	Drill	-	-	-	-	-	-	-	2	-	-	-	1	3
	Lamellar Blade	-	-	-	-	-	-	2	-	-	-	-	-	2
	Perforator	-	-	-	-	-	-	3	1	-	-	-	-	4
	Projectile Point	-	-	-	-	-	-	9	10	-	-	-	-	19
	Spokeshave	-	-	-	-	-	-	-	1	-	-	-	-	1
	Uniface	-	-	-	-	-	-	2	1	-	-	-	-	3
Chipped Stone Subtotal		-	8	-	-	-	-	2053	355	73	-	-	3	2492
Daub		-	7	2	-	-	-	414	25	1	-	-	-	449
Fauna, Unmodified		-	157	20	3	-	-	2655	278	53	-	-	-	3166
Faunal Objects	Bone Awl	-	-	-	-	-	-	1	-	-	-	-	-	1
	Shell Bead	-	-	-	-	-	-	1	-	-	-	-	-	1
	Faunal ?	-	-	-	-	-	-	1	-	-	-	-	-	1
	Bone Fishhook	-	-	-	-	-	-	1	-	-	-	-	-	1
Faunal Objects Subtotal		-	0	0	0	-	-	4	0	0	-	-	-	4
Ground Stone	Hammer and Pitted Stone	-	-	-	-	-	-	-	-	-	-	-	1	1
	Hammerstone	-	-	-	-	-	-	-	-	2	-	-	-	2
Ground Stone Subtotal		-	-	-	-	-	-	-	-	2	-	-	1	3
Historic Euro-american Artifacts	Brick	-	-	-	-	-	-	27	13	18	-	-	-	58
	Button	-	-	-	-	-	-	1	-	-	-	-	-	1
	Ceramic	-	-	-	-	-	-	26	8	8	-	-	-	42
	Clinker	-	-	-	-	-	-	229	59	-	-	-	-	288
	Coin	-	-	-	-	-	-	-	-	-	-	-	1	1
	Glass	-	-	-	-	-	-	99	16	6	-	-	-	121
	Misc Object	-	-	-	-	-	-	14	5	4	-	-	-	23
	Mortar	-	-	-	-	-	-	3	-	-	-	-	-	3
	Nail	-	-	-	-	-	-	140	47	8	-	-	-	195
	Rifle/pistol Shell	-	-	-	-	-	-	1	-	-	-	-	-	1
	Staple	-	-	-	-	-	-	-	2	-	-	-	-	2
	Unidentified Misc Object	-	-	-	-	-	-	148	37	10	-	-	-	195
	Wire	-	-	-	-	-	-	40	4	1	-	-	-	45
	Rock (Coal)	-	-	-	-	-	-	98	16	1	-	-	-	115
	Rock (Slate)	-	-	-	-	-	-	1	-	-	-	-	-	1
Historic Subtotal		-	-	-	-	-	-	827	207	56	-	-	1	1091

Table 1. Collected Artifacts and Samples by Type of Collection and Size Class (continued).

Group	Artifact Category	Type of Collection and Size Class												Total All Sizes
		Flot. <1/4"	Flot. <1/2"	Flot. <2 cm	Flot. >2 cm	Piece Plot, >2 cm	Screened, <1/4"	Screened, <1/2 Inch	Screened, <2cm	Screened, >2cm	Screened, Charcoal	Special Collection	Surface Collection	
Natural Material	Fossil	-	-	-	-	-	-	3	3	-	-	-	-	6
	Pebble	-	-	-	-	-	-	142	36	10	-	-	-	188
	Rock	-	11	11	8	1	-	985	882	290	-	-	-	2188
Natural Material Subtotal		-	11	11	8	1	-	1130	921	300	-	-	-	2382
Natural Material?	Rock	-	32	-	-	1	-	4371	24	4	-	-	-	4432
Botanical Remains	Charcoal	2	-	-	-	-	-	-	-	-	47	-	-	49
	Charcoal Select Corn	-	-	-	-	-	-	-	-	-	1	-	-	1
	Charcoal Select Nut	-	-	-	-	-	-	-	-	-	14	-	-	14
Botanical Remains Subtotal		2	-	-	-	-	-	-	-	-	62	-	-	64
Residue	Ash	-	-	-	-	-	-	-	-	1	-	-	-	1
Rock & Mineral	Cobble	-	-	-	-	-	-	-	-	4	-	-	-	4
	Red Ochre	-	-	-	-	-	-	4	-	-	-	-	-	4
	Rock	-	-	-	-	1	-	4	20	7	-	3	-	35
	Unidentified Material	-	-	-	-	-	-	23	1	1	-	1	-	26
Rock & Mineral Subtotal		-	-	-	-	1	-	31	21	12	-	4	-	69
Sample	Rock	-	-	-	-	-	-	-	-	-	-	18	-	18
	Sherd											1		1
	Soil Sample	-	-	-	-	-	-	-	-	-	-	6	-	6
	Unsorted Material	-	-	-	-	-	118	-	-	-	-	-	-	118
	Unsorted Flotation Factions	4	-	-	-	-	-	-	-	-	-	-	-	4
Sample Subtotal		4	-	-	-	-	118	-	-	-	-	25	-	147
Grand Total		6	248	45	16	5	118	14236	2443	579	62	29	5	17792

misidentified as to temper. Therefore, intersite comparison of temper variation might best refer to the larger size classes. Also, if larger samples of sherds are obtained for intrasite comparison, then temper variation between the larger size classes should be reanalyzed.

The presence of shell temper, alone or in combination with other aplastic material, is the basis for classifying ceramics as Mississippian. Shell temper was sometimes directly observed; in other cases, it was indirectly indicated by small, platey voids that result from leaching of shell in acidic soils. Both present and leached shell were coded (Table 2). Shell-tempered sherds often include a mixture of shell and grit, with the grit being crushed rock (primarily dolomite), or, rarely, shell mixed with calcareous limestone. However, the addition of observable grog mixed with shell is very rare (N=2, <0.01%).

More than 35 percent of the shell-tempered sherds contain grit. It is possible that this grit derives from using local upland clays that were poorly processed to remove the non-clay inclusions of macroscopic size (≥0.5 mm). Shell-tempered ceramics without obvious grit may have been made from the same upland clays after careful processing. Alternatively, it is possible that the sherds lacking included grit may have derived from different clays, perhaps alluvial clays from the Ohio River or Silver Creek floodplains. None of the grit mixed with shell was classified as sand temper, but sand does occur in some of the shell- and grit-

Table 2. Ceramics by Group, Temper, and Exterior Surface Treatment.

Ceramic Group	Temper	Percent Exterior Surface Treatment							Total (n)
		Cord Marked	Cord Marked/ Fabric Impressed	Incised	Noded	Plain	Red Slipped	Unknown	
Woodland	Grit	2.3	0.0	0.0	0.0	87.8	0.0	10.0	173
	Grit-Limestone	0.0	0.0	0.0	0.0	100.0	0.0	0.0	3
	Grit-Grog	0.0	0.0	0.0	0.0	100.0	0.0	0.0	1
	Grog	33.3	0.0	0.0	0.0	33.3	0.0	33.3	3
	Limestone	0.0	0.0	0.0	0.0	94.4	0.0	5.6	18
	Subtotal	2.5	0.0	0.0	0.0	87.8	0.0	10.0	197
Mississippian	Shell Leached	0.2	0.2	0.2	0.0	93.4	0.0	6.1	604
	Shell Leached-Grit	0.7	0.0	0.0	0.0	94.9	0.0	4.0	888
	Shell Leached-Limestone	0.0	0.0	0.0	0.0	100.0	0.0	0.0	2
	Shell Present	2.5	0.1	0.3	0.3	90.1	0.2	6.6	1,519
	Shell Present-Grit	6.3	0.0	0.7	0.0	90.7	0.0	2.0	270
	Shell Present-Grit-Limestone	0.0	0.0	0.0	0.0	100.0	0.0	0.0	1
	Shell Present-Grog	0.0	0.0	0.0	0.0	100.0	0.0	0.0	2
	Shell Present-Limestone	0.0	0.0	50.0	0.0	50.0	0.0	0.0	2
	Subtotal	1.9	0.1	0.2	0.2	92.0	0.1	5.5	3,288
Unclassified	Unknown	0.0	0.0	0.0	0.0	71.9	0.0	28.0	32
Total		1.9	0.1	0.2	0.1	91.6	0.1	6.0	3,517

tempered sherds. This does not mean that sand was intentionally added to the clay as temper, since it is possible that naturally sandy clays, such as those derived from alluvial contexts, were used. Our series of observations on temper points to the great potential of petrographic analysis and clay source studies as a means of assessing variation in cultural preferences and perhaps social distinctions within the Prather site community.

Surface Treatment and Ceramic Types

Table 2 also shows the range of variation in the exterior surfaces. Shell-tempered sherds, regardless of temper combinations, are predominately plain (92.1%), while those with unknown exteriors are a distant second (5.5%), and cordmarked a weak third (1.9%). Noded (all over), incised, and red slipped are the other surface treatments (each less than 0.3%) of the total number of recovered sherds.

Mississippian Group. To further describe and analyze Mississippian ceramics we classified all rim sherds, body sherds with surface modification or decoration, and attachment according to defined ceramic types or descriptive types. Sherds with unknown exteriors were excluded from the analytic sample since these are primarily delaminated interior segments. The size of the analytic sample is small, 47 sherds. The ceramic sample from the survey is not large enough to consider definition of regional varieties of ceramic types.

Rim sherds having plain surfaces and attachments were sorted into the types Mississippi Plain (Phillips 1970:130-135) and Bell Plain (Phillips 1970:58-61), which are considered to be

functionally significant wares in the Mississippi and lower Ohio valleys (Phillips 1970; Hilgeman 2000). The coarse ware Mississippi Plain was distinguished from the fine ware Bell Plain based on size of shell temper particles and characteristics of plain surfaces (degree of compaction and burnishing, or presence of slip). Sherds in the analytic sample having surface modifications or decorations were identified with reference to previously defined types if the type assignment could be made with confidence for two or more sherds. Old Town Red (Phillips 1970:167), also Old Town Red var. Knight, and Fortune Noded (Phillips 1970:83; Lumb and McNutt 1988:152) are the only decorated types positively identified, given our small sample.

The presence of Old Town Red at Prather is not surprising, even though it was not recognized in Guernsey's collections. Old Town Red is a common Mississippian decorated ceramic type of the Ohio-Mississippi confluence region (Lewis 1986; Lewis and Mackin 1984), from Wickliffe (Wesler 2001), to "red slipped" at Kincaid (Orr 1951), to Angel where the variety Old Town Red var. Knight has been defined (Hilgeman 2000:44). Red-slipped pottery is also present in the Tennessee Valley (Hiwassee Island Red Filmed [Lewis and Kneberg 1946:Table 19]). Fortune Noded, on the other hand, is a comparatively rare but also widely distributed type in the lower Ohio and Mississippi valleys. Sherds at Angel Mounds having large protrusions (and that appear identical to Fortune Noded at Prather) were grouped by Hilgeman (2000:117, Figure 3.61) into a new variety, Pouncey Pinched var. Newburgh, which also includes sherds with smaller pinches aligned in rows. The smaller pinches at Angel do not look like Fortune Noded at Prather and seem to fit well with the definitions provided by Phillips (1970:155) for Pouncey Ridge Pinched and by Williams and Brain (1983:200; Figure 5.109) for Pouncey Pinched var. Patosi.

The many plain body sherds (N=3,033) were dominated by small fragments, and so could not be reliably analyzed to distinguish Mississippi Plain and Bell Plain. To facilitate comparison of the Prather ceramic assemblage with other sites where all sherds are classified to type, we calculated estimates of the number of Mississippi and Bell Plain body sherds based on the proportions of these types among the identified rims and attachments (Table 3). Using these calculations, Mississippi Plain (92.7%) (Figures 34 and 35) substantially exceeds Bell Plain (4.8%).

It should be noted that none of the Mississippi Plain rims had the thickening at the lip that is a common characteristic of Anderson Shell-Tempered and other Fort Ancient jars (Drooker 1997:79; Henderson 1992). Consequently, none of the shell-tempered rims in the survey collection are classifiable as Fort Ancient. The other shell-tempered sherds assigned to defined types also are limited to Mississippian types, and exclude Fort Ancient types: Fortune Noded (0.2%) (Figure 36 c-d), and Old Town Red (0.1%) (Figure 36 e). All five Fortune Noded sherds were recovered from the same auger sample location (N1000, E980), which appears to have intersected a deep feature (extending nearly 1 m below surface) that was filled with homogenous dark, artifact-rich soil; the Fortune Noded sherds were present in the two levels that were augered, and in both screened and flotation samples. A generally similar sherd of either a pinched or punctated type or perhaps Fortune Noded is illustrated by Lilly (1937:99, lower right) and comes from the Newcomb site (Honerkamp 1975:Plate XIXb, lower right).

Not classified to defined ceramic types are the cordmarked and incised sherds. Unclassified cordmarked sherds (2.1%), all of which are body fragments of jars, were not assigned to a formal type because jar shape is unknown. Cordmarking varies from narrow to widely spaced, parallel to slightly overlapping, and deeply impressed to very slightly smoothed over (Figure 37). Cordmarking that was greatly smoothed over to give the appearance of a plain surface was classified as "plain."

Unclassified incised sherds (0.3%) were not assigned to type because, with one exception,

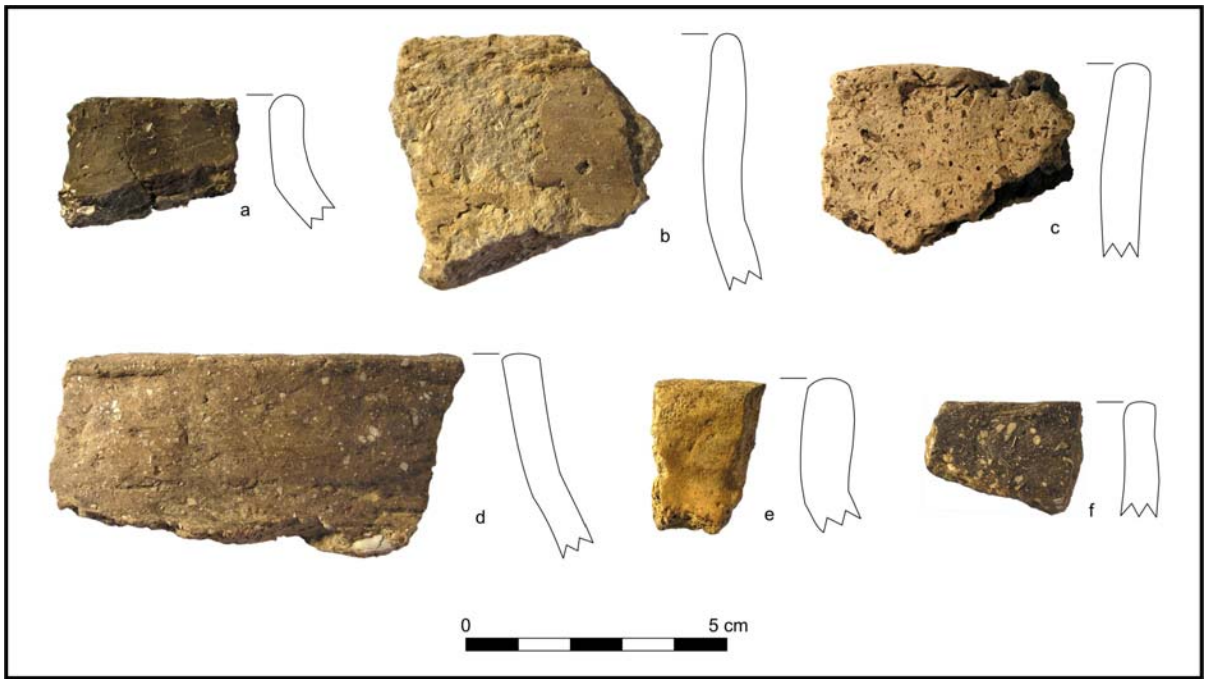

Figure 34. Mississippi Plain rims. (a) 660.118.12; (b) 660.121.1; (c) 660.37.13.2; (d) 660.126.15.3; (e) 660.74.11; (f) 660.61.24.

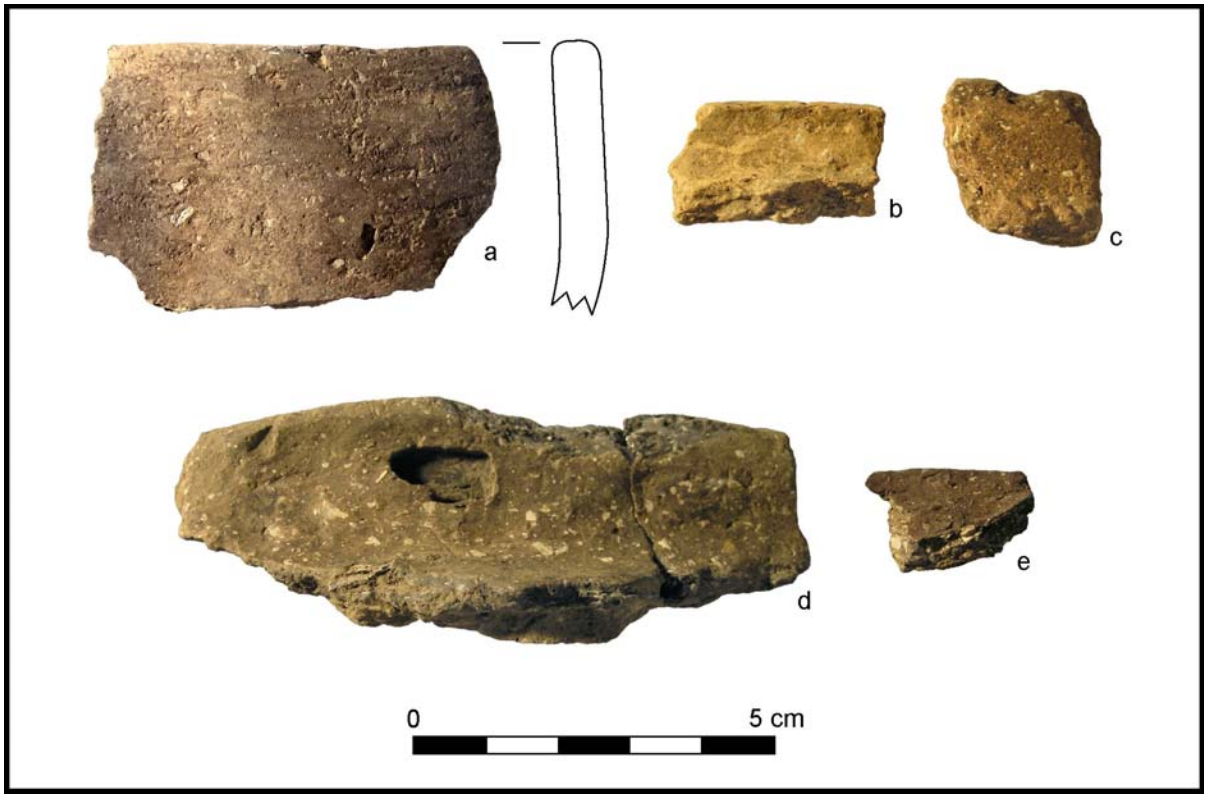

Figure 35. Mississippi Plain rims. (a) bowl , 660.108.34; (b-d) jars, form unknown, 660.136.40.1, 660.136.40.2, 660.12.16.1; (e) typical indeterminate, small straight rim, bowl or jar?, 660.19.13.

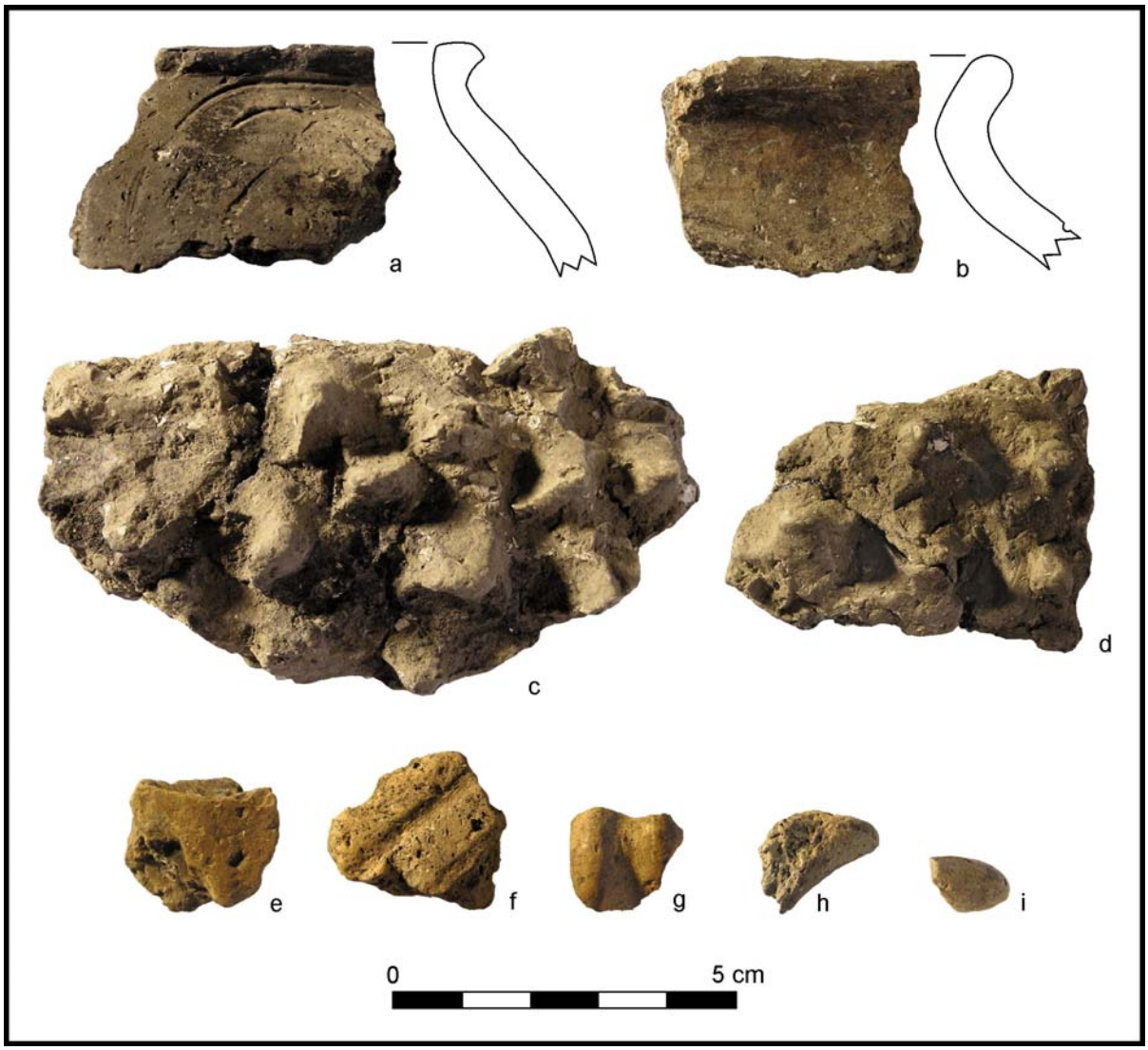

Figure 36. Mississippian decorated ceramic types and attachments. (a-b) unclassified incised with arch and chevron motif, Ramey Incised-like 660.122.34, 660.45.15.3; (c-d) Fortune Noded, 660.10.15.3, 660.10.15.4; (e) Old Town Red, 660.91.23.1; (f) unclassified incised, unknown motif, 660.64.20; (g) Bell Plain, intermediate strap handle with broad vertical groove, 660.135.12; (h) Mississippi Plain, elongated node, 660.151.10; (I) Mississippi Plain, rounded horizontal lug, 660.28.2.5.

design motifs are not clear. The presence of incised lines on jar necks brings to mind Fort Ancient incised jars, but none of the recovered Prather jars can be clearly identified as having either the typical guilloche design nor opposed line-filled triangles found on Anderson Shell-Tempered (Griffin 1943: Plates XLI-XLIII). The largest rim sherd with incising has two nested arches above a chevron (Figure 36a). This design was executed on the neck of a shouldered jar with an unusually short, angled rim and is reminiscent of Ramey Incised jars at Cahokia and related sites, which have the arch or chevron as the most common motif (Emerson 1989:68-70). Another similar but smaller incised rim sherd (Figure 36b) also has nested arches, but only the crest of this motif shows on the neck, and it has a slightly longer, angled rim. Given the small decorated area, there is a possibility that the design is comparable to the simple arches on Matthews Incised var. Matthews (Phillips 1970127-128; Hilgeman 2000:115) or Matthews Incised (Pollack and Munson 1998:182),

Figure 37. Mississippian Cordmarked, type unspecified. (a) 660.29.11.2; (b) 660.140.14; (c) 660.12.10.3; (d) 660.138.24; (e) 660.10.10.3; (f) 660.45.9.4; (g) 660.61.25.2; (h) 660.126.10.4; (I) 660.61.25.3; (j) 660.135.25.

but the vessel shape of the Prather sherds is very similar to the larger, Ramey-like jar rim and unlike the var. Matthews "standard Mississippian jars" found at Angel and other sites. The next largest incised sherd from Prather is a jar body fragment having two, broad parallel lines on a globular vessel segment (Figure 32 f). The incised design might be part of a Fort Ancient guilloche or line-filled design motif, or another motif employing parallel lines such as Barton Incised var. Barton (Phillips 1970: 44-45) or Barton Incised (Hilgeman 2000:115-116; Pollack and Munson 1998:184) or Matthews Incised var. Beckwith (Phillips 1970:127-128) or "Beckwith Incised" (Hilgeman

Table 3. Mississippian Ceramics by Type and Vessel Form.

Ceramic Type	Identified and Estimated (all size classes)	N	% of Total	Vessel Form of Rim and Body Segments (excludes smaller than 1/2")		
				Bowl	Jar	Unclassified
Mississippi Plain	identified rims (42) and attachments (3) = 95.74% of analyzed rims and attachments	45	1.4	1	19 (larger rims)	23 (small rims) + 3 (attachments)
	estimated body sherds (95.74% of the 3,033 classified shell tempered, plain body sherds)	2,904	92.0			
	Subtotal	2,949	93.4			
Bell Plain	identified rims (2) and attachments (0) = 4.26% of analyzed rims and attachments	2	0.06			1 (small rim)
	estimated body sherds (4.9% of the 3,033 unclassified shell tempered, plain body sherds)	129	4.1			
	Subtotal	131	4.1			
Fortune Noded	body sherds	5	0.2		5 (body sherds)	
Old Town Red	body sherds	3	0.1		2 (body sherds)	
Unclassified Cord Marked	body sherds	64	2.1		64 (body sherds)	
Unclassified Incised, including Ramey-like	rims (2) and body sherds (6)	8	0.3		2 (rims) and 6 body sherds)	
Total		3,158	100.0			

Note: sherds with unclassified exterior surface and the reconstructed Mississippi Plain jar are not included.

2000:115; Pollack and Munson 1998:182).

Emerson (personal communication) believes the design as well as the shoulder and lip form of the Prather Ramey-like sherds to be similar to the Ramey Incised imitations found in Mississippian contexts in the upper Mississippi Valley localities of Spoon River, Apple River, La Moine River, and Redwing, Minnesota (Silvernale phase). Pauketat and Emerson (1991; also Emerson 1997:212-215) consider the arch-chevron motif to represent the continuum of sky-arch/bird/Upper World symbolism and a visual portrayal of part of the Cahokian cosmos. Ramey Incised at Cahokia is found in Sterling phase and early to middle Moorehead phase (Holley 1989; Milner et al. 1984). For temporal comparison with Prather, the calibrated date range for Ramey at Cahokia of A.D. 1100-1250 (Hall 1991) is consistent with the calibrated 1 sigma range of A.D. 1025-1215 for Janzen's radiocarbon date from the Northeast Mound.

It is possible that the origin of–or inspiration for–Prather site's Ramey-like material was much closer to Prather than Cahokia. Hilgeman's study of the decorated ceramics from the Angel site identified a very small percent of the decorated ceramics as Ramey-like and assigned the type/variety name, Ramey Incised var. Green River (Hilgeman 2000:107-111). However, while geographic distance might suggest Angel as the point of inspiration, it is remarkable that the far more common decorated vessels at Angel, the negative painted plates, are not known at Prather. Thus, it seems more plausible that both Prather and Angel derived Ramey symbols from Cahokia, rather than one from the other.

Finally, Prather may not be the only Mississippian site in the Falls region to have Ramey

symbolism. Lilly (1937:99, lower right) illustrates a possible Ramey-like rim sherd from the Newcomb site, which has nested chevrons on the neck of a vessel (Honerkamp 1975:Plate XIXb, upper right). However, it is unknown whether this rim sherd is from a short, shouldered jar distinctive of Ramey Incised or a tall jar typical of Fort Ancient Incised. Further research in collections might permit identification.

Woodland Group. Woodland sherds (Figure 38a-b), except for the very few grog-tempered sherds (Table 2), are predominately plain (88.4 to 100.0%). A few of the larger plain, limestone-tempered sherds are comparable to the Middle Woodland ceramic type Falls Plain (Stephen T. Mocas, personal communication 2004; Mocas 1992). Cordmarked surfaces (Figure 38c) are rare (<3%), except for grog-tempered sherds. The small number of large sherds and the paucity of large rim sherds (6 of the 8 rims are <½ inch) makes assignment to regional types a questionable endeavor, so further classification was not attempted. The survey recovered one small fragment of a detached appendage (Figure 38d). With future work and a larger sample, it should be possible to classify the specimens in the larger size classes to ceramic type.

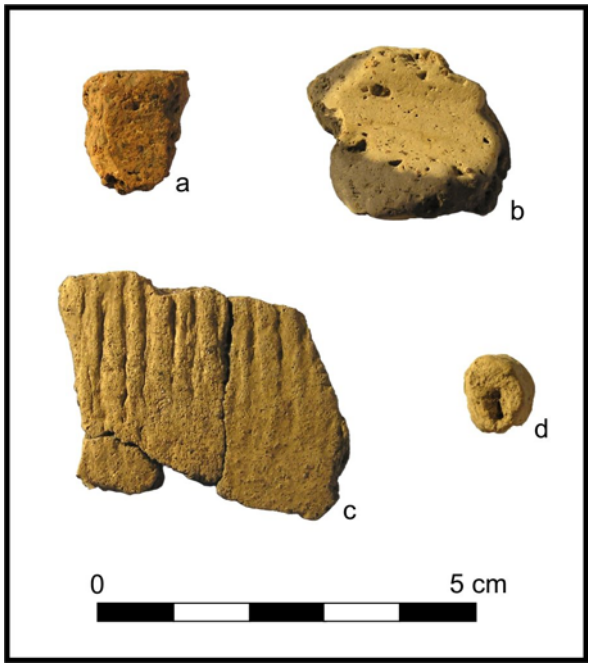

Figure 38. Woodland Ceramics. (a-b) angular grit temper, plain rim, 660.12.3.5, 660.16.2.1; (c) sandy paste, angular grit temper, cordmarked body sherd 660.2.10.2; (d) grit temper, detached appendage 660.45.3.11.

With a larger sample it may be possible to recognize whether any of the grit-tempered collection differs from Middle and Late Woodland ceramics in the region and perhaps represents later prehistoric ceramic production. Use of grit temper without shell might be either contemporary with or immediately antecedent to the use of shell temper, or perhaps both. Alternatively, grit tempering could have continued in use but the pottery vessels may have been shaped into the same forms as shell-tempered pottery, which could suggest that grit without shell was simply another temper alternative for Mississippian potters.

Unknown Group. Sherds in the unknown group (N=32) are those having unknown temper. Plain surfaces again predominate.

Effects of Sherd Size

The effect of size on the classification of sherds was a consideration during laboratory work and analysis. In what way might the smaller sherds be biased compared to the larger ones? Table 4 provides some answers. For Mississippian sherds, Fortune Noded, Unclassified Cordmarked, and Unclassified Incised are slightly to somewhat better represented among the larger sherds, while the combined category Mississippi/Bell Plain and Unclassified are slightly better represented in the smallest size class. For Woodland sherds, Unclassified Cordmarked is better represented in the larger class, and Unclassified Plain is in the smaller class. In conclusion, size does not greatly affect the identification of plain, cordmarked, or decorated Mississippian sherds, but there is a bias against identification of cordmarked Woodland sherds in the smaller size classes.

Table 4. Ceramics Groups and Types, Percentages by Size Grade.

Ceramic Group	Ceramic Type (All Sherds, All Size Classes)	<1/2 Inch Mesh	>1/2 Inch, <2 Cm	Group3 = >2 Cm	All Sizes Total	Total
Mississippian	Mississippi/Bell Plain	86.22	86.14	83.15	86.13	3033
	Fortune Noded	0.07	0.16	2.25	0.14	5
	Old Town Red	0.00	0.47	-	0.09	3
	Unclassified Cord Marked	0.86	5.30	6.74	1.82	64
	Unclassified Incised	0.11	0.62	1.12	0.23	8
	Unclassified	5.99	3.12	1.12	5.34	182
Mississippian Subtotal		93.25	95.79	94.38	93.75	3295
Woodland	Unclassified Cord Marked	-	0.31	3.37	0.14	6
	Unclassified Plain	5.88	3.74	2.25	5.40	165
	Unclassified	0.07	-	-	0.06	18
Woodland Subtotal		5.96	4.05	5.62	5.60	187
Unclassified	Unknown	0.30	-	-	0.30	9
	Plain	0.79	0.16	-	0.65	23
Unclassified Subtotal		1.09	0.16	-	0.95	23
N		2786	641	89	3516	3516

Vessel Form

For Mississippian ceramics, rims and decorated sherds greater than ½ inch in size were further identified to vessel form (Table 3). Twenty of 25 rims could be confidently assigned. Jars outnumber bowls 19 to 1. Seven of the rims are large enough to orient, so that rim profiles could be measured; all six jars have direct rims (Figure 34), the one bowl (Figure 35a) is a simple hemispherical form. In cases where the wall of the upper vessel rim is straight and rim sherds were small, it was impossible to distinguish jars from bowls (Figure 35e). No shallow pans, bottles, or effigy vessels were identified, although Janzen (D. Janzen to J. H. Kellar, letter, Oct. 2, 1972, GBL) notes the occurrence of a bottle sherd and a human effigy fragment in his excavated collection. The only bottle sherd that we observed in the collection was a negative-painted (black-on-buff) fragment. Guernsey's collection includes one fabric-impressed sherd, which is probably a fragment of a pan.

Appendages

Based on the current survey collection, appendages or attachments on any type on Mississippian vessels seem to be very rare. The reconstructed Mississippi Plain jar had an opposed pair of intermediate-width, strap handles (see Figure 21). Detached appendages include an intermediate strap handle with a vertical groove (Figure 36g), an elongated node or strange lug (Figure 36h), and a rounded lug (Figure 36i).

Ceramic Objects and Reconstructed Vessel

The single ceramic object is a small shell-tempered fragment whose shape suggests an ear spool or plug. The one reconstructed Mississippian Plain jar has a roughly smoothed exterior surface (see Figure 21). The context of this vessel is understandably little known, given recovery from the base of an auger sample, but the lower portion of the vessel was observed near the side and base of a deep feature (0.76 m below surface, defined at the base of the hole drilled for FS 89. This jar has one attached handle, which was welded to the rim and riveted to the lower neck. The opposed handle is indicated by a weathered handle-attachment scar, so it had broken off prior to deposition. The missing handle suggests that this vessel was not a burial inclusion but a still-useful container cached in a pit or left inside a house.

Other reconstructed vessels from Prather

were found in earlier investigations. Guernsey's 1934 excavations recovered several, which he donated to the University of Michigan Museum of Anthropology. The one vessel from the Prather site in the collections of the GBL is a small Mississippi Plain jar with an opposed pair of unusually wide and short strap handles. This vessel (catalog number 221/9) was donated to Guernsey by Dr. W. W. Work of Charlestown. Our cursory review of the collections from Janzen's 1971 excavations indicates the recovery of at least one reconstructable Mississippian jar. Several additional vessels are reported to have been excavated at Prather. One is a Mississippi Plain jar on exhibit at the Falls of the Ohio State Park (photo at: http://www.indiana.edu/~archaeo/prather/pr-ga.htm); it was donated to the museum by the excavator, Mr. Ace Soliday who uncovered it sometime in the 1950s. Mr. Soliday compiled an extensive artifact collection from the Falls region but excavated little. The other vessel is the Mississippi Plain bowl with a notched lip (see Figure 24) reportedly found in the spring.

Fauna (N=3,166)

Faunal remains, including bone, mussel shell, and gastropod shell, were abundant in certain areas and well preserved. Those that showed no shaping, perforation, or incising represent food remains. Much of the bone was burned or calcined. The contexts of recovery do not call for identification of these remains to species, but it is worth noting that the collection includes a diverse range, from fragmentary bones of large and small mammals, turtle, and fish to pieces of mussel shell. The preservation of faunal remains adds substantially to the significance of the Prather site, since understanding subsistence practices is a long-term research goal. The excellent preservation is corroborated by the faunal material recovered in Jansen's excavations and by Guernsey's discovery of the skeleton of a fish with a burial in the Northwest Mound. The few faunal objects that show evidence of shaping are noted below in the Other Prehistoric Artifact section.

Chipped Stone (N=2,490)

Chipped stone materials include nine different artifact categories (Table 1). Amorphous cores (N=85) (Figure 39) are roughly flaked residual blocks of chert; in some cases these might be called "tested blocks" when they exhibit the removal of only one or two flakes. Core materials are consistent with the range of variation seen in the immediately local chert, which is highly variable and has not been identified to chert type. Thus, all cores are from unclassified chert. Debitage includes flakes and flake fragments of all types; flake types were not distinguished further. Flakes also were not examined for evidence of use in cutting or scraping. All flakes are unclassified chert. Bifaces are core-reduction products that range from thick, roughly shaped, only slightly pointed specimens (Figure 40a-d), to thin, refined, leaf-shaped preforms or unhafted knives (Figure 40e-f), to thick triangular forms with a distinct hump, or "humpbacked knives" (Munson and Munson 1972) (Figure 40g-m). The larger humpbacked knives (Figure 40g-h) are larger than most triangular arrow points, while the smaller (Figure 40i-m) are approximately the same size. Drills (Figure 41a-c) are slightly larger than arrow points and share the same triangular form. The few lamellar blades, or "bladelets" (N=2) (Figure 41 g-h), are proximal and medial fragments of longer tools. Perforators are flake tools having retouched projections (Figure 41d-f). Projectile points include one small spear point of the Brewerton Side Notched type (Justice 1987) (Figure 42a) and 18 Madison triangular arrow points (Figure 42b-o). Scraping implements include a spokeshave (N=1) that was made on the side of a medium-size flake (Figure 41j), as well as variously shaped, roughly flaked scrapers or unifaces (N=3) (Figure 41i).

Each chipped stone artifact was classified according to chert type, but only one formal type, nonlocal Wyandotte chert, was identified. The

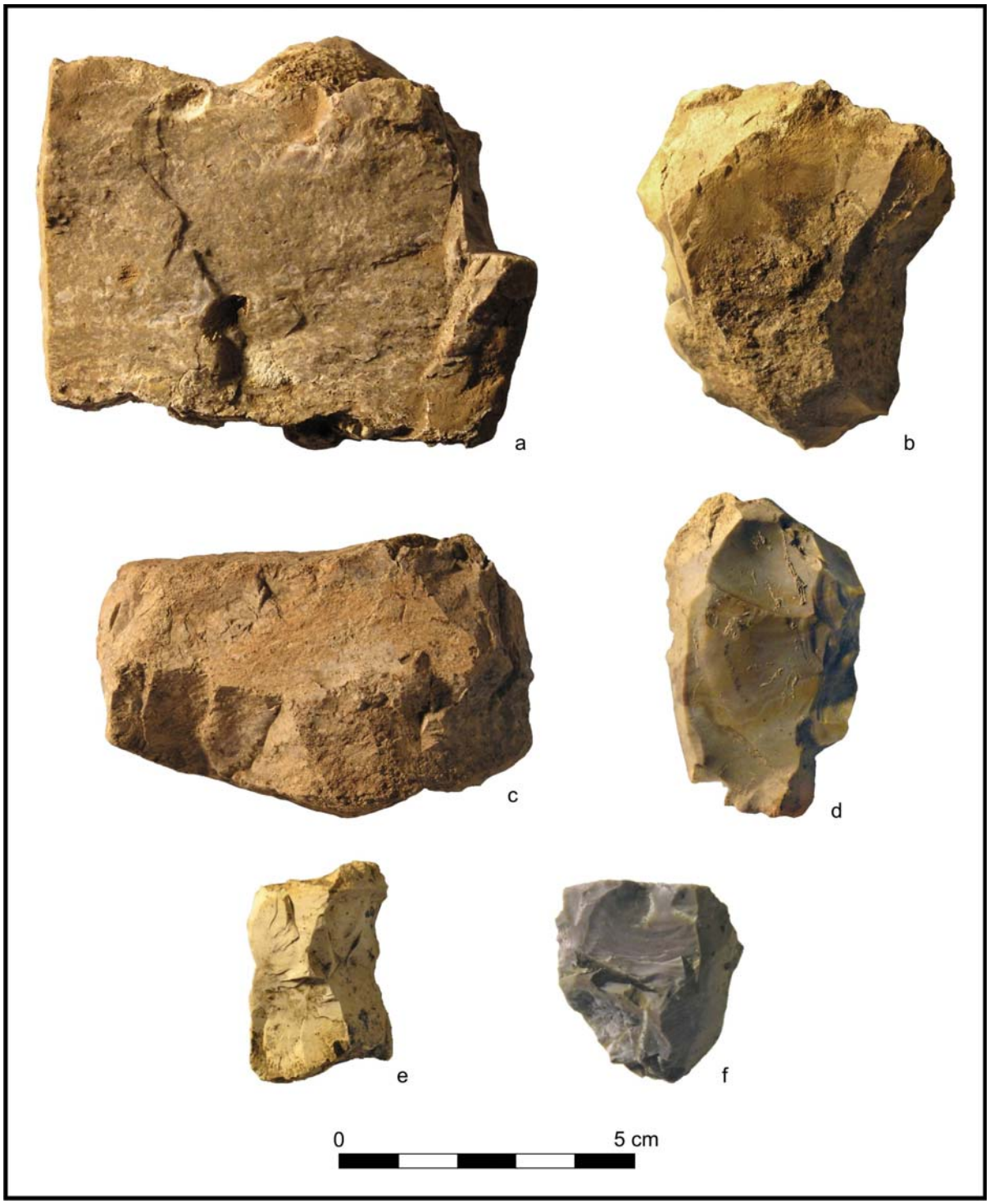

Figure 39. Amorphous cores. (a) 660.179.4; (b) 660.45.16.2; (c) 660.138.35.1; (d) 660.126.16.1; (e) 6 60.2.11; (f) 660.45.16.4.

overwhelming majority are categorized as unclassified chert, most of which is consistent with the wide range of variation in the local residual chert found on slopes and in stream beds. Only 0.2 percent of the chipped stone artifacts was made from Wyandotte chert. These include five artifacts: two of 29 biface fragments; one of two lamellar blades segments; one of four perforators; and one

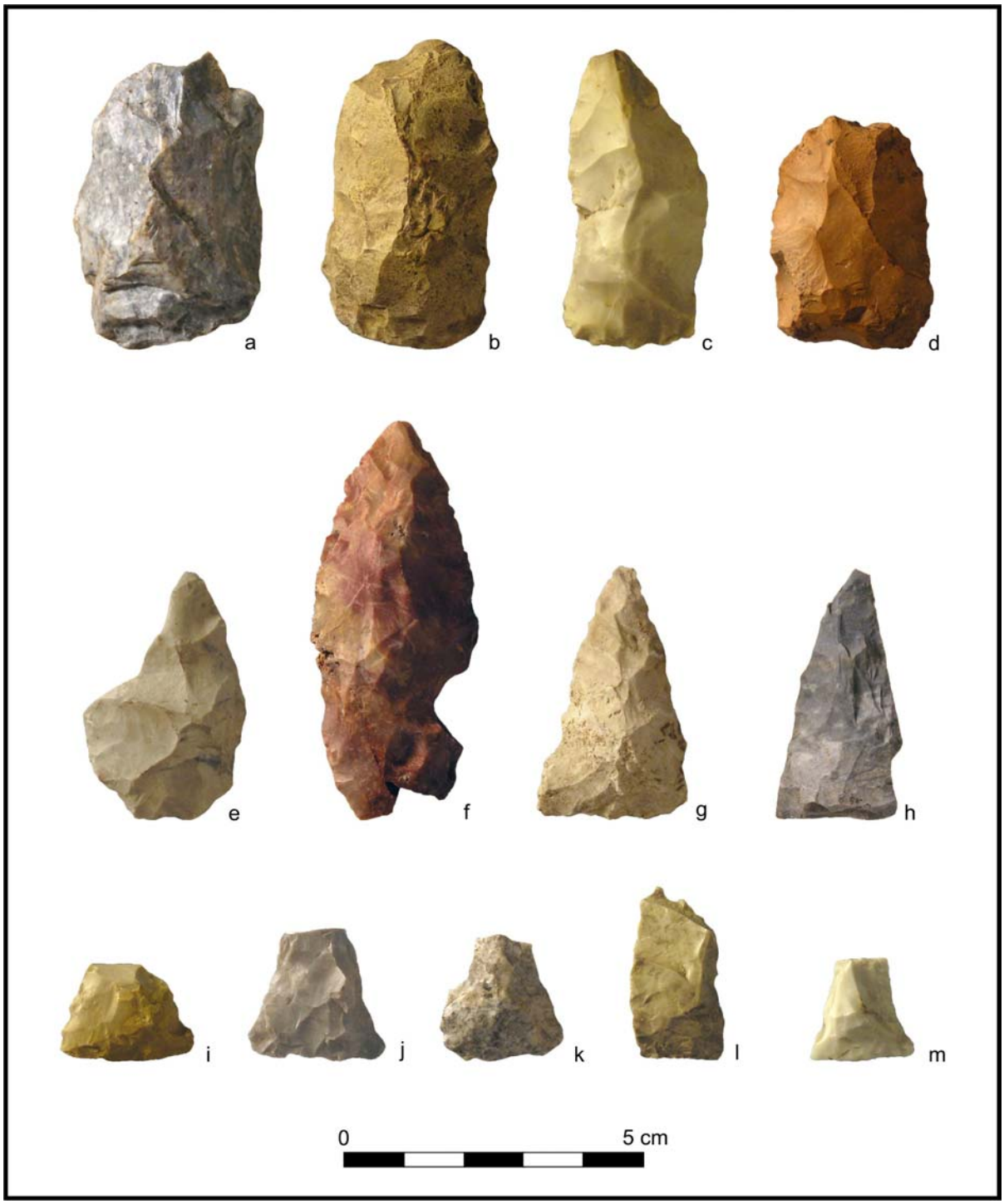

Figure 40. Bifaces. (a) 660.85.7; (b) 660.67; (c) 660.131.9; (d) 660.56.2; (e) 660.127.37; (f) 660.257.3; (g) 660.109.24; (h) 660.10.13.1; (i) 660.130.12; (j) 660.52.10; (k) 660.118.14; (l) 660.61.37; (m) 660.151.14.

of 18 Madison points. All the cores and debitage are unclassified chert.

Triangular projectile points, primarily proximal fragments, are remarkable only by their relative abundance. Most appear to be made from local cherts, but the specific types of local chert were not classifiable, based on present reference collections. One specimen, however, is made from nonlocal Wyandotte chert (Table 5).

Notably absent in the chipped stone

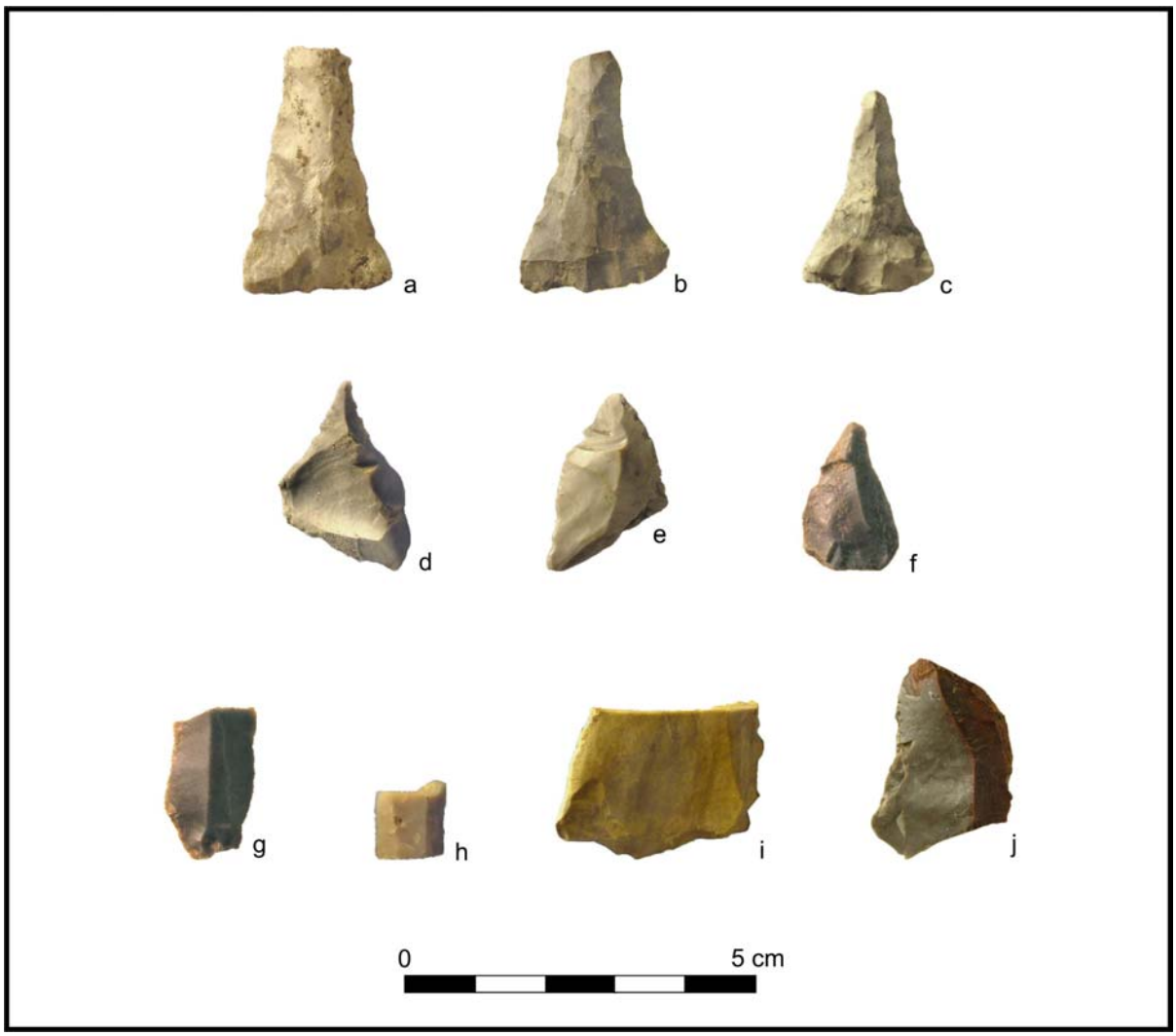

Figure 41. Chipped stone tools. (a-c) drills, 660.123.21, 660.109.42, 660.57.1; (d-f) perforators, 660.91.32, 660.6.5.1; 660.4.3.2; (g-h) lamellar blade segments, 660.31.5, 660.198.4; (I) uniface, 660.146.6; (j) spokeshave, 660.139.14.

assemblage are fragments of chert hoes or gouges, as well as polished flakes (e.g., resharpening flakes) from these types of implements. Given the absence of hoes and gouges, it is not unexpected that the types of chert that were widely traded in Mississippian times–Mill Creek, Dover, and Kaolin (Brown et al. 1990; Cobb 1989)–are also absent in the survey collection. Hoes and gouges made from these distant materials are present at many Angel phase sites (Munson 1994). Guernsey (1939:30) noted that digging implements made of slate and sometimes notched were found at Falls region Mississippian sites, which suggests the possibility of an atypical Mississippian tool for this region. However, no hoe-like fragments of slate were found by the survey.

Other Prehistoric Artifacts

Daub (N=449)

Fragments of fired clay that lack temper and prepared surfaces were classified as daub. Much

Table 5. Madison Projectile Points by Chert Type and Segment.

Chert Type	Distal	Medial	Proximal	Whole	Total
Unidentified	1	1	13*	2	17
Wyandotte	-	-	-	1	1
Total	1	1	12	3	18

Figure 42. Projectile points. (a) Brewerton Side Notched, 660.174.4; (b-o) Madison Triangular 660.127.38.2, 660.6.5.2, 660.127.38.1, 660.39.8, 660.136.48, 660.7.6, 660.61.38.1, 660.45.12, 660.109.41, 660.61.38.2, 660.91.33, 660.135.31, 660.191.3, 660.164.7.

of the daub probably derives from wall plaster, but pieces of prepared clay hearths that have been fragmented are similar. Daub sometimes occurred in large masses (4). Several pieces of daub have impressions suggesting grass or twigs.

Rock and Minerals (N=69)

Fragments of hardstone and sandstone include both fire-cracked rock (FCR) and fragments that lack obvious modification but are probably manuports to the site. Other rocks and minerals include cobbles and pebbles (diameter < 5 cm), unidentified, and red ocher. The cobbles are also probably manuports but show no sign of use as tools. Some pebbles may be historic artifacts, for example, bits of road gravel, since they have an uneven distribution (see below).

Figure 43. Daub masses at N940, E960 (FS 136).

Botanical Remains (N=64)

Pieces of charcoal were saved while screening and separated in the laboratory. Most are unidentified charcoal, and most of these are probably wood. One kernel of maize and 14 pieces of nutshell (not identified) were identified during cataloging. Charcoal observed in soil profiles was mostly dispersed fragments. Jansen also recovered maize from his mound excavations.

Faunal Objects (N=4)

Implements and ornaments of bone and shell were identified by Rex Garniewicz of the Indiana State Museum. They are limited to a fragmentary bone awl (Figure 44a), a bone fishhook (Figure 44b), and a fragmentary bone object of unknown form, which has a series of engraved parallel lines on a concave surface (Figure 44c). A single shell artifact is a poorly preserved disk bead (Figure 44d). The engraved bone object was recovered from a sample that intersected stratified deposits in the Southwest Mound, while the others came from various midden deposits near the mounds.

Ground Stone Tools (N=3)

A fragmentary pitted hammerstone (Figure 45a) was discovered on the ground surface a short distance uphill from the bedrock mortars and metates. Screening revealed two complete small hammerstones made from hardstone cobbles (Figure 45b).

Historic Euroamerican Artifacts (N=1,091)

Historic artifacts derive from the Prather family farmstead, which dates to the early 1800s, as well as from later occupations on the property. Janzen's earlier excavations near the Prather house yielded an extensive collection of early ceramics and glass found in a refuse deposit. This collection is now at the University of Louisville, where it has been cataloged. It is an excellent reference collection for the Falls of the Ohio region. This excavated sample dwarfs the small sample of historic artifacts from the current survey, which derives not from one locale at the Prather house but from multiple auger samples throughout the site. It also includes demolition debris from the

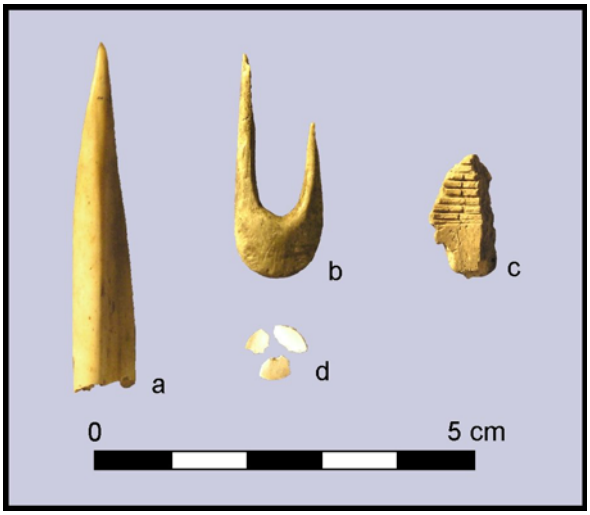

Figure 44. Faunal objects. (a) bone awl, 660.136.28; (b) bone fishhook, 660.61.20; (c) engraved bone fragment 660.45.6.6; (d) shell disk bead, 660.138.17.

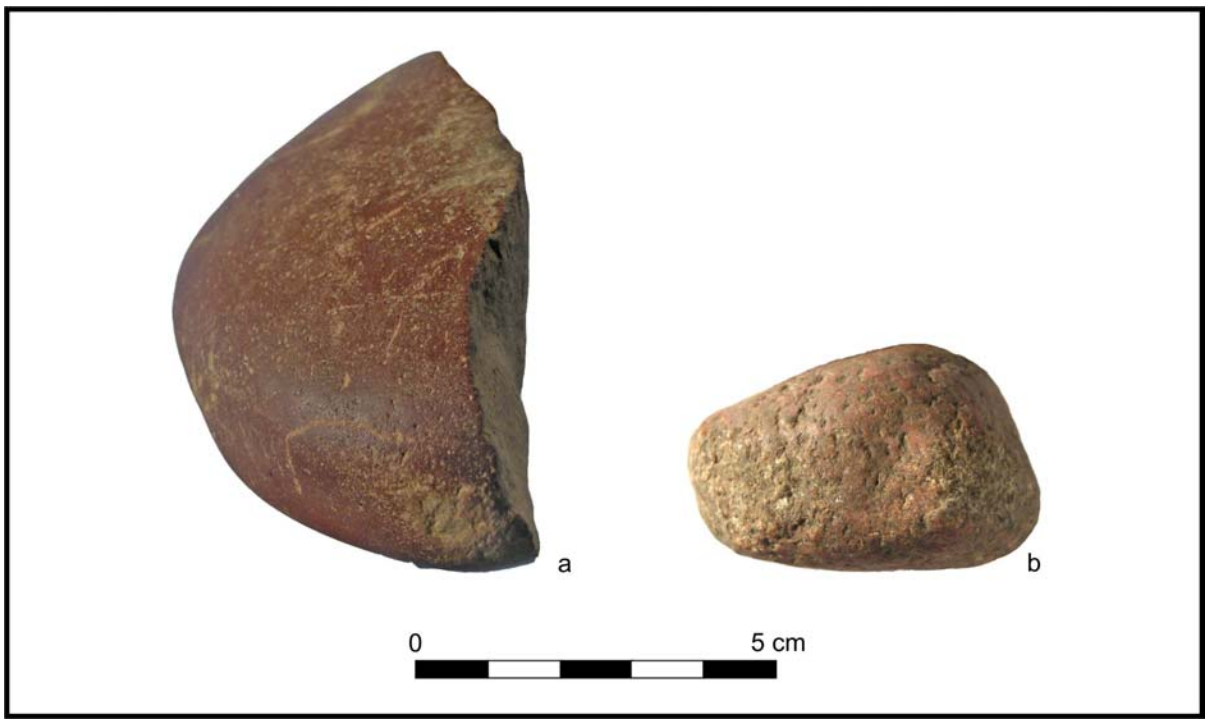

Figure 45. Hammerstones. (a) 660.68; (b) 660.12.19.

Prather house.

Another characteristic of the sample is the generally small size of the pieces of metal, brick, ceramic, and glass, which makes it difficult to confidently identify artifacts to type. Metal is primarily wire from fencing, or nails (both wire and square). Brick is unglazed. Ceramics include primarily bits of crockery and whiteware. Glass is predominately window glass, but one fragment of a white glass, canning-jar lid liner was identified.

Despite the meager sample size and small physical size, the collection of historic artifacts from the survey is significant as signals of historic or modern disturbance and intrusions into the prehistoric deposits. The most common historic artifacts are pieces of clinker and coal, nails, and unidentified objects that are primarily metal and glass. Artifacts that are possibly temporally diagnostic are illustrated: a metal buckle, which may have been for a shoe or for stable gear (Figure 46a); a brass rivet (Figure 46b-c); a plastic game piece for checkers (Figure 46d); and a soda bottle of light green glass with a red and white painted label. The buckle and rivet may date to the early historic period of the Prather farmstead. The checkers piece and the soda bottle probably date to the mid-20th century (based on the senior author's memory and first-hand experience in playing games and drinking pop in the late 1940s and early 1950s).

Samples and Other Materials (N=148)

One deposit of ash from the Southwest Mound and six soil samples were collected. Various rock samples were segregated for further identification. Unsorted flotation samples from feature contexts number 4. An additional sherd was collected from the surface as a non-systematic sample.

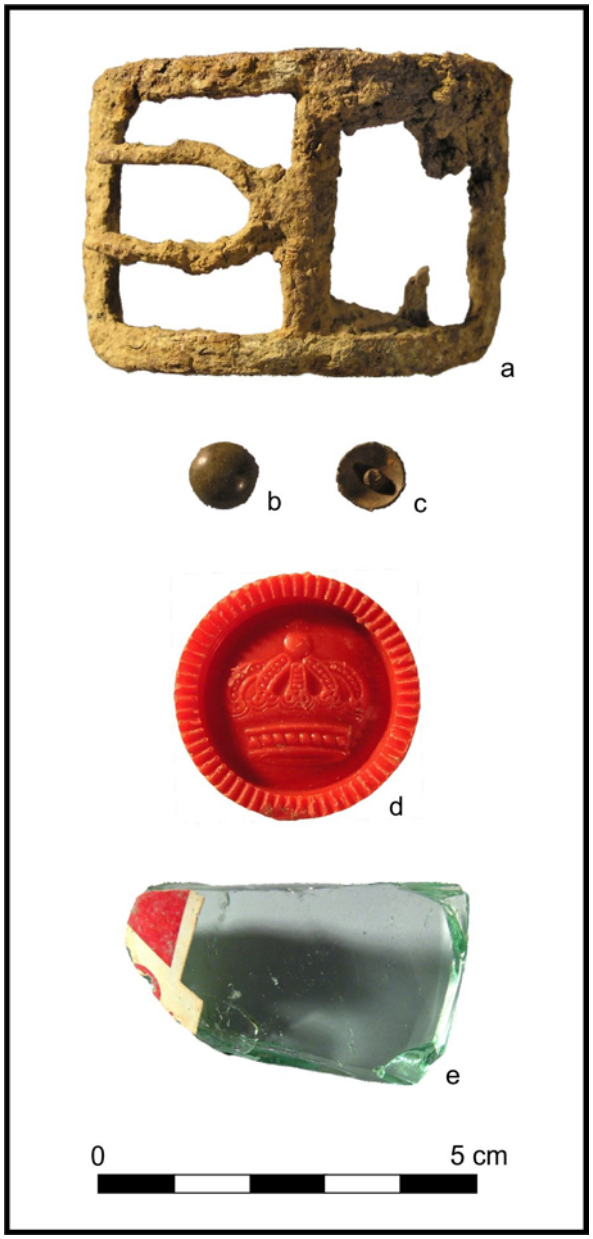

Figure 46. Historic Euroamerican artifacts. (a) 660.137.50; (b) 660.137.18; (c) 660.137.18; (d) 660.113.35; (e) 660.118.20.

CHAPTER 5
Soil and Artifact Distributions

Soils and Stratigraphy

Soils were carefully mapped in profile to estimate the horizontal and vertical extent of undisturbed cultural deposits beneath the plowzone. Soils at Prather derive from weathered limestone and shale, plus loess. Bedrock limestone outcrops on the lower slopes on the west side of the site, near the western spring, and shale and bedrock were found at the base of several widely separated auger holes. The breakdown of the parent rock left pieces of rock–primarily dolomite–and chert as residual soil inclusions. Other residua are small pebbles, crinoid fossils, ironstone, and geodes.

The plowzone in most parts of the site was readily distinguished from underlying soils. These include anthrosols and a culturally sterile B Horizon. Anthrosols include deposits interpreted as middens, including redeposited midden soils in mounded strata, and other features such as pits and postholes. Although it can sometimes be difficult in small excavations such to distinguish large features, such as house basins, from midden deposits, we made this classification based on the sharpness of the boundary with the underlying soils and the observed dip of the cultural deposit in the soil profile. On the other hand, it is relatively easy to recognize such filled-in prehistoric excavations as small pits, postholes, or wall trenches because soil boundaries and feature configuration can be defined within a limited area.

Soils classified as middens showed a gradual transition to underlying soils, including B Horizon soils, while small and large features exhibited a sharp break. Additionally, many features observed in soil profiles were spatially discrete and narrow enough to probably represent postholes/molds or wall trenches. Mounded cultural strata, as previously illustrated, appeared as distinct horizontally bedded zones comprised of redeposited midden soils. Soils for mound construction may have been borrowed from a location within the site, but no hint of borrow pits was evident in topographic mapping. Finally, it is worth noting that transitional A/B Horizons were difficult to distinguish from the lower remnant of midden soils having few artifacts. Therefore, only obvious middens soils containing cultural inclusions were classified middens.

Appendix II lists the soil profile data from the survey. Appendix III illustrates the record form used to record observations and soil profiles.

Figures 47 to 50 present compilations of soil profiles for 16 separate east-west transects across the site (from E880 to E1240), beginning near the south edge of our sampling. From these compilations we can compare generalized soil profiles of the site from the south boundary of our survey to the north. The schematic representations in these figures are scaled to show both the variation in surface elevation and the depth of various soils and horizons. Grid locations that were not sampled are noted by a horizontal line.

The schematic soil profiles clearly show an area between the mounds that lacks middens and other features, plus an area surrounding the mounds where most of the features and midden deposits occur. The central "empty area" suggests a plaza. This finding was not startling, since we noted this pattern during the course of fieldwork. Artifact distributions, discussed in the next section, further indicate that this area is probably a plaza. Toward the north, east, and south margins of our sampling, there are no midden deposits and only two other features (at N940, E1160 and N106, E1120). Recovered cultural materials from auger samples in the outlying feature locations are limited to chert debitage, plus a piece of carbonized nutshell.

Further illustration of the distribution of

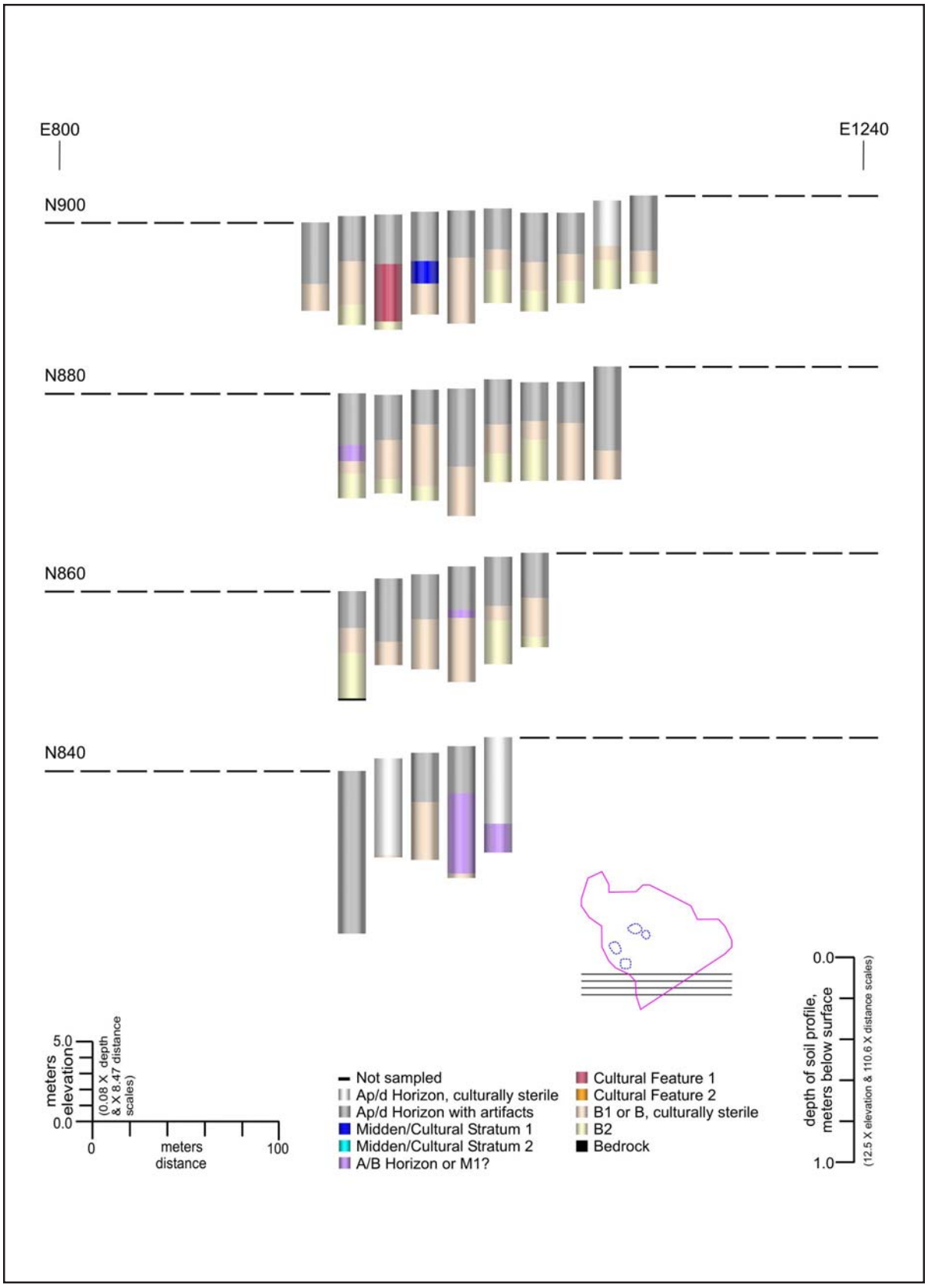

Figure 47. Soil profiles on the N840 to N900 grid lines. (Note that the scales for surface elevation and depth of soils are each exaggerated relative to the scale for horizontal distance.)

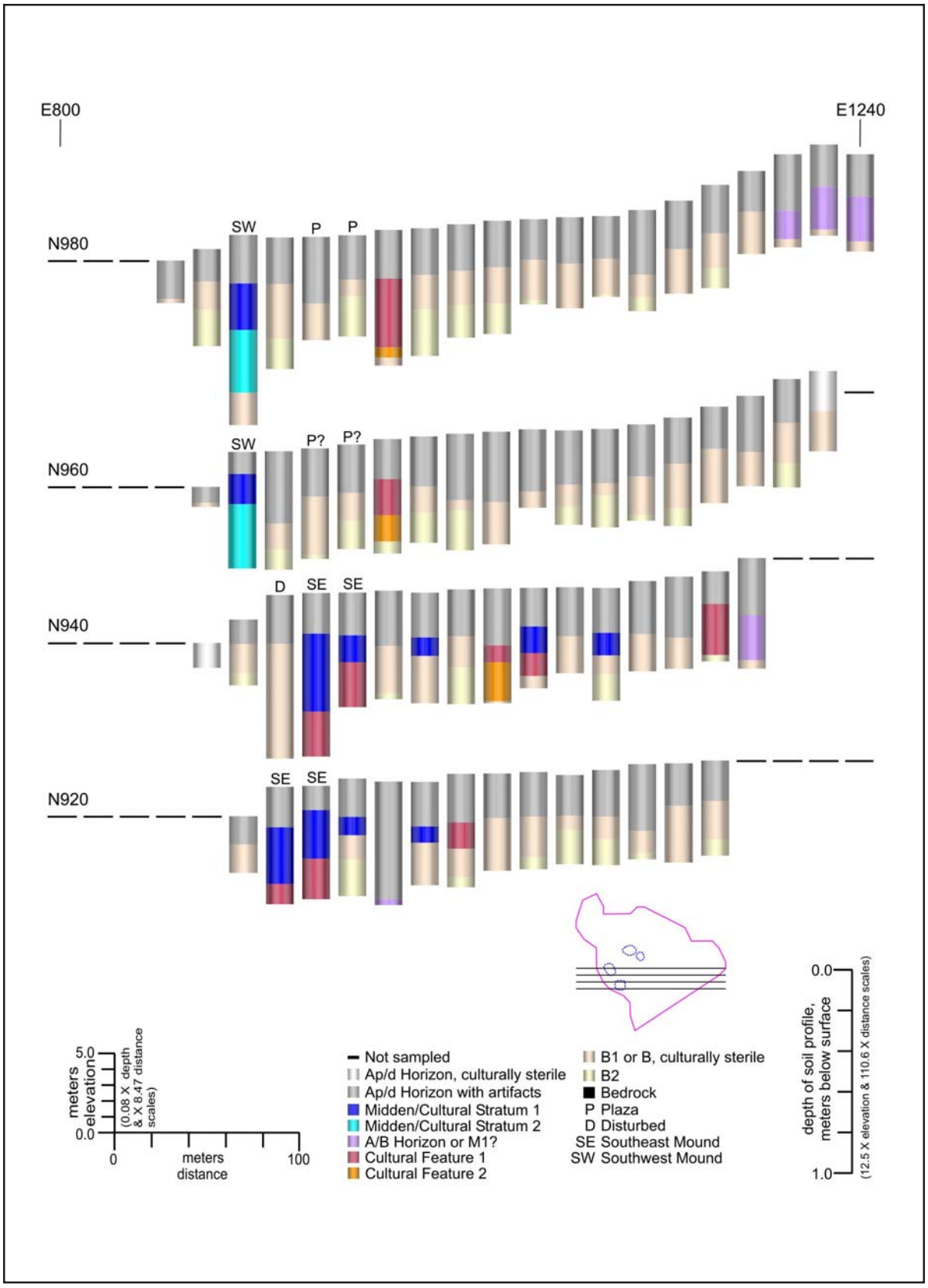

Figure 48. Soil profiles on the N920 to N980 grid lines. (Note that the scales for surface elevation and depth of soils are each exaggerated relative to the scale for horizontal distance.)

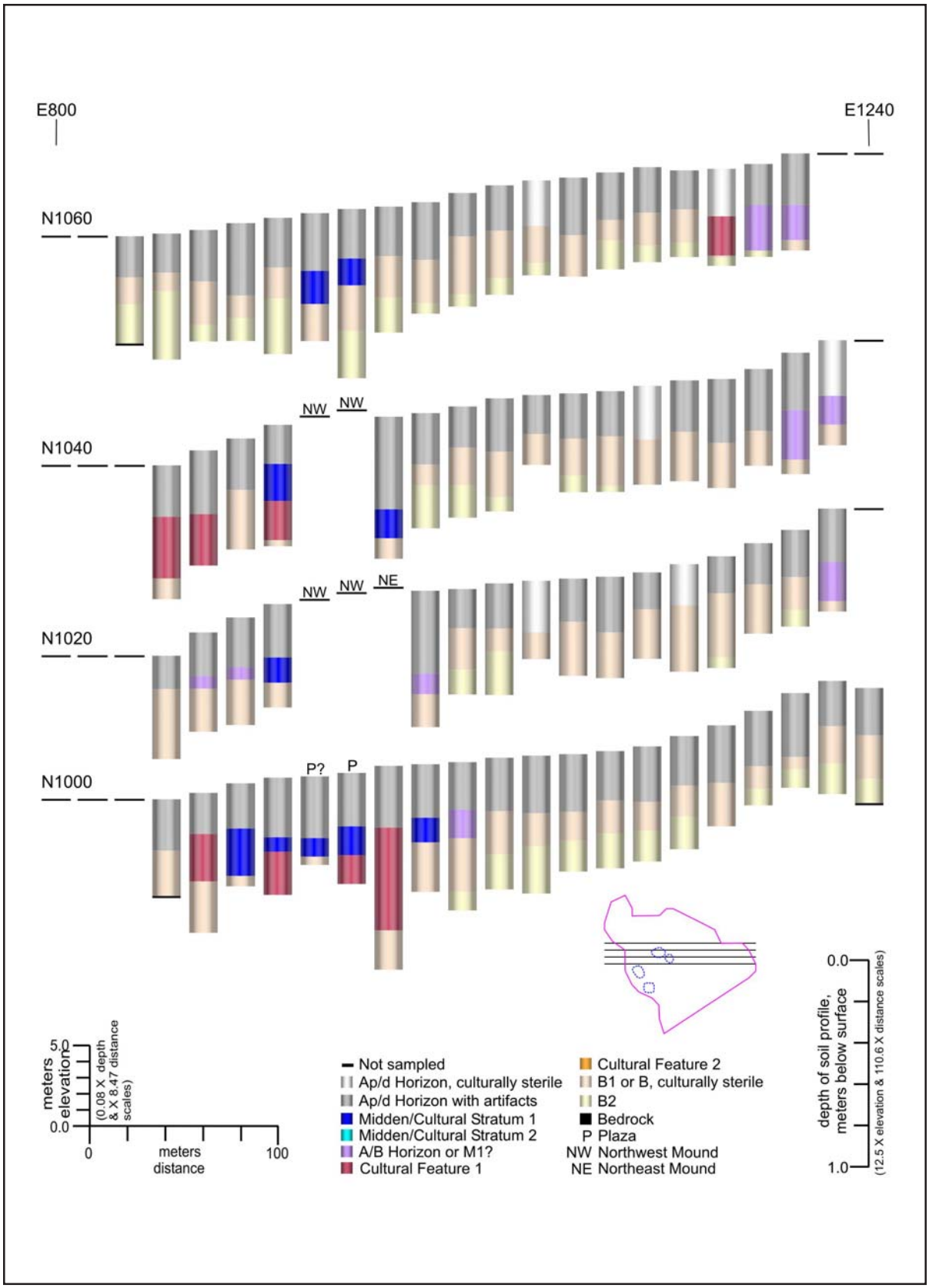

Figure 49. Soil profiles on the N1000 to N1060 grid lines. (Note that the scales for surface elevation and depth of soils are each exaggerated relative to the scale for horizontal distance.)

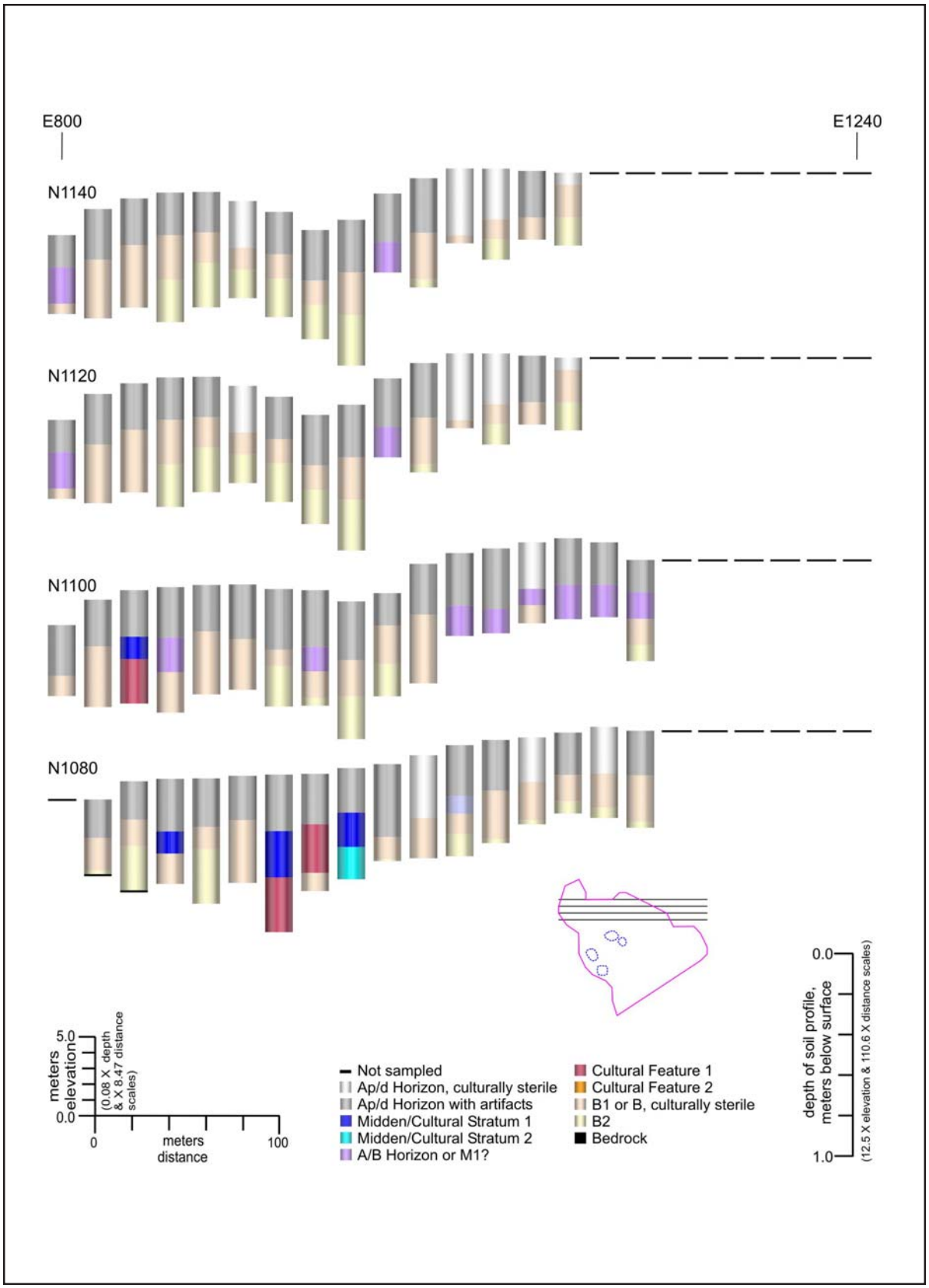

Figure 50. Soil profiles on the N1080 to N1140 grid lines. (Note that the scales for surface elevation and depth of soils are each exaggerated relative to the scale for horizontal distance.)

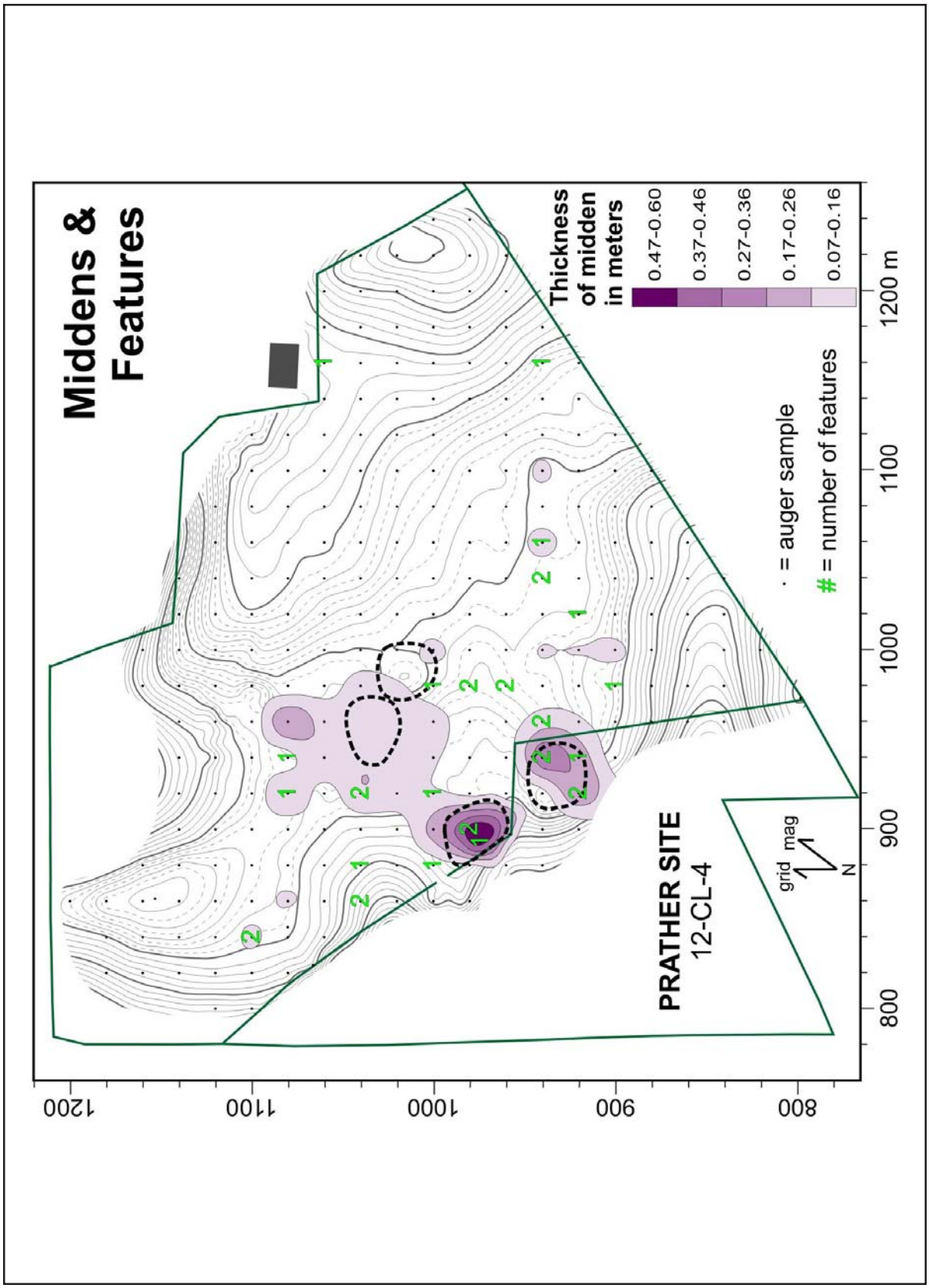

Figure 51. Distribution of midden deposits and features (numbers in the survey area represent total number of features per auger sample).

midden deposits and other features is shown relative to topography in Figure 51. Identified midden strata number 31 and occur in 25 (10.1%) of 246 sampled locations. Most locations contain only one cultural stratum below the plowzone, but in the mounds four locations have multiple strata, which include redeposited midden soils used for mound construction. Two samples in the mounds showed two strata each, and two other mound samples had three strata each. Total depth of midden soils, including the redeposited midden soils used in mound construction, ranges from 0.07 m to 0.60 m. These anthrosols are thickest at the two sampled mounds, of course. For the Southwest and Southeast mounds, the estimated limits of the mounds are based not only on topography but on several soil profiles. Note however, that a wide midden deposit also surrounds the Northwest Mound but not the Northeast. Sampling is undoubtedly distorting the distributions to some extent because there are no auger samples close to the Northeast Mound.

Taken together, these distributions show that thick midden soils extend beyond the estimated limits of the mounds, suggesting the possibility that at least some of the mound-encircling deposits represent slope wash. We observed no indications of a deep plowzone or multiple plowzones in profiles, however, but widely spaced auger samples are not well suited to assessing mound size and structure. Another area of relatively thick midden is north of the Northwest Mound, but that area is indicated by a single sample.

Other features identified in profile and at the base of auger holes include deposits interpreted as: deep pits; shallow, large pits or house basins; and narrow postholes/molds or wall trenches. Features total 33 and occur in 23 of 246 sampled locations (9.3%). Features have a distribution pattern that is somewhat similar to midden deposits. Again, they are concentrated in the area surrounding the mounds but absent in the center of this area.

Midden deposits and other features do not consistently co-occur. Seventeen of the 33 features are in locales that lack middens, and seventeen of the 31 middens lack co-occurring features. All together there are 38 loci with either features or middens in the 246 sampled locations. Our classification of middens and features observed in soil profiles is intended to guide future investigations. Excavation of areas substantially larger than auger samples is needed to identify and formally define the types of features present at Prather.

Artifact Distributions

Artifact distributions were analyzed to investigate spatial patterning of human activities. In cases where artifacts were numerous, the distribution of artifact densities as well as artifact frequencies was analyzed. Frequencies were mapped simply by plotting counts, while densities were mapped using classes of frequencies, with the classes numbering ten groups of approximately equal size. We also experimented with mapping densities using ten divisions of the range of artifact counts (range = 230; divisions = 1-23, 24-47, 47-70, ... 207-230) However, this scaling produced unsatisfactory results because the great proportion of the artifacts was grouped in the two lowest classes and the higher classes were indicated by only one or two samples. Artifact distributions focused on historic artifacts, prehistoric artifacts, Woodland ceramics, Mississippian ceramics, implements, ornaments, chert tool manufacturing debris, faunal remains, botanical remains, daub, and rock.

Historic Artifacts

Historic artifacts, regardless of category, have a wide but very spotty distribution within the surveyed area (Figure 52.) They are concentrated around the former Prather family home, as might be expected, but also occur in several discontinuous areas that trend true north. This distribution suggests the possibility of a former farm lane or fence row. The southwestern concentration is

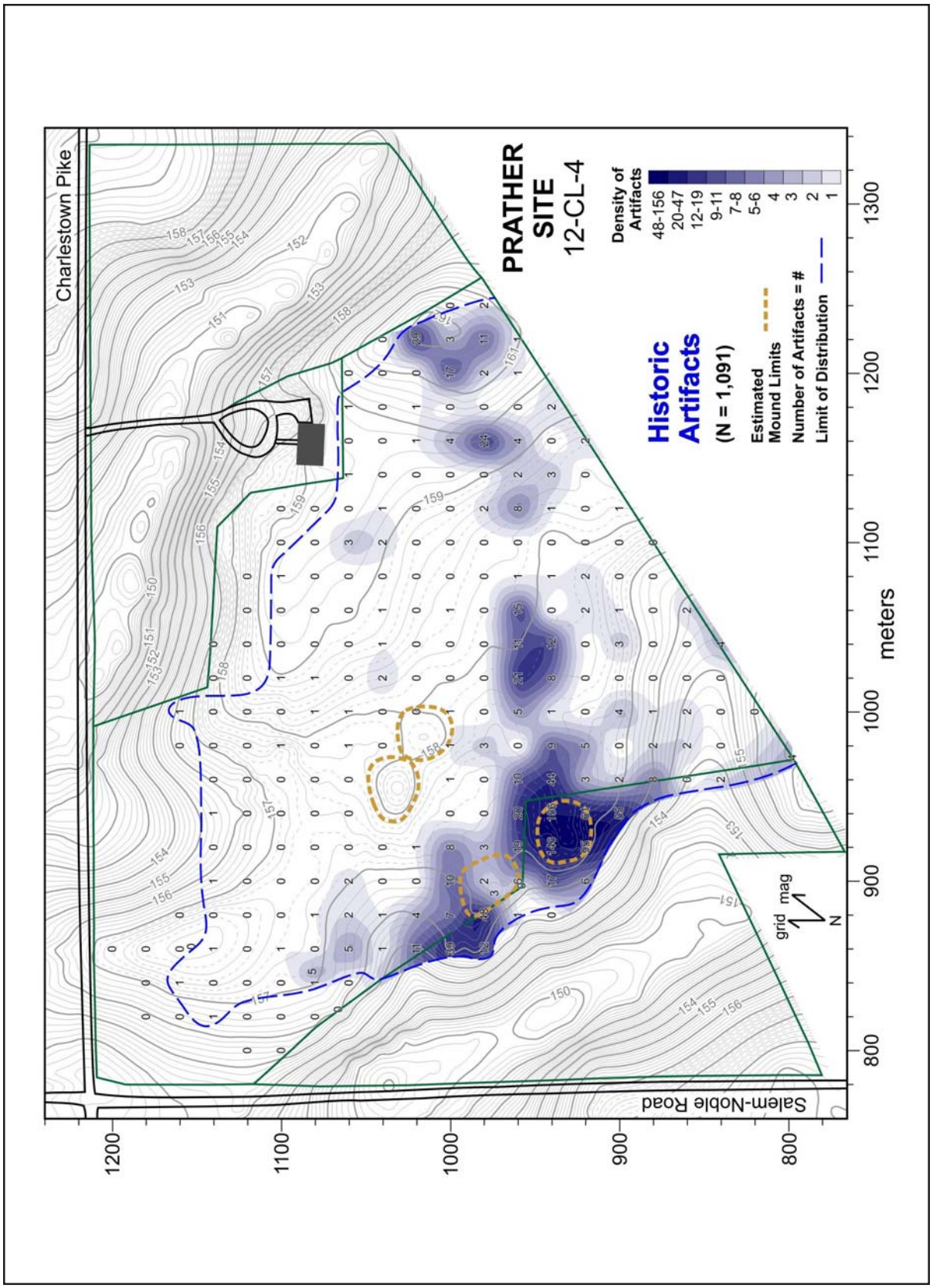

Figure 52. Distribution and density of historic artifacts (numbers in the survey area represent total counts per auger sample).

around the former house (on the Southeastern Mound); the northwestern concentration of historic artifacts is around a former corn crib and a reported hog lot (grid west of the Southwest Mound, N980-1000, E860-880).

Prehistoric Artifacts

Prehistoric artifacts, regardless of category, have an extensive distribution within the surveyed area (Figure 53). They form an oval "donut" around the mounds with a sparse "center." This pattern was observed during fieldwork and suggests a plaza centered between the mounds, a hypothesis which is further evaluated below. The oval donut has a distinct outer boundary, but there are small scattered concentrations of prehistoric artifacts beyond the main concentration. A key question is: How much of the pattern is due to the Woodland occupations versus the Mississippian occupation?

The maximum extent of prehistoric materials corresponds to the limits of the survey area in many cases. Only five locations along the marginal auger samples have no prehistoric artifacts. Thus the prehistoric components at the site cover an area from the railroad embankment on the southeast to beyond the limits of our survey on the east, north, and west.

Woodland Ceramics

Woodland ceramics are the most abundant diagnostic artifacts of pre-Mississippian occupations. The density distribution (Figure 54) forms an arc or "U" located northeast of the spring. But surprisingly, the "U" surrounds most of the possible plaza. One explanation for this pattern is that later Mississippian occupants cleaned the plaza area, removing Woodland pottery fragments and other materials in the soil.

Comparison of plain versus cordmarked surfaces on grit-tempered ceramics shows no obvious differences in distribution. Comparison of temper categories also shows little spatial variation.

Mississippian Ceramics

Mississippian ceramics are responsible for much of the patterning seen in the distribution of prehistoric artifacts (see Figure 53). Comparison of the frequency (Figure 55) and weight (Figure 56) distributions shows they are nearly identical. The center of the mounds corresponds with a central, nearly empty area that probably is the community plaza. Surrounding the mounds is a concentration of Mississippian ceramics, suggesting a core area of domestic activity. The core area is best delimited by frequencies that equal or exceed 6 and weights that equal or exceed 9 g. Note that the orientation of the southern boundary of the core area has approximately the same true north orientation as the Southeast-Northeast and Southwest-Northwest pairs of mounds. The high density of ceramics on the Southwest and Southeast mounds shows that their construction involved soils from areas of domestic activity. Mississippian ceramics also occur beyond the core in various clusters. These small clusters may represent loci of peripheral domestic activity, perhaps outlying household clusters.

Distribution of specific ceramic attributes was also examined. Comparison of temper variation shows that leached versus non-leached shell temper distributions are similar, while shell temper versus shell temper plus grit has a slightly variable pattern (Figure 57). In the latter case, there appears to be slightly more shell plus grit on the north and south, and more shell with no grit on the east and west. Additionally, there is more leached temper outside the core area, and no unleached. These distribution suggests several possibilities: (a) different pottery manufacturing traditions within households or clusters of households in the community; (b) different preservation conditions between the core and periphery areas, leading to greater leaching of shell in areas away from the core and midden concentrations; and (c) temporal variation, with occupation across a large area and then nucleation into the core area, with the earlier sherds becoming leached. Comparison of exterior

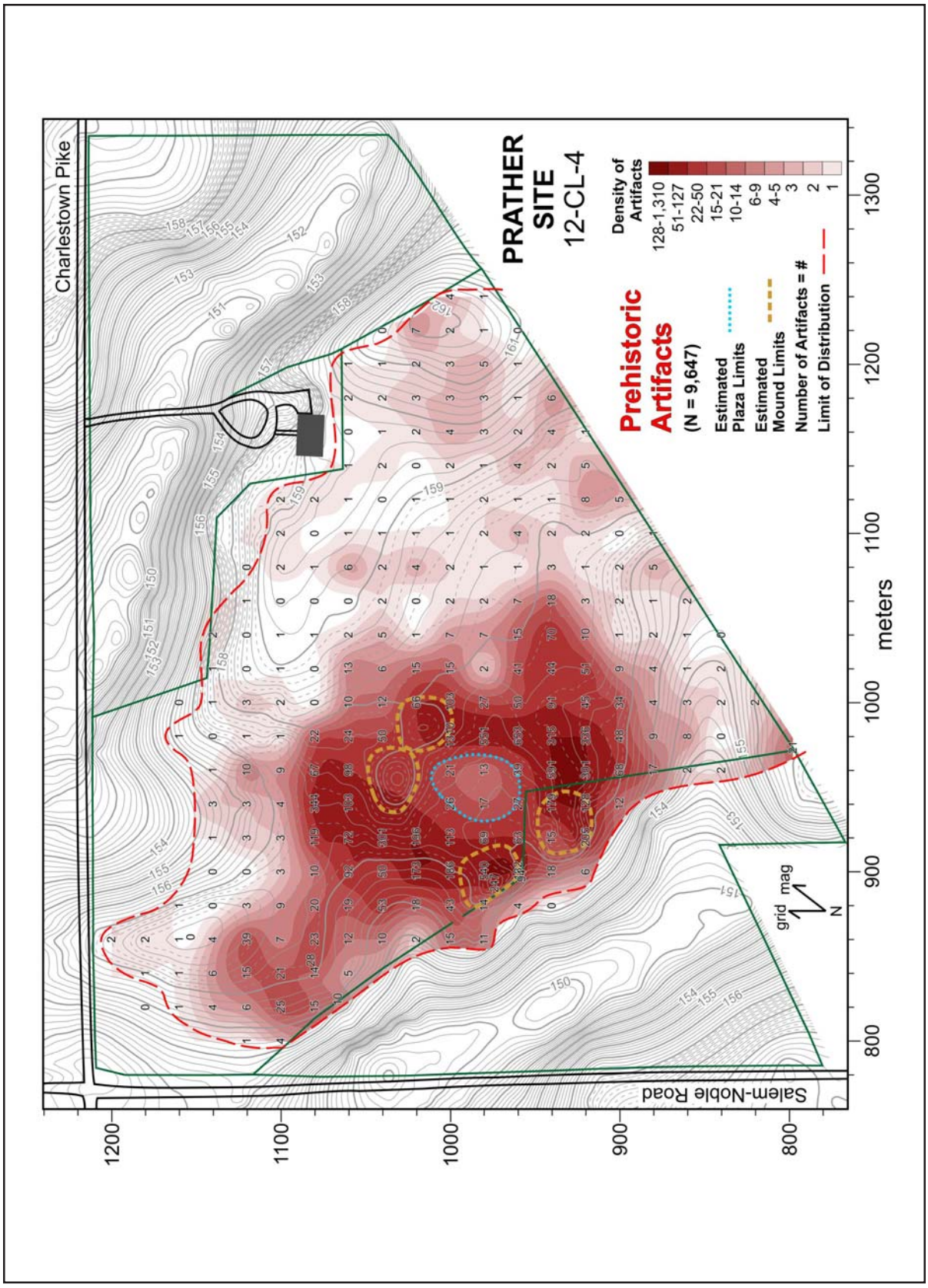

Figure 53. Distribution and density of prehistoric artifacts (numbers in the survey area represent total counts per auger sample).

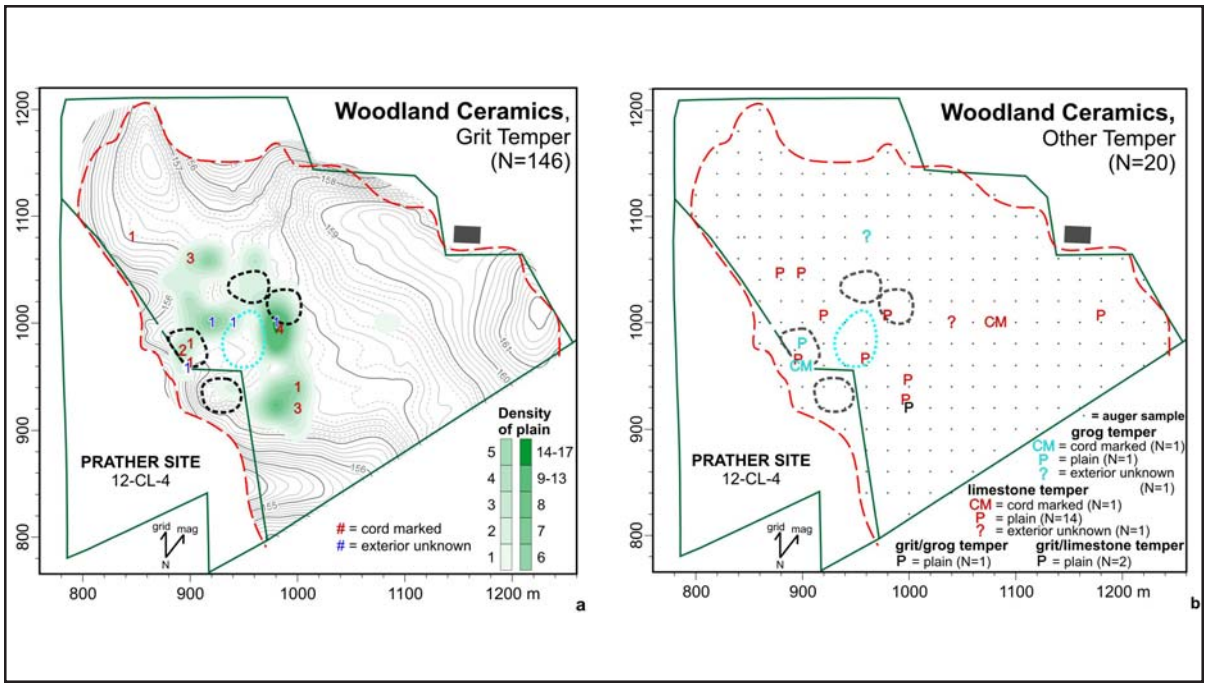

Figure 54. Distribution and density of Woodland ceramics, comparing temper and surface treatment (numbers in the survey area represent total counts per auger sample): (a) grit temper, cordmarked and unknown; (b) other temper, various surface treatments.

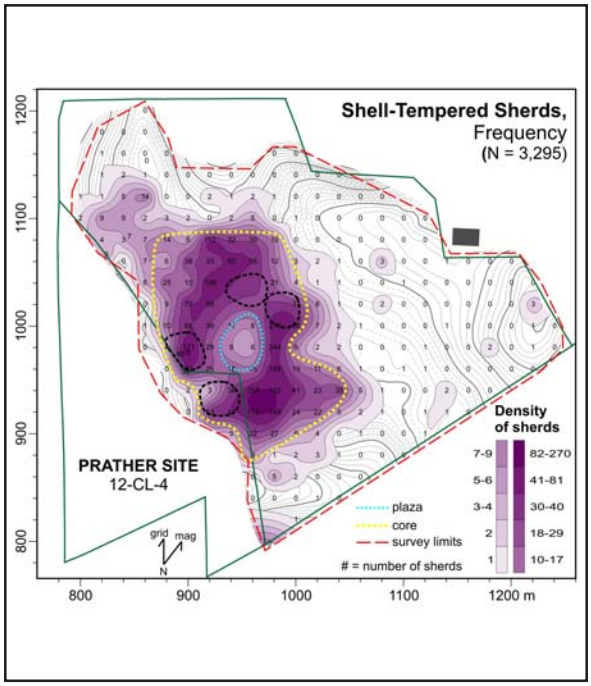

Figure 55. Distribution and density of Mississippian ceramics by frequency (numbers represent total counts per auger sample).

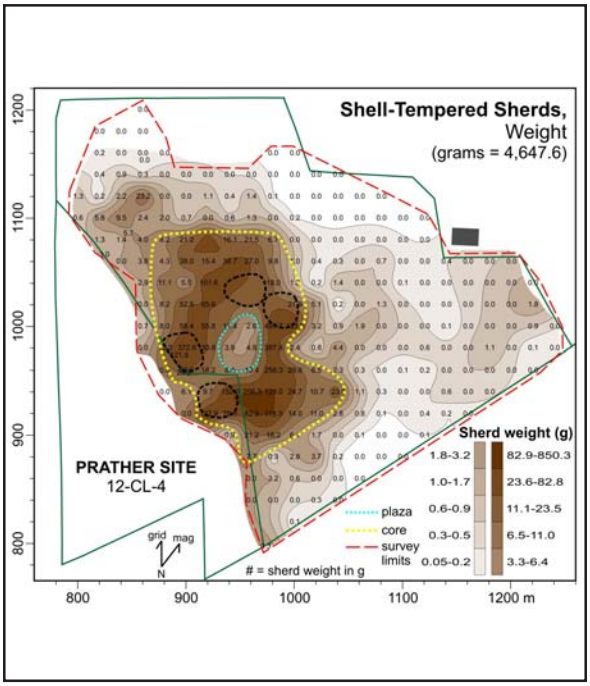

Figure 56. Distribution and density of Mississippian ceramics by weight (numbers represent total weights per auger sample).

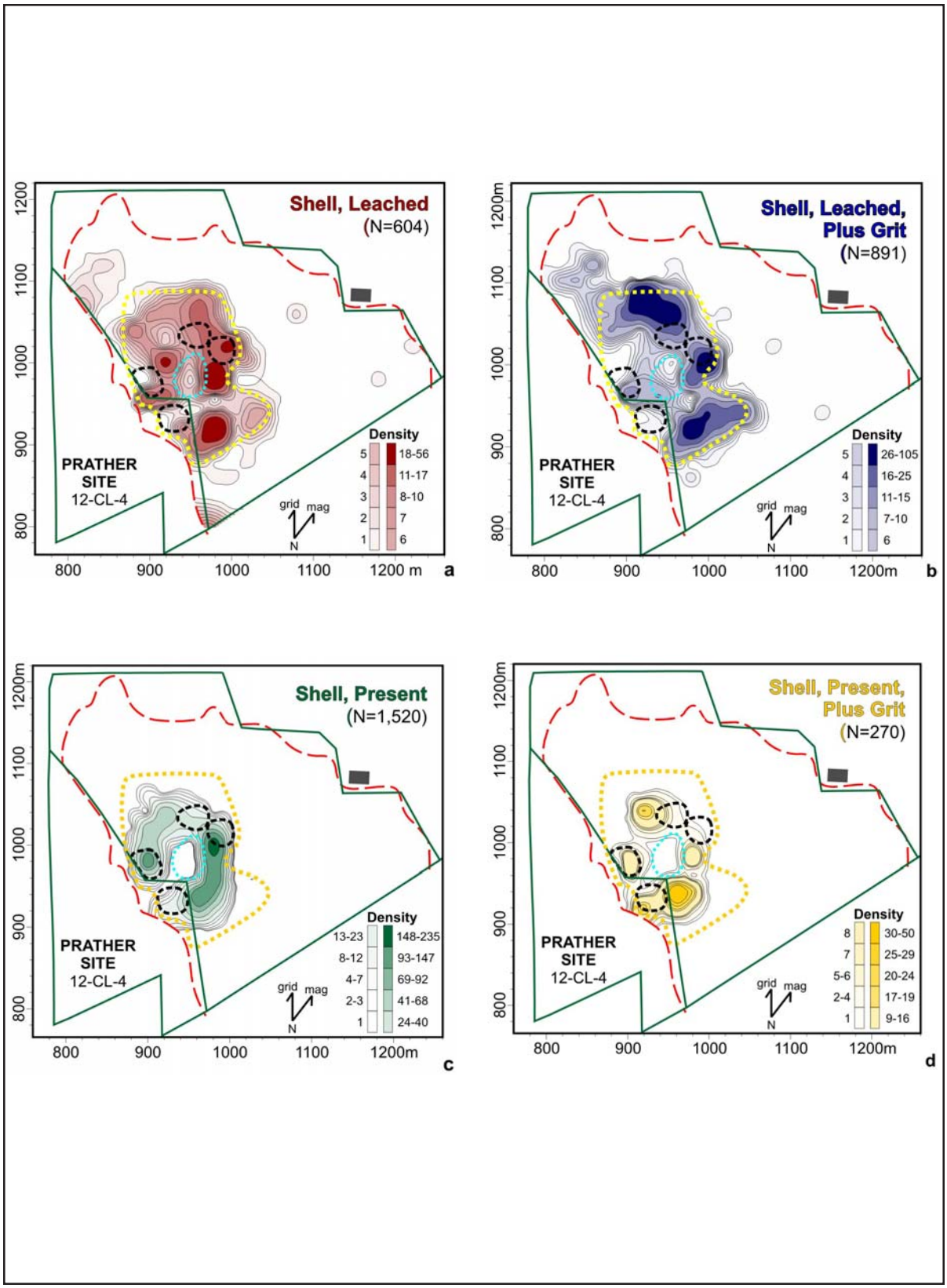

Figure 57. Distribution and density of Mississippian ceramics by temper (numbers in the survey area represent total counts per auger sample): (a) shell, leached; (b) shell, leached, plus grit; (c) shell, present; (d) shell, present, plus grit.

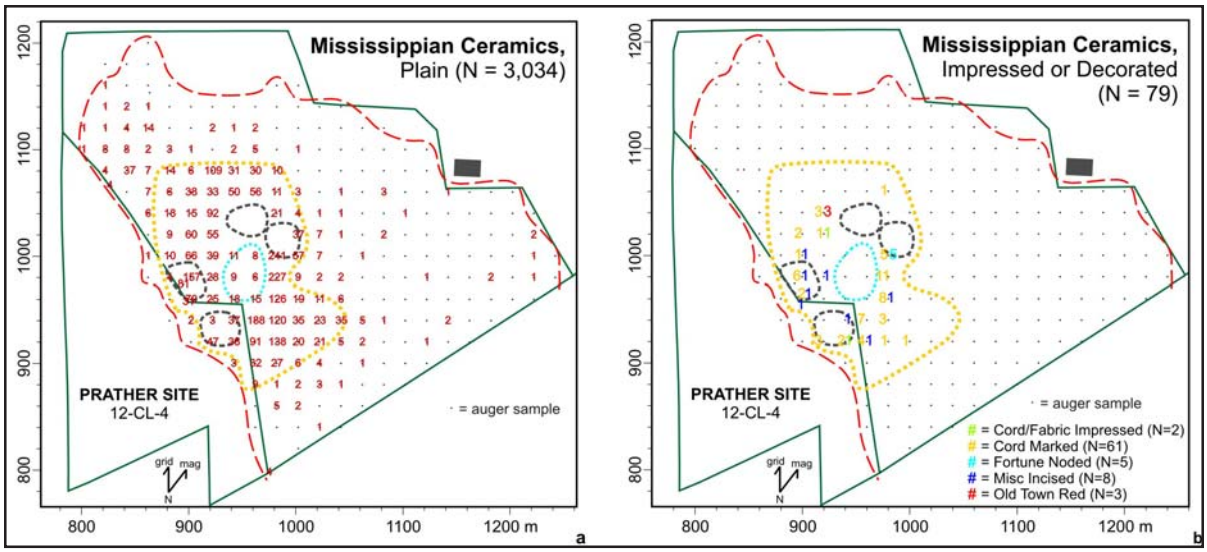

Figure 58. Distribution of Mississippian ceramics by surface treatment (numbers in the survey area represent total counts per auger sample). (a) plain; (b) impressed or decorated.

surface treatment shows nothing remarkable (Figure 58). All examples of impressed or decorated sherds occur within the core area, but the bulk of the ceramics at the site also occur in this area; therefore, the distribution of impressed and decorated pottery follows the statistically expected pattern. The rare vessel appendages are mostly in the southern part of the site, but the sample is too small to be meaningful (Figure 59).

Implements, Ornaments, and Manufacturing Debris

Tools include both chipped and ground stone artifacts. Chipped stone bifaces have a distribution that is slightly wider than the core area but not out of line considering the scattered outlying clusters of Mississippian ceramics. The biface distribution (Figure 60b) is similar to that of Madison triangular arrow points (Figure 60a), since these are also concentrated in the core area. Similarly, chipped stone tools and ground stone tools are clustered in the core area (Figure 60c-d). Outlying artifacts are those clearly not associated with the Mississippian occupation: the Brewerton Side Notched point, and two lamellar blade segments (Figure 60c). The few faunal objects are tools and a single ornament, again found in the core area (Figure 60d).

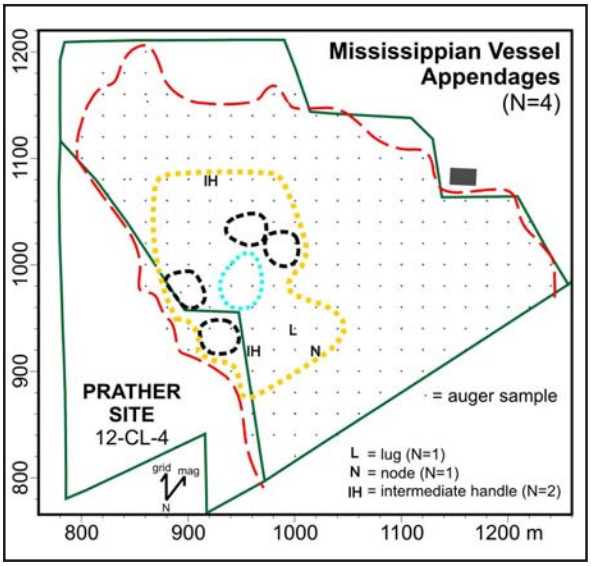

Figure 59. Distribution of Mississippian ceramics appendages (numbers in the survey area represent

Chert manufacturing debris includes both flakes and cores. Cores have a distribution pattern that is similar to flakes, and both have a pattern that compares well with the distribution of Mississippian ceramics (Figure 61). Like the density of pottery, the high density of manufacturing debris on the Southwest and Southeast mounds shows that their construction involved soils from areas of domestic activity.

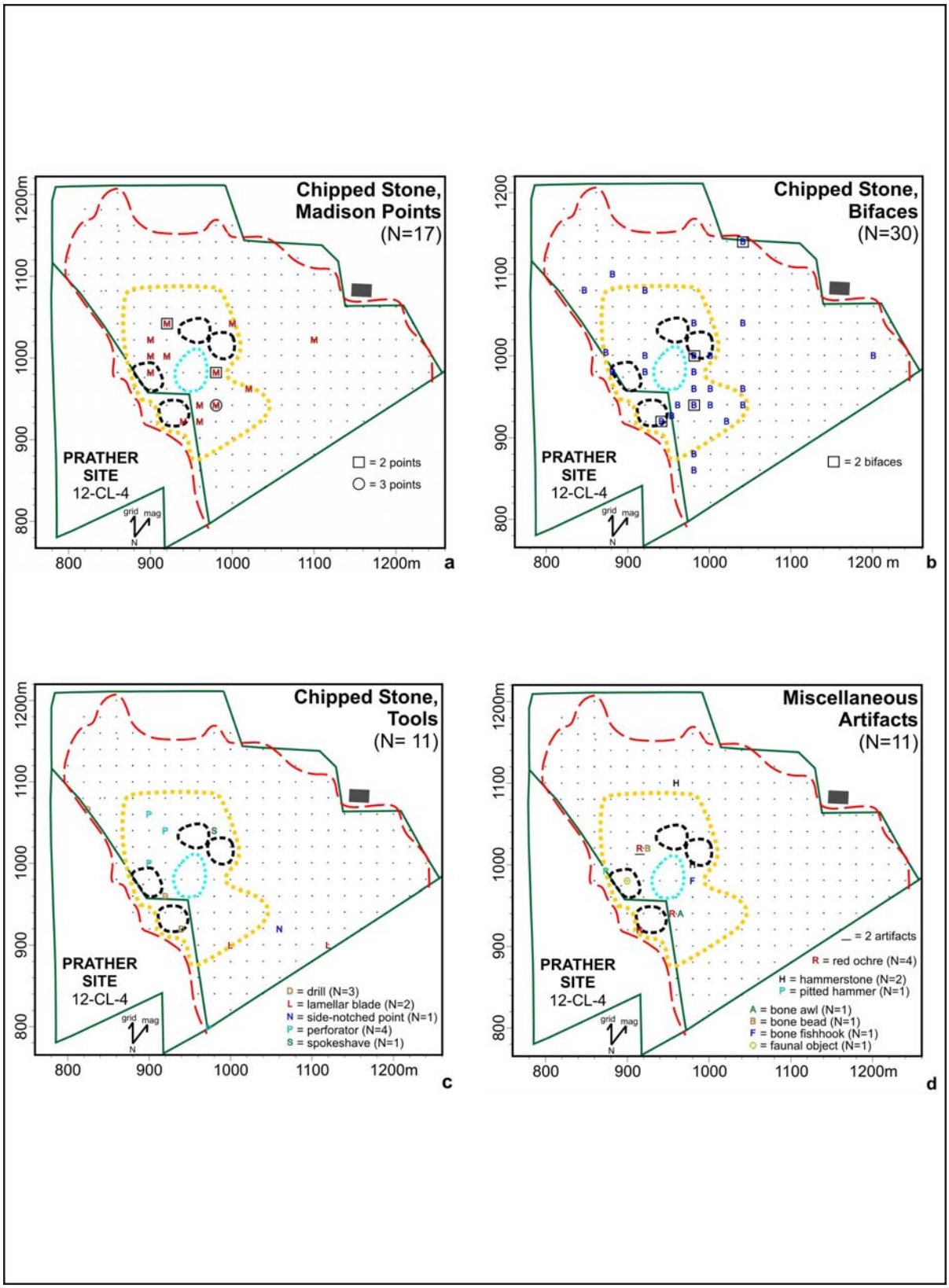

Figure 60. Distribution and density of implements and miscellaneous artifacts (numbers in the survey area represent total counts per auger sample). (a) chipped stone, Madison points; (b) chipped stone, bifaces; (c) chipped stone, tools; (d) miscellaneous artifacts.

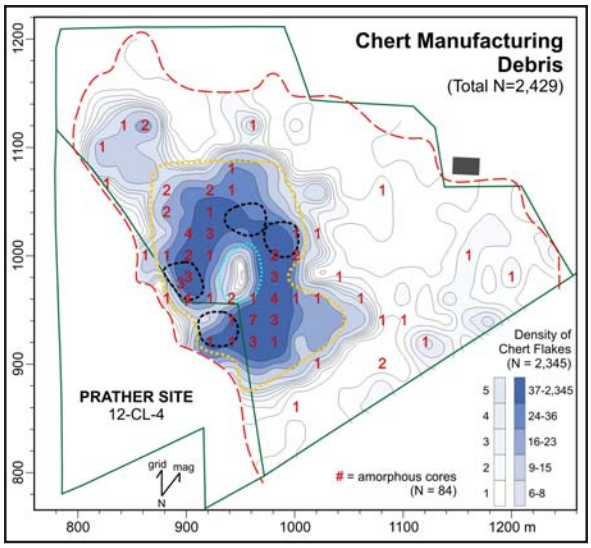

Figure 61. Distribution and density of chert manufacturing debris, flakes and cores

Faunal Remains

The density of faunal remains continues the same pattern: a gap in the plaza and a concentration in the core, with a few outlying clusters. Comparison of the distribution of burned, unburned, and calcined bone shows nothing remarkable (Figure 62a-c). Fragments of mussel shell (Figure 62 d) are not found in the northwest section of the core area, which is somewhat puzzling. The location of the few gastropods is again in the core area (Figure 62d).

Botanical Remains

The distribution of weights of unidentified charcoal

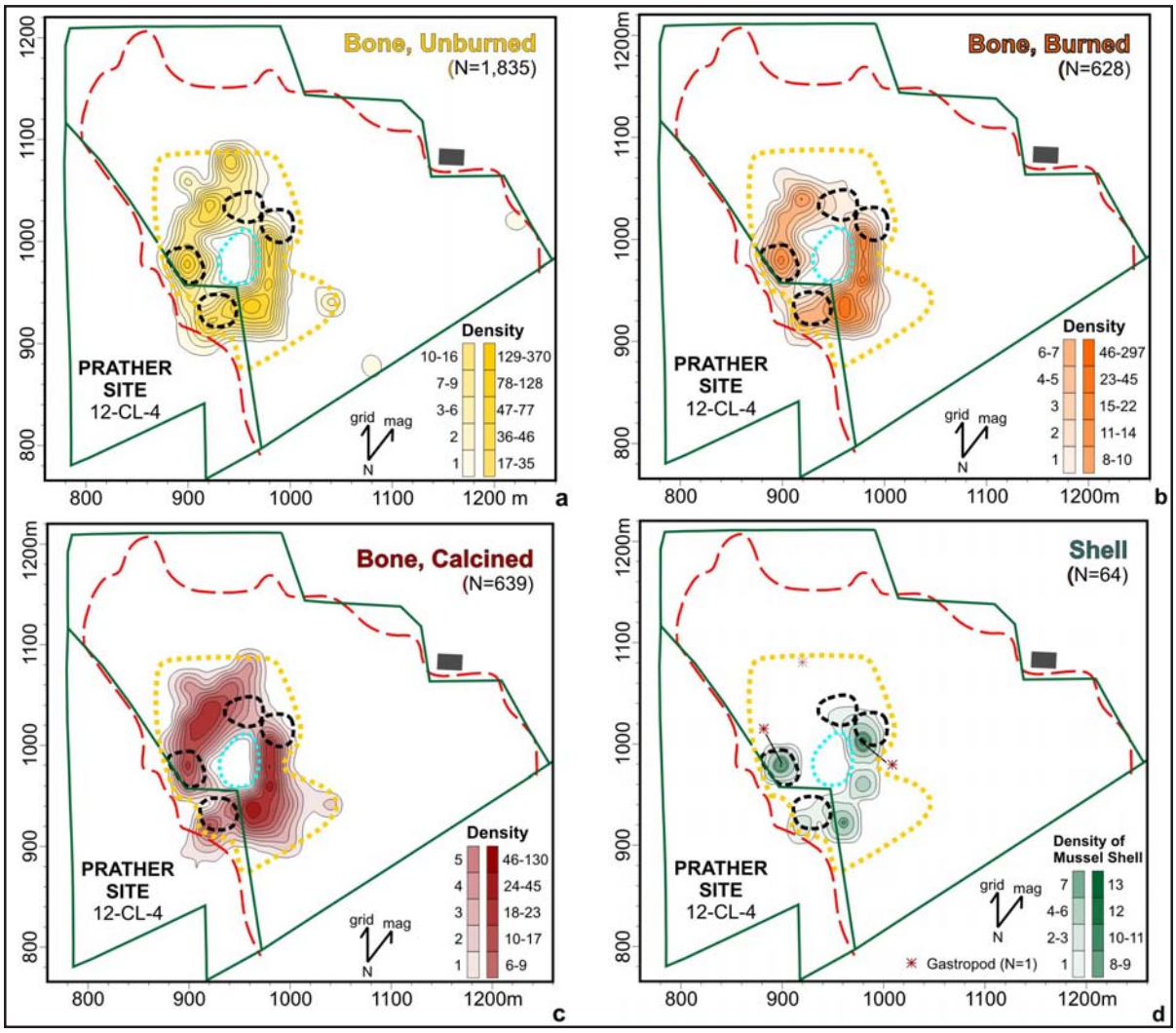

Figure 62. Distribution and density of faunal remains. (a) bone, unburned; (b) bone, burned; (c) bone, calcined; (d) shell.

(primarily wood) plus the identified pieces of carbonized corn and nutshell is shown in Figure 63. Weight density patterns compare best with faunal remains and, again, contribute to the developing picture of the plaza and core. But there are a number of outlying occurrences of charcoal in the eastern part of the site that are intriguing. The single corn kernel was found in the core, but the more abundant nutshell is not restricted to the core.

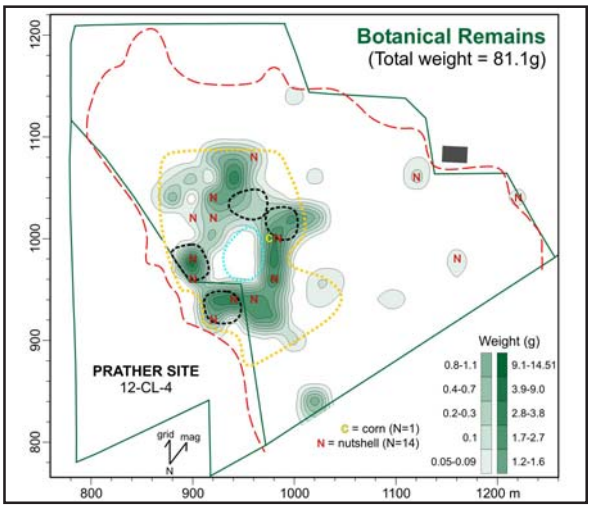

Figure 63. Distribution and density of botanical remains by weight (with scatterplot showing identified nutshell and corn)

Daub

Daub has a distribution (Figure 64) that seems similar to shell, with an unexplained low density in the northwestern section of the core.

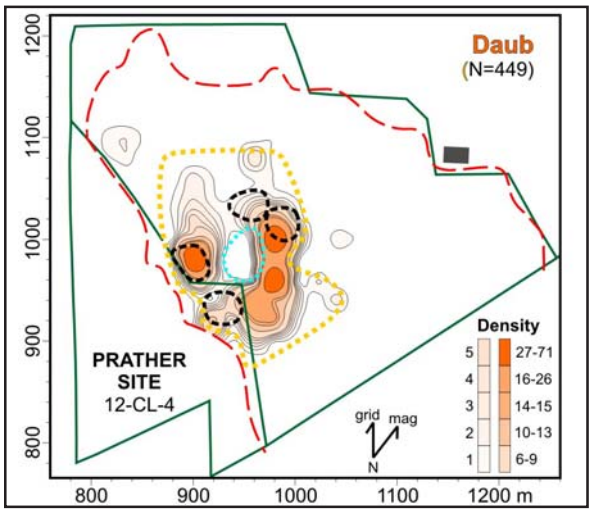

Figure 64. Distribution and density of daub.

Rock

Pieces of natural rock, including pebbles, were distinguished in the laboratory from culturally introduced rock. The distribution of natural rock (Figure 65a) generally does *not* follow the pattern previously seen for Mississippian artifacts, which is what we would expect. However, it does follow the pattern for the plaza, where rock, like other materials, has a much lower density. This suggests that the Mississippian occupants removed pieces of natural rock from the soil when they prepared the ground in the plaza. Cultural rock, including sandstone and hardstone FCR, does not have a remarkable distribution (Figure 65b).

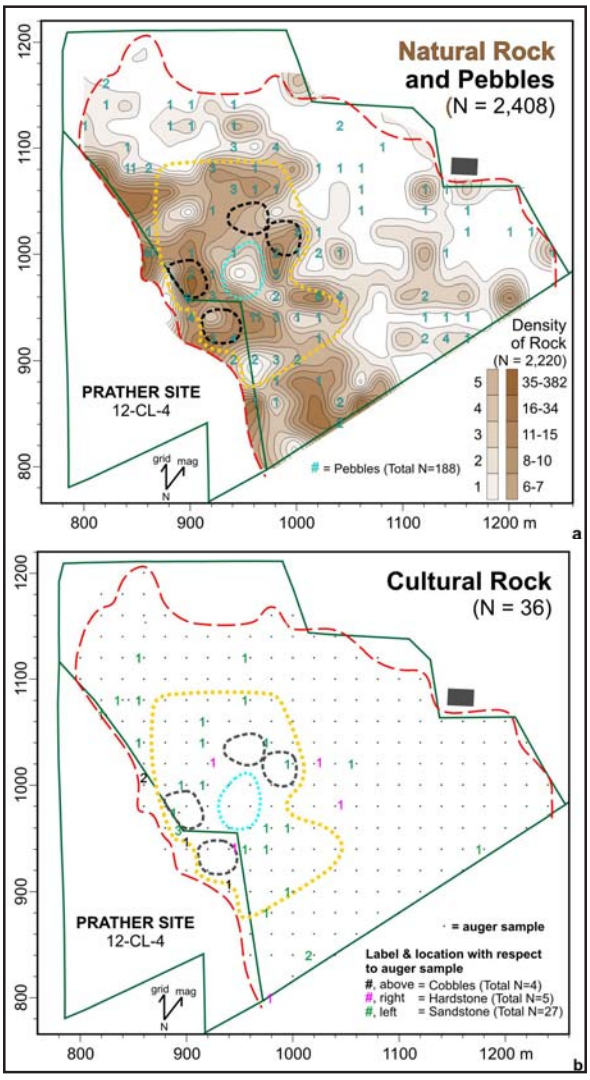

Figure 65. Distribution and density of: (a) natural rock; (b) cultural rock.

CHAPTER 6
Discussion

Horizontal Extent of Occupations

The auger sample survey extended over an area of about 95,800 m^2 or about 9.58 ha (23.68 ac). Only five of the 46 samples on the perimeter of the survey area did not have prehistoric artifacts of some type (see Figure 53), and these artifacts are more broadly distributed than historic materials (see Figure 52). With a survey perimeter that is more than 89 percent positive for prehistoric artifacts, it is clear that we have not identified the boundaries of prehistoric use. While it is not possible to estimate site boundaries, we can assess the minimal size of the several cultural components identified. Distributions of diagnostic artifacts provide data on the geographic extent of Archaic, Woodland, Mississippian, and historic Euroamerican occupations.

Archaic artifacts are limited to an isolated specimen in our survey, but earlier collections contain several Archaic projectile points that have not yet been classified. Information does not permit further comment on horizontal limits, but we expect all Archaic occupations were very limited in size and duration.

The Woodland components, based on both ceramics and two lamellar blade fragments, extend from the railroad embankment on the southeast to the center of the west central portion of the survey area. They occur within an area that measures about 180 m north-south by 320 m east-west. The area of distribution is surrounded by samples that are negative for Woodland artifacts, but there is little point in commenting further on the size of the "Woodland area" because the small ceramic sample points to both Middle and Late Woodland occupations.

The Mississippian occupation has the broadest horizontal extent, based on the distribution of diagnostic artifacts. Because Madison points might have been used by Late Woodland peoples, shell-tempered ceramics are the only diagnostic artifacts considered for identifying Mississippian spatial dimensions. The area encompassed by shell-tempered sherds is only slightly less geographically extensive than the distribution of all prehistoric materials (see Figures 53 and 55). However, the frequency of Mississippian ceramics outside the core area is so low (only one or two sherds in discrete clusters), that negative data is not particularly meaningful for boundary definition unless two or more adjacent samples show an absence (Figure 66). Thus, the boundary of the Mississippian occupation can probably be well estimated on the north side of the survey area, but not on the far east or on the southeast, along the more elevated portions of the area along the railroad embankment. Similarly the west and northwestern limits of the Mississippian occupation are not yet definable. The occurrence of Mississippian materials on the higher areas at the northwest, east, and southeast portions of the survey area indicates that the occupation extends unknown distances onto adjacent fields or perhaps adjacent properties.

We can at least give minimum estimates of the size of the Mississippian occupation. As presently mapped, Mississippian diagnostic artifacts extend over a roughly triangular area about 340 m true north-south by 410 m true east-west. The area encompassed by Mississippian artifacts from the survey measures 50,833 m^2 or 5.2 ha (12.9 ac), but the Mississippian site area is undoubtedly somewhat larger that our survey coverage, probably about double the estimate of 3 ha made by Jansen on site records (University of Louisville, dated April 1973).

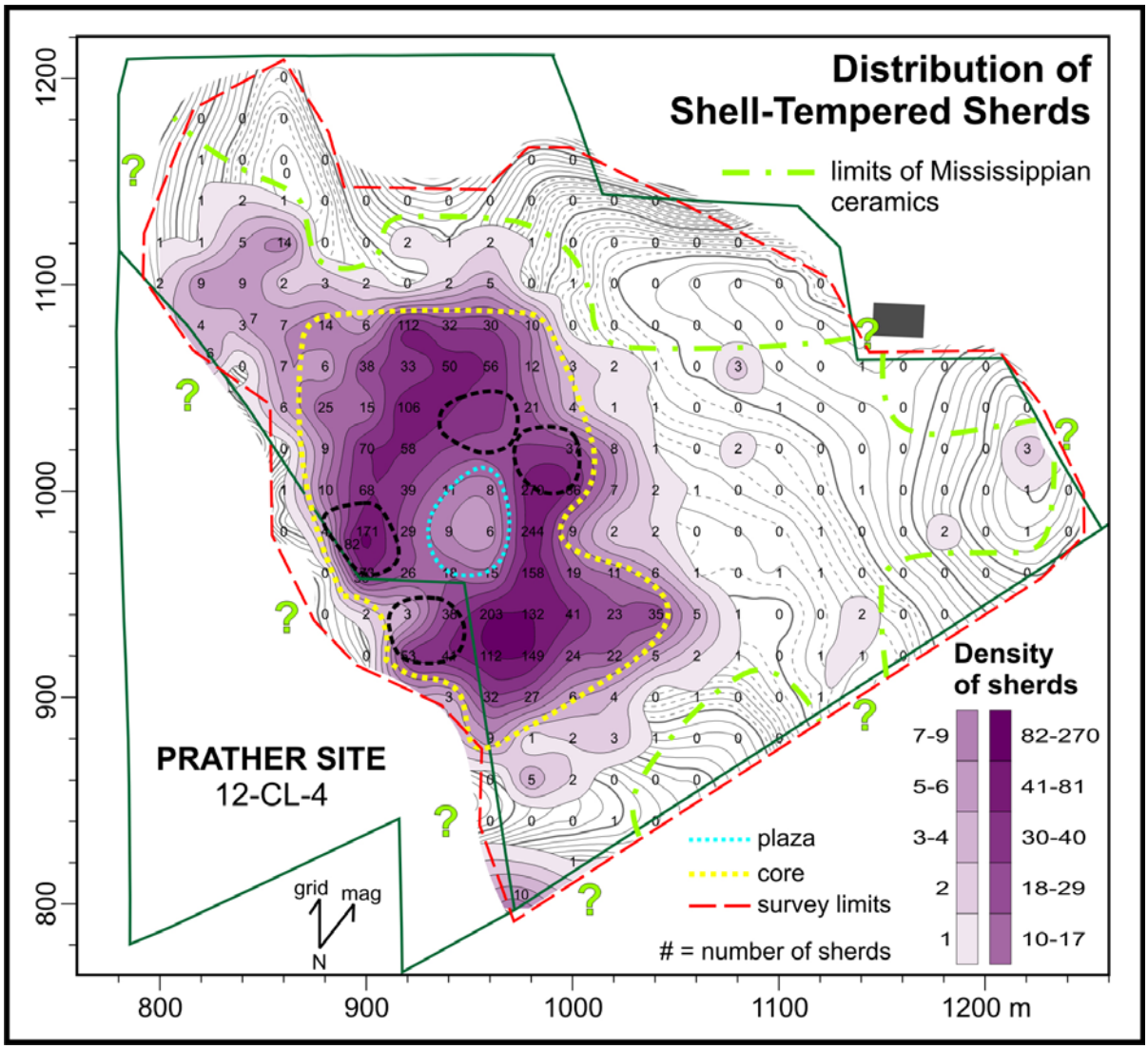

Figure 66. Current knowledge of the limits of Mississippian artifacts.

Integrity and Preservation

The vertical limits of the Mississippian occupation at Prather were evaluated by the auger samples and soil profiles. In the core area of the site, features and midden deposits are abundant below the level of agricultural disturbance. They also extend beyond the core area to several locations in the periphery. In addition, the lower levels of the Southwest and Southeast mounds are preserved. The same is undoubtedly true of the Northeast and Northwest Mounds. For a site that has been a farm for nearly two centuries, the degree of integrity of the archaeological deposits is a very significant finding. Substantial credit for halting the plowing and erosion of the site goes to Dr. Martin, who switched to no-till agriculture in the 1970s.

Mississippian Site Structure

Our concluding observations about the Prather site concern the structure of the Mississippian occupation, and the implications of this structure for assessing the character of the occupation. The evidence indicates a central plaza surrounded by four mounds and a concentration of domestic refuse that signals a core residential area (Figure 67). Every category of artifacts studied–

Mississippian ceramics, lithic tools, ornaments, chert manufacturing by-products, faunal remains, botanical remains, daub, and rock–shows the same donut-shaped distribution. Furthermore, the density of Mississippian ceramics, as well as of the other artifact categories, has a very sharp fall-off along the outer margin of the core. The dramatic drop in density suggests the presence of a physical barrier, such as a palisade.

Note that there is a distinct undulation in the eastern boundary around the core, and this might be a gateway through a palisade. The undulation does not coincide with any evidence of disturbance in the soil profiles in this locale.

We can explore how the different areas of the communities may have been used by comparing the proportions of the more abundant artifact categories. Table 6 shows that the core dominates the total of all areas, as would be expected, because the core was defined by higher densities of cultural materials. Therefore, it is useful to highlight which areas have substantially higher or lower representation of certain artifact categories than the site total.

The plaza has notably lower proportions of faunal remains, botanical remains, and rock. Deposition of ceramics, chert debitage, and daub was emphasized in this area, compared to other areas. One explanation for the high frequency of ceramics counts might be that the plaza had a lot of foot traffic–a trampling area. One scenario that would explain the emphasis on chert flakes is that the plaza was an open area where people worked on tool making. An alternative idea is that the sweeping and cleaning of the plaza left behind small sherds, chert flakes, and bits of daub but removed the larger pieces in this category, plus bone and rock. Another idea is that the plaza artifacts derive from an early occupation that did not have a plaza but extended over a larger area for a short time.

The mounds have the highest proportion of ceramics by weight, the highest proportion of fauna by count and weight, and the highest proportion of botanical remains by weight. The ceramic data indicate larger sherds are in the mounds. This finding, combined with the high proportions of faunal and botanical remains, suggests taphonomic effects are responsible for the distinctive characteristics of the artifacts in mound deposits. The greater depth of intact deposits in the mounds would have offered better conditions for preservation of pottery, bone, and carbonized

Table 6. Comparison of community areas by artifact groups, percent of counts and weights (g).

Artifact Group	Plazas		Mounds (SW & SE)		Core		Periphery		Total All Areas	
	%N	%Wt	%N	%Wt	%N	%Wt	%N	%Wt	%N	%Wt
Miss. Ceramics	46.0	40.2	30.7	43.0	36.0	41.1	23.5	10.2	33.9	35.1
Faunal Remains	2.0	2.1	38.7	26.8	34.7	20.0	10.2	8.7	32.6	18.8
Chipped Stone (tools & debris)	46.0	49.5	20.3	22.7	23.4	29.0	48.4	56.3	25.6	33.6
Daub	6.0	8.2	8.4	3.6	4.2	2.3	2.1	0.6	4.6	2.2
Rock	0.0	0.0	1.2	2.5	1.3	7.0	14.1	24.2	2.6	9.7
Botanical Remains	0.0	0.0	0.8	1.4	0.5	0.6	1.7	0.1	0.7	0.6
Total N or Wt	50	28.1	1,507	2,215.4	7,154	8,298.0	1,006	2,698.0	9,717	13,239.5

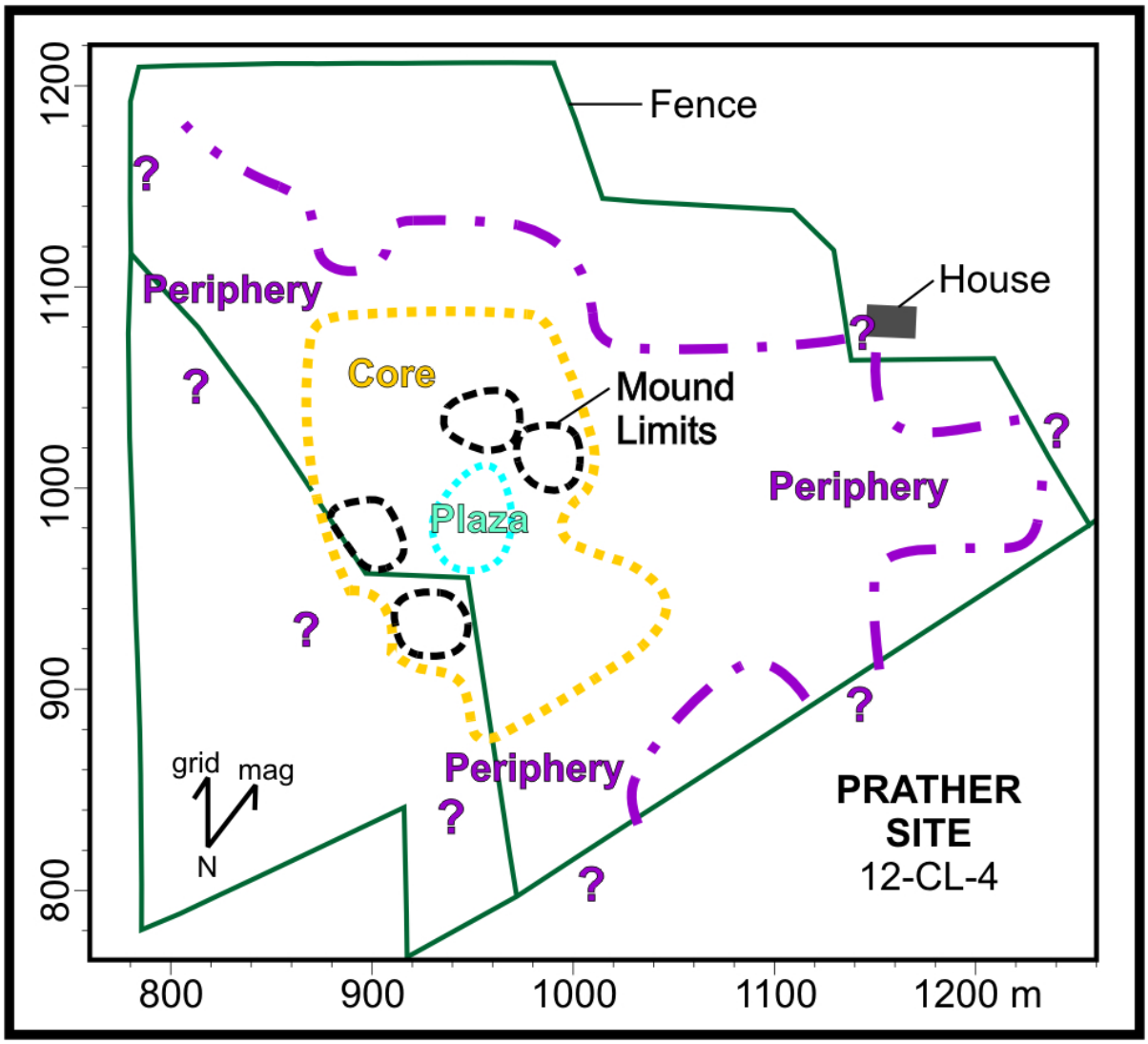

Figure 67. Location of hypothesized community areas: plaza, mounds, domestic core, and periphery.

plants. Why the mounds would have a low proportion of chipped stone is not obvious, but the core area also has a low chipped stone density.

The core area is most similar to the mounds in the relative proportion of artifact groups, both in counts and weights. One idea about this similarity is that discarded items in the core area were excavated or scraped up when soil was borrowed for use in mound construction.

The periphery is the most distinct area. It has the highest proportions by count but not weight of botanical remains, plus the highest proportion by count and weight of chipped stone artifacts and rock. The low proportions of pottery and bone further suggest that this area was used substantially differently than the core.

In sum, use and breakage of pottery is high in the deposits in the plaza, core, and mounds. Chert tool manufacturing, as indicated by the chipped stone artifacts, was emphasized over other activities in the plaza and periphery. Deposition of daub was emphasized in the plaza and in the deposits making up the mounds. Use of rock was emphasized in the periphery. Botanical remains are infrequent but best represented by weight in the mounds and counts in the periphery. Together these results present a picture of structural differences in community behaviors, plus taphonomic effects.

Prather as a Mound Center

Muller (1986:250), in discussing Mississippian in the Ohio Valley, has given the opinion that the Falls region Mississippian is "a marginal form ... that might not be considered completely Mississippian in its adaptation," and further that it is "a somewhat backwoods kind of Mississippian from the traditional point of view." But he also noted that little is known about this regional Mississippian expression. Specifically discussing Prather site, Janzen believed it was "a diluted form of Mississippian"(D. Janzen to J. H. Kellar, letter, Oct. 2, 1972, GBL).

Since Prather is one of the principal Mississippian sites in the Falls region and is becoming one of the better known sites in this area, it is useful to summarize what we have learned about Prather by considering whether this site can be classified as a " Mississippian mound center" and how it might relate to neighboring sites and adjacent Late Prehistoric populations in the Ohio Valley.

1. Size of the community. Prather is a small village with mounds, covering at least 5.2 ha (12.9 ac). The limits of the Mississippian occupation are identified on the north and unknown on the west, east, and south. Based on topography and artifact distributions, the occupation may extend beyond the survey's limits on the south and southeast, an area presently obscured by a railroad embankment. The great concentration of artifacts in a core area suggests that the site would not extend much farther to the east or south. The west margin of the site might extend beyond the area of the spring and bedrock metates and mortars to the spring-fed stream.

2. Dating. The one radiocarbon date from Janzen's excavations has a large standard deviation and a wide calibrated date range A.D. 998 - 1276 (2 sigma).

3. Community structure. Mounds are evidence of both directed community labor and ritual activity. Our topographic mapping confirmed four mounds, albeit lowered by erosion and grading. One mound was confirmed by previous excavations conducted by Guernsey and Janzen. Two mounds were confirmed by the current survey's auger samples. Artifact densities and distributions from the survey indicate a central plaza surrounded by mounds and a core area of domestic activity. Beyond the core is a peripheral area of light, perhaps intermittent domestic use, suggesting outlying households or clusters of activity. The possibility of outlying households is particularly intriguing, since spatial differences were noted in the temper of Mississippian ceramics in the core area. There are several possible explanations for the outlying artifact clusters: (a) They might represent visiting groups or outsiders seeking a place of refuge; (b) They could be the residues of an earlier Mississippian occupation antecedent to mounds and plaza construction, which was geographically extensive but short-lived and followed by a shift in domestic activity to the concentration in the core area; and (c) They could reflect areas of specialized activity carried out by the residents of the core area.

4. Fortification. A palisade wall around the core is hypothesized, based on artifact distributions. The possibility of the wall's orientation to cardinal directions is also suggested by these distributions.

5. Ritual and symbolism. The summits of the two pairs of mounds are approximately oriented to true north. The orientation of the long axis of the core area does not match the cardinal directions, but the southern boundary of this area, and perhaps a palisade wall, may be oriented to true north. Based on the early excavations, one of the mounds was used for structures and for burials. Mortuary activity is not confined to the mounds, however, since interments are present in the core area north of the mounds. Burials were accompanied by a range of artifacts types, and one male was interred with a copper-covered wooden eagle, a complete fish, conch shell ornaments, ceramic vessels, and other artifacts. Another burial had a stone discoidal and ceramic vessels. A further aspect of symbolism is the use of nested chevrons or arches on the necks of short jars. If

these are copies of Ramey Incised motifs, might they not also be Ramey-like symbols?

6. Subsistence economy. Recovered faunal and botanical remains from previous excavations and our survey indicate maize agriculture, the use of nuts, hunting and fishing, and collecting mollusks. Specialized facilities for processing plant foods are the bedrock metates and mortars. Large fish and molluscs point to use of the Ohio River, 4.9 km (3.0 mi) overland to the east.

7. Settlement pattern. Very simply, little data is available. Prather is one of several Mississippian villages in the uplands, but of the known large villages with burials it is located farthest from the river. Other villages along the river and terraces were better situated in terms of access to tillable soils, aquatic resources, and canoe transportation.

8. Settlement system. Even less data are available, but it is possible that Prather is the largest Mississippian community at the Falls (at least in Indiana), based on our survey and on the density of materials in the core area. Sizes of other sites are poorly documented, but a number of sites are much smaller than Prather, indicating some degree of settlement hierarchy. No other sites have confirmed mounds. The smallest Mississippian sites are rockshelters south of Louisville (Bader 2003). It is noteworthy that Prather is not in the center of the distribution of known Mississippian sites, but at the margin: the term "mound center" simply does not fit. Still, the mound-and-plaza complex at Prather, as well as the surrounding residential core make the site comparable to Mississippian "temple towns" (see Lewis and Stout 1998). Prather may well have been a regional node of ritual activity because of its mound group, even if it was not geographically central for the population. A ritual center at Prather clearly would not have been a center for mortuary activity, since multiple Mississippian sites in the Falls region have burials and reported stone box graves.

9. Interaction with neighboring populations. The closest contemporary Mississippian populations are the Angel phase people of the lower Ohio Valley and Fort Ancient peoples of the central Ohio Valley. The one date from Prather fits within the wide date range for sites of the Angel phase, roughly A.D. 1050-1450 (Hilgeman 2000:Appendix B; Green and Munson 1978; Munson 1994). Between the group of Mississippian sites at the Falls and the sites of the Angel phase (Green and Munson 1978), there is a veritable "no-Mississippians-land" that is well documented by surveys on the Indiana side of the Ohio River (Munson et al 1977). The unoccupied area southwest of the Falls region between the westernmost Mississippian sites in the Falls region and the easternmost Angel phase sites is about 85 km (137 mi). Upriver from the Falls region, the nearest known major Fort Ancient sites are in Ohio County, Indiana, near the mouth of Laughrey Creek. Thus, another "no-persons-land" may be present to the northeast of the Falls that stretches over an area of about 95 km (153 mi). The apparent geographic buffers between the Mississippian population at the Falls and contemporary groups to the southwest and northeast may not be entirely a result of social dynamics but might also reflect the narrow river valleys and the less-desirable environments in those locales.

Interestingly, Prather site collections show no evidence of interaction with Angel, such as negative painted plates with sun symbol motifs. However, there is nothing else distinctive of Angel phase material culture to help us track interactions. Indications of Fort Ancient interactions are also very limited at Prather. This pattern is better indicated by the larger ceramic sample from the Mississippian Eva Bandman (River Road) site, across the river in Kentucky (Henderson 2004). An incised sherd from our survey might be part of a Fort Ancient guilloche design, and a handle from Guernsey's collection is most probably a Fort Ancient style appendage.

10. Long-distance trade. Access to distant raw materials or finished products of copper and marine shell is indicated, thanks to Guernsey's work. A piece of a black-on-buff negative painted bottle, perhaps from the Tennessee Valley region,

is known, thanks to Janzen's work. Based on our examination of nearly 2,500 pieces of chert, the Prather site occupants do not seem to have participated in the geographically widespread, Mississippian trade network that transported chert hoes or hoe preforms to areas far from the chert sources. Although low quality chert was very abundant and close at hand, at the edge of the village, the chert blocks are not large enough for manufacture of Mississippian-style hoes.

These results and observations indicate that Prather was a planned community and mound complex. It was established at the northwestern margin of the Mississippian population that occupied the Falls region and distant from the concentration of aquatic resources and most tillable soils near the Falls themselves. But other than the site's marginal setting, we have no data to indicate that the Prather site occupants were somehow "less Mississippian" than the neighboring Angel population. Further, what is the economic significance of the environmentally marginal setting? The Prather site villagers were not held back from access to fish or molluscs; to acquire the fish and molluscs evident at the site, they could have either spent a couple hours walking to and from the river, or acquired these foods from neighboring villagers who lived in the more optimal areas along the river. Furthermore, the upland soils can be farmed successfully, though the farming strategies may have required more labor for weeding and repeated clearing of new fields than would have been needed for alluvial soils.

The reason for Prather's location on the margin may well have little to do with day-to-day subsistence economics and more with the defensive advantage of *not* living near the river. Prather also may have been strategically located with respect to the permanent springs that surround the site. The community planners seem to have chosen a safe, but well-watered locale away from the riverine transportation routes, and out of sight from unfriendly neighboring populations. It might have been an ideal locale for a ritual precinct during times of social conflict. But if Prather was ritual safe haven, it was clearly not an empty or rarely used ceremonial site, but a ritual site with a residential community, as is indicated by the high densities of ordinary domestic residues found at Mississippian sites. In this respect, Prather is comparable to Angel and more distant mound centers of the lower Ohio Valley.

In sum, Prather was situated on the margin of the group of Mississippian communities in the Falls region. And this Mississippian population was established on the northeastern frontier of the Mississippian world. The Mississippian population in the Falls region probably never grew as large as those in other regions. While we have learned nothing that would suggest the people at Prather and related sites were some mixture of Mississippian and Fort Ancient, or were notably marginal or dilute in reference to other Mississippian polities in the Ohio Valley in either economy and beliefs, the people at Prather and related sites nonetheless undoubtedly developed social, political, and economic adaptations that reflect their position on the Mississippian frontier. It is the chance to learn about these adaptations, and how they differ from the adaptations made by contemporary groups, that makes the Falls region an exciting locality for Mississippian research.

CHAPTER 7
Summary and Future Directions

The Prather site is probably Indiana's best preserved Mississippian site in the Falls of the Ohio region, but it may well be the least-known Mississippian mound center in the Ohio Valley. At the same time, the site is located in an area of rapid industrial and suburban development. The Mississippian sites in the Falls region represent the northeastern extent of Mississippian adaptation, on the southwestern frontier of Fort Ancient occupations. As a Mississippian mound group, Prather is anomalously situated away from the Ohio River in the uplands.

Excavations of burials and mound deposits were conducted in the last century, but site size and characteristics were little understood. The current project was the compilation of a baseline survey of the site to learn about site characteristics and preservation, as well as to provide a foundation for future investigations. Auger sampling was the principal survey method. The survey mapped the site's topography and soils, identified the range and distribution of artifact types, and identified four mounds. The survey covered 9.6 ha, showed that the site extended over more than 9.5 ha, and had a Mississippian occupation area of more than 5.2 ha. Soils profiles and artifact distributions indicate a central plaza surrounded by a square of four mounds. Pairs of mounds may be oriented to the cardinal directions. The mounds are encompassed within a core residential area, also indicated by artifact and soil distributions. The sharp fall-off in artifacts on the margin of the core area suggests a palisade wall surrounding the core. Beyond the core, artifact distributions indicate small areas of residential or specialized activity.

The recent burst of research on Mississippian sites in the Falls region highlights the importance of gaining fuller knowledge about the Prather site. The survey results have provided an excellent foundation–a jumping off point–for future investigations. While the survey data help us develop hypotheses about site structure, excavation data will ultimately be needed to evaluate ideas developed from artifact and soil distributions. These ideas include the presence of a central plaza where lithic tool manufacturing was emphasized, a core residential area, a possible palisade, a peripheral zone where processing of plants and use of rocks was emphasized, which might represent outlying households or specialized activitiy areas. Other ideas relate to the temporal dimension of the occupation, such as the dating of mound constructions and the contemporaneity of occupation in the core and periphery. Except for the core area, our survey data are limited for making area-to-area comparisons, either because the number of samples is small or the materials are sparse. Furthermore, our survey did not identify boundaries of the site or the Mississippian occupation on the west, east, or south.

To move toward a fuller understanding of the Prather site, we have identified seven research priorities to be addressed by a second stage of survey and some initial testing.

1. *Define site boundaries and limits of the Mississippian occupation.* Extend auger sample survey farther west, northwest, northeast, and east of the existing coverage area to identify site boundaries. Sampling would necessarily avoid eroded, rocky slopes, but the lowland near the spring-fed stream on the west is an important area to check. Reduce intervals of auger samples from 20 m to 10 m along the railroad embankment to better assess limits of the Mississippian occupation.

2. *Clarify boundaries around the plaza and core*. Excavate reduced-interval samples around the plaza and core, either by the auger procedure or by 0.5 x 0.5-m hand-excavated squares. Hand excavation would be useful if midden deposits or

features are suspected but must be done when soils are moist.

3. *Obtain additional subsurface samples from other areas to compare with the core*. Excavate reduced-interval samples in the plaza and at multiple locations in the periphery in several different artifact clusters. The plaza samples could include 0.5 x 0.5-m hand excavated squares, but few features are expected in the periphery.

4. *Carry out geophysical surveys (ground-penetrating radar, magnetometry, soil resistivity) and ground-truthing of anomalies to further assess site structure and types of subsurface features in select areas*. Using a combination of geophysical surveys would give the best results (Clay 2001). Geophysical survey transects should be placed in sections of the plaza and core, as well as in several locations along the boundary of the core where a palisade wall is hypothesized. Geophysical surveys should be conducted in two mounds, the Southwest and Southeast. At the Southwest Mound, these surveys should precede geoarchaeological study; at the Southeast Mound, they can be conducted to identify the filled-in basement walls of the Prather house and to plan exploration of the mound's remnants. In the plaza and core areas, select geophysical anomalies can be ground truthed using both a small, 1-inch diameter (Oakfield sampler), solid-earth corer and small hand-excavated test units. Ground truthing in the Southwest Mound should be conducted as part of a geoarchaeological study. For faunal and botanical remains, it is important to assess abundance during coring and to carry out standard laboratory identifications for test excavation samples.

5. *Conduct geoarchaeological study of one of the mounds to address multiple research questions.* To assess the size, shape, construction sequence, and dating of one of the mounds, solid earth, 2-inch diameter cores (Giddings rig) should be excavated at regular intervals and in geophysical anomalies to document stratigraphy and to collect micro-artifacts and residues. The Southwest Mound should be investigated, because it appears to be the least impacted by previous excavations and house construction and demolition. Additionally, one face of this mound has been eroded along the fence line (by livestock and possibly a farm lane). A test excavation sample should explore this face as part of the stratigraphic study.

6. *Begin development of a site chronology*. Assay 4 to 6 radiocarbon samples from the mound study and from other test excavations.

7. *Assess survey and initial testing data to identify priorities for further geophysical survey and for feature excavation.* To characterize the Prather occupation, excavation data are needed to identify types of constructions and to obtain excavated assemblages of ceramics, lithic tools, and faunal and botanical remains. Analyzing the results of the second stage of survey should be directed toward identifying the most appropriate areas for test excavations. Ideally, testing will lead to large block excavations of structures and pit facilities in different parts of the site.

References Cited

Adams, B., and A. Berkson, I. Matkovszki, and G. R. Walz
2004 *Phase 1A Archaeological Reconnaissance of 3,450 Acres at the Former Indiana Army Ammunition Plant in Clark County, Indiana.* Submitted to Indiana Army Ammunition Plant. Research Report 73, Public Service Archaeology Program, University of Illinois at Urbana-Champaign.

Anderson, D.G.
1990 Stability and Change in Chiefdom-Level Societies: An Examination of Mississippian Political Evolution in the South Atlantic Slope. In *Lamar Archaeology: Mississippian Chiefdoms in the Deep South,* edited by M. Williams and G. Shapiro, pp. 187-213. University of Alabama Press, Tuscaloosa.

Anonymous
1882 *History of the Ohio Falls Cities.* L.A. Williams and Company, Cleveland.

Bader, A. T.
2003 Late Prehistoric Occupation at the Falls of the Ohio River: Somewhat More Than Speculation, Somewhat Less Than Conviction. *Currents of Change, Journal of the Falls of the Ohio Archaeological Society* 1(1):3-42.

Bassett, J., and R. L. Powell
1984 Stratigraphic Distribution of Cherts in the Limestones of the Blue River Group in Southern Indiana. In *Prehistoric Chert Utilization from the Midcontinent*, edited by B.M. Butler and E.E. May, pp. 239-251. Occasional Paper No. 2, Center f or Archaeological Investigations, Southern Illinois University, Carbondale.

Borden, W.
1874 Report of a Geological Survey of Clarke and Floyd Counties. In *Indiana Geological Report of 1873*, pp. 184-186. Indianapolis.

Baird, L. C.
1909 *Baird's History of Clark County, Indiana.* B.F. Bowen and Company, Indianapolis.

Black, G. A.
1967 *Angel Site: An Archaeological, Historical, and Ethnological Study*. Indiana Historical Society, Indianapolis.

Brose, D .S., C. W. Cowan, and R. C. Mainfort Jr. (editors)
2001 *Societies in Eclipse: Archaeology of the Eastern Woodlands Indians, A.D. 1400-1700.* Smithsonian Institution Press, Washington, D.C.

Brown, J. A., R. A. Kerber, and H. D. Winters
1990 Trade and the Evolution of Exchange Relations at the Beginning of the Mississippian

Period. In *The Mississippian Emergence*, edited by B.D. Smith, pp. 251-280. University Press of Kansas, Lawrence.

Clay, R. B.
2001 Complementary Geophysical Survey Techniques: Why Two Ways Are Always Better Than One. *Southeastern Archaeology* 20(1):31-43.

Cobb, C. R.
1989 An Appraisal of the Role of Mill Creek Hoes in Mississippian Exchange Systems. *Southeastern Archaeology* 8:79-92.

Cox, E. T.
1874 Mounds and Mound Builder's Implements. In *Fifth Annual Report of the Geological Survey of Indiana, Made during the Year 1873,* pp. 126-127. Indianapolis.

1875 Antiquities. In *Sixth Annual Report of the Geological Survey of Indiana, Made during the Year* 1874, pp. 124-125. Indianapolis.

Drooker, P. B.
1997 *The View from Madisonville: Protohistoric Western Fort Ancient Interaction Patterns*. Memoir 31, Museum of Anthropology, University of Michigan, Ann Arbor.

2000 Madisonville Focus Revisited: Reexcavating Southwestern Ohio Fort Ancient from Museum Collections. In *Cultures Before Contact: The Late Prehistory of Ohio and Surrounding Regions*, edited by R. A. Genheimer, pp. 228-270. Ohio Archaeological Council, Columbus.

Drooker, P. B., and C. W. Cowan
2001 Transformation of the Fort Ancient Cultures of the Central Ohio Valley. In *Societies in Eclipse: Archaeology of the Eastern Woodlands Indians, A.D. 1400-1700,* edited by D. S. Brose, C. W. Cowan, and R. C. Mainfort Jr., pp. 83-106. Smithsonian Institution Press, Washington, D.C.

Emerson, T. E.
1989 Water, Serpents, and the Underworld: An Exploration into Cahokian Symbolism. In *The Southern Ceremonial Complex: Artifacts and Analysis; The Cottonlandia Conference,* edited by P. Galloway, pp. 45-92. University of Nebraska Press, Lincoln.

1991 Some Perspectives on Cahokia and the Northern Mississippian Expansion. In *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest,* edited by T.E. Emerson and R.B. Lewis, pp. 193-206. University of Illinois Press, Urbana.

1997 *Cahokia and the Archaeology of Power*. University of Alabama Press, Tuscaloosa.

1999 The Langford Tradition and the Process of Tribalization on the Middle Mississippian Borders. *Midcontinental Journal of Archaeology* 24:3-56.

Fowke, G.
1902 *Archaeological History of Ohio: The Mound Builders and Later Indians*. Ohio State Archaeological and Historical Society and F.J. Heer, Columbus.

Garland, E. B.
1992 *The Obion Site: An Early Mississippian Center in Western Tennessee*. Report of Investigations 7, Mississippi State University, Cobb Institute of Archaeology, Mississippi State.

Gibbon, G.
1995 Oneota at the Periphery: Trade, Political Power, and Ethnicity in Northern Minnesota and on the Northeastern Plains in the Late Prehistoric Period. In *Oneota Archaeology: Past, Present, and Future,* edited by W. Green, pp. 175-199. Office of the State Archaeologist, University of Iowa, Iowa City.

Goldstein, L. G., and J. D. Richards
1991 Ancient Aztalan: The Cultural and Ecological Context of a Late Prehistoric Site in the Midwest. In *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest,* edited by T.E. Emerson and R.B. Lewis, pp. 193-206. University of Illinois Press, Urbana.

Gove, P. B. (editor)
2002 *Webster's Third New International Dictionary of the English Language, Unabridged*. Merriam-Webster, Springfield, Mass.

Granger, J. E., P. J. DiBlasi, and J. M. Hemberger
1981 *Toward a Research and Management Design*. Cultural Resources Studies in the Falls Region of Kentucky, Volume 3. University of Louisville, Louisville.

Graybill, J. R.
1981 *The Eastern Periphery of Fort Ancient (A.D. 1050-1650): A Diachronic Approach to Settlement Variability*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Washington, Seattle.

1984 The Eastern Periphery of Fort Ancient. *Pennsylvania Archaeologist* 54(1-2):41-50.

Green, T. J., and C. A. Munson
1978 Mississippian Settlement Patterns in Southwestern Indiana. In: *Mississippian Settlement Patterns*, edited by B.D. Smith, pp. 293-330, Academic Press, New York.

Green, W.

1997 Middle Mississippian Peoples. *The Wisconsin Archaeologist* 78:202-222.

Griffin, J. B.

1943 The Fort Ancient Aspect. Anthropological Papers 28, Museum of anthropology, University of Michigan, Ann Arbor.

1978 Late Prehistory of the Ohio Valley. In *Handbook of North American Indians, Northeast* (Vol. 15), edited by B. Trigger, pp. 547-559. Smithsonian Institution Press, Washington, D.C.

Guernsey, E. Y.

1939 Relationships Among Various Clark County Sites. *Proceedings of the Indiana Academy of Science* 48:27-32.

1942 The Culture Sequence of the Ohio Falls Sites. *Proceedings of the Indiana Academy of Science* 51:60-67.

Hall, R. L.

1991 Cahokia Identity and Interaction Models of Cahokia Mississippian. In *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest*, edited by T. E. Emerson and R. B. Lewis, pp. 3-34. University of Illinois Press, Urbana.

Henderson, A. G.

1992 *Fort Ancient Cultural Dynamics in the Middle Ohio Valley.* Monographs in World Archaeology 8. Prehistory Press, Madison, Wisconsin.

2004 A Preliminary Consideration of the Late Prehistoric Ceramics from Site15Jf668. Paper presented at the 21st Annual Kentucky Heritage Council Conference, Cumberland Falls, Kentucky.

Hilgeman, S. L.

2000 *Pottery and Chronology at Angel.* University of Alabama Press, Tuscaloosa.

Holley, G. R.

1989 *The Archaeology of the Cahokia Mounds ICT-II: Ceramics*. Illinois Cultural Resources Study 11. Illinois Historic Preservation Agency, Springfield.

Hollinger, R. E.

1995 Residence Patterns and Oneota Cultural Dynamics. In *Oneota Archaeology: Past, Present, and Future,* edited by W. Green, pp. 141-174. Office of the State Archaeologist, University of Iowa, Iowa City.

2002 Conflict and Culture Change in the Late Prehistoric and Early Historic American Midcontinent. Draft, Ph.D. dissertation, Department of Anthropology, University of Illinois, Urbana.

Homoya, M.A., D. B. Abrell, J. R. Aldrich and T.W. Post
1985 The Natural Regions of Indiana. *Proceedings of the Indiana Academy of Science* 94:245-268.

Honerkamp, M. W.
1975 *The Angel Phase: An Analysis of a Middle Mississippian Occupation in Southwestern Indiana.* Unpublished Ph.D. dissertation, Department of Anthropology, Indiana University, Bloomington.

Janzen, D. E.
1971 Excavations at the Fall of the Ohio River Region. *Filson Club History Quarterly* 45(4):373-380.

1972 Archaeological Investigations in Louisville and Vicinity: An Historical Sketch. *Filson Club History Quarterly* 46(4):302-321.

1977a An Examination of Late Archaic Development in the Falls of the Ohio Area. In *For the Director: Research Essays in Honor of James B. Griffin*, edited by C. E. Cleland, pp. 123-143. Anthropological Papers 61, Museum of Anthropology, University of Michigan, Ann Arbor.

1977b The Devil's Backbone of Clark County, Indiana, and the Evolution of a Legend. *Filson Club History Quarterly* 51(4):303-314.

Justice, N. D.
1987 *Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States*. Indiana University Press, Bloomington.

Keeney, K. A. and J. M. Hemberger
2003 A Recent Discovery Made in Connection with the McAlpine Lock Replacement Project. *Currents of Change, Journal of the Falls of the Ohio Archaeological Society* 1(1):65-68.

King, A., and J. A. Freer
1995 The Mississippian Southeast: A World-Systems Perspective. In *Native American Interactions: Multiscalar Analyses and Interpretations in the Eastern Woodlands,* edited by M. S. Nassaney and K. E. Sassaman, pp. 266-288. University of Tennessee Press, Knoxville.

Lewis, R. B.
1986 *Mississippian Towns of the Western Kentucky Border: The Adams, Wickliffe, and Sassafras Ridge Sites.* Kentucky Heritage Council, Frankfort.

Lewis, R. B., and L. M. Mackin

1984 The Adams Site Ceramic Assemblage in Regional Perspective. In *Late Prehistoric Research in Kentucky*, edited by D. Pollack, C. Hockensmith, and T. Sanders, pp. 187-204. Kentucky Heritage Council, Frankfort.

Lewis, T. M. N., and M.. D. Kneberg Lewis

1946 *Hiwassee Island: An Archaeological Account of Four Tennessee Indian Peoples*. University of Tennessee Press, Knoxville.

1995 *Prehistory of the Chickamauga Basin in Tennessee.* Compiled and edited by L. Sullivan. University of Tennessee Press, Knoxville.

Lewis, R. B., and C. Stout (editors)

1998 *Mississippian Towns and Sacred Spaces: Searching for an Architectural Grammar.* University of Alabama Press, Tuscaloosa.

Lilly, E.

1937 *Prehistoric Antiquities of Indiana*. Indiana Historical Bureau, Indianapolis.

Lumb, L. C., and C. H. McNutt

1988 *Chucalissa: Excavations in Units 2 and 6, 1959-67.* Occasional Papers 15. Anthropological Research Center, Memphis State University, Memphis, Tennessee.

Madison, J. H.

1989 *Eli Lilly: A Life, 1885-1977.* Indiana Historical Society, Indianapolis.

McCullough, R. G.

2000 *The Oliver Phase of Central Indiana: A Study of Settlement Variability as a Response to Social Risk.* Unpublished Ph.D. dissertation, Department of Anthropology, Southern Illinois University, Carbondale.

Milner, G. R.

1992 Morbidity, Mortality, and the Adaptive Success of an Oneota Population from West-Central Illinois. In *Late Prehistoric Agriculture: Observations from the Midwest,* edited by W. J. Woods, pp. 136-166. Studies in Illinois Archaeology 8. Illinois Historic Preservation Agency, Springfield.

Milner, G. R., T. E. Emerson, M. W. Mehrer, J. A. Williams, and D. Esarey

1984 Mississippian and Oneota Period. In *American Bottom Archaeology*, edited by C. Bareis and J. Porter, pp. 158-186. University of Illinois Press, Urbana..

Milner, G. R., V. G. Smith, and E. Anderson

1991 Conflict, Mortality, and Community Health in an Illinois Oneota Population. In *Between Bands and States,* edited by S. G. Gregg, pp. 245–264. Occasional Paper 9. Center for Archaeological Investigations, Southern Illinois University, Carbondale.

Mocas, S. T.

1992 Falls Plain: A Middle Woodland Ceramic Type from the Falls of the Ohio River Region. In *Current Archaeological Research in Kentucky: Volume Two,* edited by D. Pollack and A. G. Henderson, pp. 55-78. Kentucky Heritage Council, Frankfort.

Morse, P., and D. F. Morse

1990 The Zebree Site: An Emerged Early Mississippian Expression in Northeast Arkansas. In *The Mississippian Emergence*, edited by B. D. Smith, pp. 51-66. Smithsonian Institution Press, Washington, D.C.

Muller, J.
1978 The Kincaid System: Mississippian Settlement in the Environs of a Large Site. In *Mississippian Settlement Patterns*, edited by B. D. Smith, pp. 269-292. Academic Press, New York.

1986 *Archaeology of the Lower Ohio Valley.* Academic Press, New York.

1997 *Mississippian Political Economy*. Plenum, New York.

Munson, C. A.
2000 *Phase I Archaeological Survey of the Construction Area for Two New Storage Buildings, Hovey Lake Fish and Wildlife Area, Posey County, Indiana.* Prepared for Division of Engineering, Indiana Department of Natural Resources. Department of Anthropology, Indiana University.

Munson, C. A. (editor)
1994 *Archaeological Investigations at the Southwind Site, a Mississippian Community in Posey County, Indiana*. Submitted to the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology. Department of Anthropology, Indiana University, Bloomington.

Munson, C. A., F. Limp, and D. Barton
1977 *Cultural Resources of the Ohio River Valley in Indiana.* Prepared for the Huntington District, Corps of Engineers. Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington.

Munson, P. J., and C. A. Munson
1972 Unfinished Triangular Projectile Points or Hump-Backed Knives? *Pennsylvania Archeologist* 42(3):31-36.

Nickell, A. K.
1974 Soil Survey of Clark and Floyd Counties, Indiana. United States Department of Agriculture, Soil Conservation Service, in cooperation with Purdue University Agricultural Experiment Station. U.S. Government Printing Office, Washington, D.C.

Orr, K.
1951 Change at Kincaid: A Study of Cultural Dynamics. In *Kincaid: A Prehistoric Illinois Metropolis*, edited by F-C. Cole, R. Bell, J. Bennett, J. Caldwell, N. Emerson, R. MacNeish, K. Orr, and R. Willis, pp. 293-359. University of Chicago Press, Chicago.

Pauketat, T. R., and T. E. Emerson
1991 The Ideology of Authority and Power of the Pot. *American Anthropologist* 93:919-

941.

Phillips, P.
1970 *Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949-1955.* Papers of the Peabody Museum of Archaeology and Ethnology, Vol. 60, Harvard University, Cambridge, Mass.

Pollack, D., and A. G. Henderson
2000 Insights into Fort Ancient Culture Change: A View from South of the Ohio River. In *Cultures Before Contact: The Late Prehistory of Ohio and Surrounding Regions*, edited by R. A. Genheimer, pp. 194-227. Ohio Archaeological Council, Columbus.

Pollack, D., and C. A. Munson
1998 Caborn-Welborn Ceramics: Inter-site Comparisons and Extra-regional Interaction. In *Current Archaeological Research in Kentucky, Volume Five*, edited by C. D. Hockensmith et al., pp. 163-202. Kentucky Heritage Council, Frankfort.

Putnam, C. W.
1875 Archaeological Researches in Kentucky and Indiana with Descriptions of Salt Cave. *Proceedings of the Boston Society of Natural History* 42:315-316.

Redmond, B. G.
1990 *The Yankeetown Phase: Emergent Mississippian Cultural Adaptation in the Lower Ohio River Valley*. Unpublished Ph.D. Dissertation, Department of Anthropology, Indiana University, Bloomington.

Ray, L. L.
1974 Geomorphology and Quaternary Geology of the Glaciated Ohio River Valley—A Reconnaissance Study. *U.S. Geological Survey Professional Paper* 826.

Rice, P. M.
1998 Contexts of Contact and Change: Peripheries, Frontiers, and Boundaries. In *Studies in Culture Contact: Interaction, Culture Change, and Archaeology,* edited by J. G. Cusick, pp. 44-66. Center for Archaeological Investigations, Southern Illinois University, Carbondale.

Riggs, R. E.
1986 New Stratigraphic Sequences from the Lower Miami Valley. *West Virginia Archaeologist* 38(2):1-21.

Rossen, J., and R. B. Edging
1987 East Meets West: Patterns in Kentucky Late Prehistoric Subsistence. In *Current Archaeological Research in Kentucky, Volume One,* edited by D. Pollack, pp. 225-234. Kentucky Heritage Council, Frankfort.

Santure, S .K., A. D. Harn, and D. Esarey (editors)
1990 *Archaeological Investigations at the Morton Village and Norris Farms 36 Cemetery.* Reports of Investigations 45. Illinois State Museum, Springfield.

Smith, B. D.
1978 Variation in Mississippian Settlement Patterns. In *Mississippian Settlement Patterns,* edited by B.D. Smith, pp. 479-503. Academic Press, New York.

Stuiver, M., and P. J. Reimer
1993 Extended 14C Database and Revised CALIB Radiocarbon Calibration Program. *Radiocarbon* 35:215-230.

Stuiver, M., P. J. Reimer, E. Bard, J. W. Beck, G. S. Burr, K. A. Hughen, B. Kromer, F. G. McCormac, J. V. D. Plicht, and M. Spurk
1998 INTCAL98 Radiocarbon age Calibration 24,000 - 0 cal BP. *Radiocarbon* 40:1041-1083.

Vickery, K. D., T. D. Sunderhaus, and R. A. Genheimer
2000 Preliminary Report on Excavations at the Fort Ancient State Line Site, 33 Ha 58, in the Central Ohio Valley. *Cultures Before Contact: The Late Prehistory of Ohio and Surrounding Regions*, edited by R. A. Genheimer, pp. 272-329. Ohio Archaeological Council, Columbus.

Wesler, K. W.
2001 *Excavations at Wickliffe Mounds.* University of Alabama Press, Tuscaloosa.

White, A. A.
2003 Summary Report of Excavations at the Clark's Point Site. *Currents of Change: Journal of the Falls of the Ohio Archaeological Society* 1(1):3-42.

White, R.
1991 *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815.* Oxford University Press, New York.

Williams, L. A., and Company
1882 *History of the Ohio Falls Cities and Their Counties.* Volume 2. L. A. Williams and Company, Cleveland.

Williams, S., and J. P. Brain
1983 *Excavations at the Lake George Site, Yazoo County, Mississippi, 1958-1960.* Papers of the Peabody Museum of Archaeology and Ethnology 74. Harvard University, Cambridge, Massachusetts.

Appendix I

Field Specimen Log

FS#	Collection	Grid N1 (m)	Grid E1 (m)	Level	Surface Elevation (m, amsl)	Depth below Surface 1(m)	Depth below Surface 2 (m)	Max. Depth of Cultural Material (m)	Depth of Auger Sample (m)	Date
1	Donated Vessel	Unkn	Unkn	Unkn	Unkn	Unkn	-	-	-	7/8/03
2	1/4" Screen Auger Sample	957.87	897.38	1	156.77	0.00	-	0.47	0.47	7/8/03
3	1/4" Screen Auger Sample	1066.29	824.36	1	156.28	0.00	-	0.10	0.60	7/8/03
4	1/4" Srceen Auger Sample	797.83	973.19	1	157.21	0.00	-	0.20	0.48	7/8/03
5	1/4" Srceen Auger Sample	1000	880	1	156.54	0.00	-	0.40	0.68	7/8-9/2003
6	1/4" Screen Auger Sample	1000	900	1	157.00	0.00	-	0.45	0.50	7/9/03
7	1/4" Screen Auger Sample	1000	920	1	157.28	0.00	-	0.56	0.57	7/9/03
8	1/4" Screen Auger Sample	1000	940	1	157.34	0.00	-	0.39	0.43	7/9/03
9	1/4" Screen Auger Sample	1000	960	1	157.51	0.00	-	0.40	0.54	7/9/03
10	1/4" Screen Auger Sample	1000	980	1	157.85	0.00	-	0.40	0.40	7/9/03
11	Canceled	-	-	-	-	-	-	-	-	7/9/03
12	1/4" Srceen Auger Sample	1000	980	2	-	0.40	-	0.40	0.99	7/9-10/2003
13	1/4" Screen Auger Sample	1000	1020	1	158.03	0.00	-	0.23	0.72	7/9/03
14	1/4" Screen Auger Sample	1000	1040	1	158.25	0.00	-	0.26	0.64	7/9/03
15	1/4" Screen Auger Sample	1000	1060	1	158.35	0.00	-	0.26	0.67	7/10/03
16	1/4" Screen Auger Sample	1000	1080	1	158.42	0.00	-	0.30	0.57	7/11/03
17	1/4" Screen Auger Sample	1000	1100	1	158.57	0.00	-	0.24	0.57	7/11/03
18	1/4" Screen Auger Sample	1000	1120	1	158.80	0.00	-	0.27	0.56	7/12/03
19	Flotation Sample	1000	980	2	-	0.40	-	0.40	0.79	7/9/03
20	1/4" Screen Auger Sample	1000	1140	1	159.30	0.00	-	0.24	0.55	7/12/03
21	1/4" Screen Auger Sample	1000	1160	1	159.82	0.00	-	0.28	0.50	7/12/03
22	1/4" Screen Auger Sample	1000	1180	1	160.53	0.00	-	0.38	0.46	7/12/03
23	1/4" Screen Auger Sample	1000	1200	1	161.39	0.00	-	0.31	0.46	7/12/03
24	1/4" Screen Auger Sample	1000	1220	1	161.98	0.00	-	0.22	0.55	7/11/03
25	1/4" Screen Auger Sample	1000	1240	1	161.64	0.00	-	0.23	0.56	7/11/03
26	1/4" Screen Auger Sample	980	1000	1	157.64	0.00	-	0.23	0.63	7/11/03
27	1/4" Screen Auger Sample	960	1000	1	157.79	0.00	-	0.24	0.53	7/11/03
28	1/4" Screen Auger Sample	940	1000	1	157.66	0.00	-	0.31	0.54	7/11/03
29	1/4" Screen Auger Sample	920	1000	1	157.43	0.00	-	0.30	0.51	7/11/03
30	1/4" Screen Auger Sample	1000	860	1	156.23	0.00	-	0.25	0.48	7/11-12/2003
31	1/4" Screen Auger Sample	900	1000	1	157.33	0.00	-	0.35	0.50	7/11/03
32	1/4" Screen Auger Sample	880	1000	1	156.20	0.00	-	0.17	0.54	7/11/03
33	1/4" Screen Auger Sample	860	1000	1	154.77	0.00	-	0.22	0.47	7/12/03
34	1/4" Screen Auger Sample	840	1000	1	154.56	0.00	-	0.24	0.52	7/12/03
35	1/4" Screen Auger Sample	820	1000	1	156.00	0.00	-	0.25	0.48	7/12/03
36	Soil Sample	880	1000	1	-	0.46	0.54	-	-	7/11/03
37	1/4" Screen Auger Sample	1000	1000	1	157.93	0.00	-	0.37	0.62	7/12/03
38	1/4" Screen Auger Sample	1020	1000	1	158.03	0.00	-	0.50	0.65	7/12/03
39	1/4" Screen Auger Sample	1040	1000	1	157.98	0.00	-	0.25	0.56	7/12/03
40	1/4" Screen Auger Sample	1060	1000	1	158.04	0.00	-	0.49	0.54	7/12/03
41	1/4" Screen Auger Sample	1080	1000	1	158.30	0.00	-	0.31	0.51	7/12/03

FS#	Collection	Grid N1 (m)	Grid E1 (m)	Level	Surface Elevation (m, amsl)	Depth below Surface 1(m)	Depth below Surface 2 (m)	Max. Depth of Cultural Material (m)	Depth of Auger Sample (m)	Date
42	1/4" Screen Auger Sample	1100	1000	1	158.39	0.00	-	0.25	0.59	7/12/03
43	Piece Plot Specimen-37-1	1000	1000	1	-	0.27	0.28	-	-	7/12/03
44	1/4" Screen Auger Sample	973.94	892.81	1	157.49	0.00	-	0.87	0.91	7/12/03
45	1/4" Screen Auger Sample	980	900	1	157.32	0.00	-	0.79	0.94	7/13/03
46	1/4" Screen Auger Sample	1020	900	1	156.73	0.00	-	0.23	0.52	7/13/03
47	1/4" Screen Auger Sample	1040	900	1	156.75	0.00	-	0.24	0.54	7/13/03
48	1/4" Screen Auger Sample	1060	900	1	157.02	0.00	-	0.34	0.57	7/13/03
49	1/4" Screen Auger Sample	1080	900	1	157.28	0.00	-	0.22	0.53	7/13/03
50	1/4" Screen Auger Sample	1100	900	1	157.38	0.00	-	0.27	0.52	7/13/03
51	1/4" Screen Auger Sample	1120	900	1	157.13	0.00	-	0.22	0.48	7/13/03
52	1/4" Screen Auger Sample	1080.21	845.54	1	157.06	0.00	-	0.23	0.49	7/13/03
53	1/4" Screen Auger Sample	1153.2	861.45	1	157.88	0.00	-	0.22	0.53	7/13/03
54	1/4" Screen Auger Sample	980	1040	1	158.02	0.00	-	0.23	0.57	7/13/03
55	1/4" Screen Auger Sample	980	1020	1	157.84	0.00	-	0.23	0.56	7/13/03
56	Diagnostic Specimen, Surface	926.74	952.67	0	-	0.00	-	-	-	7/11/03
57	Diagnostic Specimen, Surface	1066.29	824.66	0	-	0.00	-	-	-	7/13/03
58	Piece Plot Specimen-45-1	980	900	1	-	0.40	-	-	-	7/13/03
59	Piece Plot Specimen-45-2	980	900	1	-	0.66	-	-	-	7/13/03
60	Soil Sample	980	900	-	-	0.35	0.42	-	-	7/13/03
61	1/4" Screen Auger Sample	980	980	1	157.56	0.00	-	0.58	0.67	7/14/03
62	1/4" Screen Auger Sample	980	960	1	157.30	0.00	-	0.30	0.50	7/14/03
63	1/4" Screen Auger Sample	980	940	1	157.22	0.00	-	0.32	0.52	7/14/03
64	1/4" Screen Auger Sample	980	920	1	157.19	0.00	-	0.23	0.65	7/14/03
65	1/4" Screen Auger Sample	1120	1000	1	158.26	0.00	-	0.27	0.53	7/14/03
66	Diagnostic Specimen, Surface	995	872	0	-	0.00	-	-	-	7/14/03
67	Diagnostic Specimen, Surface	1003.85	872	0	-	0.00	-	-	-	7/14/03
68	Diagnostic Specimen, Surface	992	874	0	-	0.00	-	-	-	7/14/03
69	1/4" Screen Auger Sample	1120	820	1	156.73	0.00	-	0.23	0.55	10/23/03
70	1/4" Screen Auger Sample	1100	820	1	156.62	0.00	-	0.24	0.52	10/23/03
71	1/4" Screen Auger Sample	1080	820	1	156.11	0.00	-	0.19	0.38	10/23/03
72	1/4" Screen Auger Sample	1060	840	1	156.39	0.00	-	0.21	0.53	10/23/03
73	1/4" Screen Auger Sample	1080	840	1	157.01	0.00	-	0.33	0.54	10/23/03
74	1/4" Screen Auger Sample	1100	840	1	157.09	0.00	-	0.35	0.56	10/23/03
75	1/4" Screen Auger Sample	1120	840	1	157.26	0.00	-	0.23	0.54	10/23/03
76	1/4" Screen Auger Sample	1120	860	1	157.55	0.00	-	0.33	0.60	10/23/03
77	1/4" Screen Auger Sample	1100	860	1	157.25	0.00	-	0.41	0.62	10/23/03
78	1/4" Screen Auger Sample	1080	860	1	157.13	0.00	-	0.37	0.53	10/23/03
79	1/4" Screen Auger Sample	1060	860	1	156.52	0.00	-	0.28	0.60	10/24/03
80	1/4" Screen Auger Sample	1040	860	1	155.44	0.00	-	0.55	0.62	10/24/03
81	1/4" Screen Auger Sample	1020	860	1	154.87	0.00	-	0.16	0.50	10/24/03
82	1/4" Screen Auger Sample	1040	880	1	156.17	0.00	-	0.55	0.55	10/24/03
83	1/4" Screen Auger Sample	1060	880	1	156.69	0.00	-	0.23	0.55	10/24/03
84	1/4" Screen Auger Sample	1080	880	1	157.15	0.00	-	0.24	0.63	10/24/03
85	1/4" Screen Auger Sample	1100	880	1	157.35	0.00	-	0.22	0.54	10/25/03

FS#	Collection	Grid N1 (m)	Grid E1 (m)	Level	Surface Elevation (m, amsl)	Depth below Surface 1(m)	Depth below Surface 2 (m)	Max. Depth of Cultural Material (m)	Depth of Auger Sample (m)	Date
86	1/4" Screen Auger Sample	1120	880	1	157.58	0.00	-	0.19	0.57	10/25/03
87	1/4" Screen Auger Sample	1120	920	1	156.59	0.00	-	0.34	0.52	10/25/03
88	1/4" Screen Auger Sample	1100	920	1	157.15	0.00	-	0.27	0.59	10/25/03
89	1/4" Screen Auger Sample	1080	920	1	157.34	0.00	-	0.72	0.72	10/25/03
90	1/4" Screen Auger Sample	1060	920	1	157.28	0.00	-	0.25	0.66	10/25/03
91	1/4" Screen Auger Sample	1040	920	1	157.41	0.00	-	0.56	0.58	10/25/03
92	1/4" Screen Auger Sample	1060	940	1	157.51	0.00	-	0.62	0.62	10/25/03
93	1/4" Screen Auger Sample	1080	940	1	157.38	0.00	-	0.48	0.58	10/25/03
94	1/4" Screen Auger Sample	1100	940	1	157.09	0.00	-	0.28	0.58	10/25/03
95	1/4" Screen Auger Sample	1120	940	1	155.70	0.00	-	0.26	0.55	10/25/03
96	1/4" Screen Auger Sample	1120	960	1	156.20	0.00	-	0.26	0.72	10/25/03
97	1/4" Screen Auger Sample	1100	960	1	156.54	0.00	-	0.29	0.68	10/26/03
98	1/4" Screen Auger Sample	1080	960	1	157.66	0.00	-	0.40	0.55	10/26/03
99	1/4" Screen Auger Sample	1060	960	1	157.71	0.00	-	0.35	0.83	10/26/03
100	1/4" Screen Auger Sample	1160	840	1	157.40	0.00	-	0.23	0.55	10/26/03
101	1/4" Screen Auger Sample	1140	840	1	157.47	0.00	-	0.22	0.60	10/26/03
102	1/4" Screen Auger Sample	1140	860	1	157.82	0.00	-	0.20	0.55	10/26/03
103	1/4" Screen Auger Sample	1160	860	1	157.90	0.00	-	0.19	0.55	10/26/03
104	1/4" Screen Auger Sample	1180	860	1	157.80	0.00	-	0.20	0.50	10/26/03
105	1/4" Srceen Auger Sample	1200	860	1	157.30	0.00	-	0.19	0.52	10/26/03
106	1/4" Srceen Auger Sample	1160	880	1	157.32	0.00	-	0.21	0.56	10/26/03
107	1/4" Screen Auger Sample	1140	880	1	157.70	0.00	-	0.21	0.56	10/26/03
108	1/4" Screen Auger Sample	940	940	1	157.65	0.00	-	0.58	0.80	10/29/03
109	1/4" Screen Auger Sample	920	940	1	157.24	0.00	-	0.67	0.71	10/30/03
110	1/4" Screen Auger Sample	900	940	1	156.81	0.00	-	0.30	0.44	10/29/03
111	1/4" Screen Auger Sample	860	960	1	153.95	0.00	-	0.30	0.52	10/29/03
112	1/4" Screen Auger Sample	840	960	1	153.69	0.00	-	0.79	0.79	11/2/03
113	1/4" Screen Auger Sample	940	920	1	157.55	0.00	-	0.81	0.81	10/29/03
114	1/4" Screen Auger Sample	940	900	1	156.34	0.00	-	0.14	0.33	10/30/03
115	1/4" Screen Auger Sample	920	900	1	155.74	0.00	-	0.14	0.28	10/30/03
116	1/4" Screen Auger Sample	940	880	1	155.20	0.00	-	0.12	0.12	10/30/03
117	1/4" Screen Auger Sample	960	880	1	155.28	0.00	-	0.10	0.10	10/30/03
118	1/4" Screen Auger Sample	980	880	1	156.62	0.00	-	0.32	0.49	10/30/03
119	1/4" Screen Auger Sample	980	860	1	156.05	0.00	-	0.21	0.21	10/31/03
120	1/4" Screen Auger Sample	1020	880	1	156.00	0.00	-	0.21	0.48	10/30/03
121	Piece Plot Specimen-108-1	940	940	1	-	0.38	-	-	-	10/29/03
122	1/4" Screen Auger Sample	960	900	1	157.02	0.00	0.59	0.64	1.05	10/31/03
123	1/4" Screen Auger Sample	960	920	1	157.05	0.00	-	0.35	0.59	10/30/03
124	1/4" Screen Auger Sample	960	940	1	157.19	0.00	-	0.24	0.55	10/30/03
125	1/4" Screen Auger Sample	960	960	1	157.38	0.00	-	0.38	0.52	10/30/03
126	1/4" Screen Auger Sample	960	980	1	157.66	0.00	-	0.37	0.55	10/31/03
127	1/4" Screen Auger Sample	940	980	1	157.76	0.00	-	0.27	0.53	10/31/03
128	1/4" Screen Auger Sample	920	980	1	157.45	0.00	-	0.58	0.86	10/31/03
129	1/4" Screen Auger Sample	900	980	1	157.19	0.00	-	0.52	0.56	10/31/03

FS#	Collection	Grid N1 (m)	Grid E1 (m)	Level	Surface Elevation (m, amsl)	Depth below Surface 1(m)	Depth below Surface 2 (m)	Max. Depth of Cultural Material (m)	Depth of Auger Sample (m)	Date
130	1/4" Screen Auger Sample	880	980	1	155.95	0.00	-	0.22	0.48	11/1/03
131	1/4" Screen Auger Sample	860	980	1	154.57	0.00	-	0.32	0.42	11/1/03
132	1/4" Screen Auger Sample	840	980	1	154.29	0.00	-	0.47	0.49	11/1/03
133	1/4" Screen Auger Sample	880	960	1	156.02	0.00	-	0.23	0.51	11/1/03
134	1/4" Screen Auger Sample	900	960	1	157.12	0.00	-	0.22	0.52	10/31/03
135	1/4" Screen Auger Sample	920	960	1	157.60	0.00	-	0.29	0.58	11/1/03
136	1/4" Screen Auger Sample	940	960	1	157.67	0.00	-	0.44	0.54	11/1/03
137	1/4" Screen Auger Sample	920	920	1	157.19	0.00	-	0.48	0.58	11/1/03
138	1/4" Screen Auger Sample	1020	920	1	157.38	0.00	-	0.31	0.50	11/1/03
139	1/4" Screen Auger Sample	1040	980	1	157.80	0.00	-	0.59	0.90	11/1/03
140	1/4" Screen Auger Sample	1060	980	1	157.82	0.00	-	0.45	0.61	11/1/03
141	1/4" Screen Auger Sample	1080	980	1	157.86	0.00	-	0.35	0.48	11/1/03
142	1/4" Screen Auger Sample	1100	980	1	156.95	0.00	-	0.16	0.51	11/1/03
143	Piece Plot Specimen-126-1	960	980	1	-	0.22	-	-	-	10/31/03
144	Piece Plot Specimen-126-2	960	980	1	-	0.30	-	-	-	10/31/03
145	1/4" Screen Auger Sample	1080	1020	1	158.80	0.00	-	0.24	0.55	11/1/03
146	1/4" Screen Auger Sample	1060	1020	1	158.48	0.00	-	0.21	0.56	11/1/03
147	1/4" Screen Auger Sample	1040	1020	1	158.30	0.00	-	0.20	0.54	11/1/03
148	1/4" Screen Auger Sample	1020	1020	1	158.11	0.00	-	0.20	0.51	11/1/03
149	1/4" Screen Auger Sample	960	1020	1	157.92	0.00	-	0.38	0.58	11/1/03
150	1/4" Screen Auger Sample	940	1020	1	157.82	0.00	-	0.24	0.56	11/1/03
151	1/4" Screen Auger Sample	920	1020	1	157.83	0.00	-	0.35	0.56	11/1/03
152	1/4" Screen Auger Sample	900	1020	1	157.39	0.00	-	0.22	0.54	11/1/03
153	1/4" Screen Auger Sample	880	1020	1	156.25	0.00	-	0.38	0.62	11/1/03
154	1/4" Screen Auger Sample	860	1020	1	155.15	0.00	-	0.21	0.56	11/2/03
155	1/4" Screen Auger Sample	840	1020	1	154.89	0.00	-	0.62	0.64	11/2/03
156	1/4" Screen Auger Sample	840	1040	1	155.32	0.00	-	0.58	0.75	11/2/03
157	1/4" Screen Auger Sample	860	1040	1	155.62	0.00	-	0.23	0.52	11/2/03
158	1/4" Screen Auger Sample	880	1040	1	156.70	0.00	-	0.23	0.50	11/2/03
159	1/4" Screen Auger Sample	900	1040	1	157.49	0.00	-	0.24	0.47	11/2/03
160	1/4" Screen Auger Sample	920	1040	1	157.85	0.00	-	0.21	0.47	11/2/03
161	1/4" Screen Auger Sample	940	1040	1	157.87	0.00	-	0.56	0.57	11/2/03
162	1/4" Screen Auger Sample	960	1040	1	158.02	0.00	-	0.35	0.56	11/2/03
163	1/4" Screen Auger Sample	1020	1040	1	158.39	0.00	-	0.22	0.54	11/2/03
164	1/4" Screen Auger Sample	1040	1040	1	158.70	0.00	-	0.26	0.55	11/2/03
165	1/4" Screen Auger Sample	1060	1040	1	158.85	0.00	-	0.22	0.53	11/2/03
166	1/4" Screen Auger Sample	1080	1040	1	159.05	0.00	-	0.25	0.70	11/2/03
167	1/4" Screen Auger Sample	1080	1060	1	159.18	0.00	-	0.22	0.43	11/2/03
168	1/4" Screen Auger Sample	1060	1060	1	159.09	0.00	-	0.22	0.46	11/2/03
169	1/4" Screen Auger Sample	1040	1060	1	158.86	0.00	-	0.19	0.34	11/2/03
170	1/4" Screen Auger Sample	1020	1060	1	158.51	0.00	-	0.25	0.55	11/2/03
171	1/4" Screen Auger Sample	980	1060	1	158.09	0.00	-	0.20	0.42	11/2/03
172	1/4" Screen Auger Sample	960	1060	1	158.14	0.00	-	0.29	0.39	11/2/03
173	1/4" Screen Auger Sample	940	1060	1	157.90	0.00	-	0.44	0.49	11/2/03

FS#	Collection	Grid N1 (m)	Grid E1 (m)	Level	Surface Elevation (m, amsl)	Depth below Surface 1(m)	Depth below Surface 2 (m)	Max. Depth of Cultural Material (m)	Depth of Auger Sample (m)	Date
174	1/4" Screen Auger Sample	920	1060	1	157.92	0.00	-	0.22	0.48	11/2/03
175	1/4" Screen Auger Sample	900	1060	1	157.28	0.00	-	0.24	0.48	11/2/03
176	1/4" Screen Auger Sample	880	1060	1	156.56	0.00	-	0.19	0.48	11/2/03
177	1/4" Screen Auger Sample	860	1060	1	155.82	0.00	-	0.22	0.46	11/2/03
178	1/4" Screen Auger Sample	880	1080	1	156.58	0.00	-	0.20	0.47	11/2/03
179	1/4" Screen Auger Sample	900	1080	1	157.28	0.00	-	0.20	0.44	11/2/03
180	1/4" Screen Auger Sample	920	1080	1	157.77	0.00	-	0.20	0.44	11/2/03
181	1/4" Screen Auger Sample	940	1080	1	157.93	0.00	-	0.24	0.42	11/2/03
182	1/4" Screen Auger Sample	960	1080	1	158.09	0.00	-	0.27	0.47	11/2/03
183	1/4" Screen Auger Sample	980	1080	1	158.19	0.00	-	0.23	0.45	11/2/03
184	1/4" Screen Auger Sample	1020	1080	1	158.62	0.00	-	0.21	0.47	11/2/03
185	1/4" Screen Auger Sample	1040	1080	1	158.94	0.00	-	0.22	0.48	11/2/03
186	1/4" Screen Auger Sample	1060	1080	1	159.23	0.00	-	0.28	0.48	11/2/03
187	1/4" Screen Auger Sample	1080	1080	1	159.42	0.00	-	0.21	0.40	11/2/03
188	1/4" Screen Auger Sample	1080	1100	1	159.70	0.00	-	0.23	0.45	11/2/03
189	1/4" Screen Auger Sample	1060	1100	1	159.48	0.00	-	0.23	0.47	11/2/03
190	1/4" Screen Auger Sample	1040	1100	1	159.05	0.00	-	0.21	0.49	11/2/03
191	1/4" Screen Auger Sample	1020	1100	1	158.71	0.00	-	0.27	0.49	11/2/03
192	1/4" Screen Auger Sample	980	1100	1	158.25	0.00	-	0.21	0.40	11/2/03
193	1/4" Screen Auger Sample	960	1100	1	158.16	0.00	-	0.27	0.49	11/2/03
194	1/4" Screen Auger Sample	940	1100	1	157.89	0.00	-	0.42	0.55	11/2/03
195	1/4" Screen Auger Sample	920	1100	1	158.02	0.00	-	0.23	0.47	11/2/03
196	1/4" Screen Auger Sample	900	1100	1	157.87	0.00	-	0.27	0.43	11/2/03
197	1/4" Screen Auger Sample	880	1100	1	157.33	0.00	-	0.41	0.54	11/2/03
198	1/4" Screen Auger Sample	900	1120	1	158.12	0.00	-	0.27	0.43	11/5/03
199	1/4" Screen Auger Sample	920	1120	1	158.31	0.00	-	0.33	0.46	11/5/03
200	1/4" Screen Auger Sample	940	1120	1	158.23	0.00	-	0.27	0.43	11/5/03
201	1/4" Screen Auger Sample	960	1120	1	158.39	0.00	-	0.27	0.47	11/5/03
202	1/4" Screen Auger Sample	980	1120	1	158.55	0.00	-	0.32	0.50	11/5/03
203	1/4" Screen Auger Sample	1020	1120	1	158.92	0.00	-	0.18	0.42	11/5/03
204	1/4" Screen Auger Sample	1040	1120	1	159.30	0.00	-	0.26	0.48	11/5/03
205	1/4" Screen Auger Sample	1060	1120	1	159.73	0.00	-	0.21	0.47	11/5/03
206	1/4" Screen Auger Sample	1080	1120	1	159.51	0.00	-	0.22	0.48	11/5/03
207	1/4" Screen Auger Sample	1060	1140	1	159.58	0.00	-	0.19	0.43	11/5/03
208	1/4" Screen Auger Sample	1040	1140	1	159.57	0.00	-	0.24	0.39	11/5/03
209	1/4" Screen Auger Sample	1020	1140	1	159.32	0.00	-	0.20	0.52	11/5/03
210	1/4" Screen Auger Sample	980	1140	1	159.01	0.00	-	0.23	0.46	11/5/03
211	1/4" Screen Auger Sample	960	1140	1	158.73	0.00	-	0.23	0.54	11/6/03
212	1/4" Screen Auger Sample	940	1140	1	158.45	0.00	-	0.30	0.43	11/6/03
213	1/4" Screen Auger Sample	920	1140	1	158.35	0.00	-	0.20	0.49	11/6/03
214	1/4" Screen Auger Sample	920	1160	1	158.49	0.00	-	0.19	0.46	11/7/03
215	1/4" Screen Auger Sample	940	1160	1	158.71	0.00	-	0.16	0.44	11/7/03
216	1/4" Screen Auger Sample	960	1160	1	159.27	0.00	-	0.21	0.48	11/7/03
217	1/4" Screen Auger Sample	980	1160	1	159.79	0.00	-	0.24	0.51	11/7/03

FS#	Collection	Grid N1 (m)	Grid E1 (m)	Level	Surface Elevation (m, amsl)	Depth below Surface 1(m)	Depth below Surface 2 (m)	Max. Depth of Cultural Material (m)	Depth of Auger Sample (m)	Date
218	1/4" Screen Auger Sample	1020	1160	1	159.70	0.00	-	0.18	0.54	11/7/03
219	1/4" Screen Auger Sample	1040	1160	1	159.64	0.00	-	0.21	0.52	11/7/03
220	1/4" Screen Auger Sample	1060	1160	1	159.65	0.00	-	0.23	0.47	11/8/03
221	1/4" Screen Auger Sample	1060	1180	1	159.89	0.00	-	0.20	0.44	11/8/03
222	1/4" Screen Auger Sample	1040	1180	1	160.12	0.00	-	0.28	0.47	11/8/03
223	1/4" Screen Auger Sample	1020	1180	1	160.34	0.00	-	0.20	0.44	11/8/03
224	1/4" Screen Auger Sample	980	1180	1	160.47	0.00	-	0.20	0.41	11/8/03
225	1/4" Screen Auger Sample	960	1180	1	159.81	0.00	-	0.28	0.45	11/8/03
226	1/4" Screen Auger Sample	940	1180	1	159.36	0.00	-	0.28	0.54	11/8/03
227	1/4" Screen Auger Sample	960	1200	1	160.65	0.00	-	0.22	0.52	11/8/03
228	1/4" Screen Auger Sample	980	1200	1	161.30	0.00	-	0.28	0.46	11/8/03
229	1/4" Screen Auger Sample	1020	1200	1	160.99	0.00	-	0.23	0.47	11/8/03
230	1/4" Screen Auger Sample	1040	1200	1	160.92	0.00	-	0.28	0.49	11/8/03
231	1/4" Screen Auger Sample	1060	1200	1	160.40	0.00	-	0.25	0.47	11/8/03
232	1/4" Screen Auger Sample	1040	1220	1	161.52	0.00	-	0.27	0.51	11/8/03
233	1/4" Screen Auger Sample	1020	1220	1	162.02	0.00	-	0.26	0.50	11/8/03
234	1/4" Screen Auger Sample	980	1220	1	161.78	0.00	-	0.21	0.45	11/8/03
235	1/4" Screen Auger Sample	960	1220	1	161.05	0.00	-	0.19	0.40	11/8/03
236	1/4" Screen Auger Sample	980	1240	1	161.30	0.00	-	0.21	0.47	11/8/03
237	1/4" Screen Auger Sample	1100	800	1	155.37	0.00	-	0.25	0.35	11/8/03
238	1/4" Screen Auger Sample	1120	800	1	155.45	0.00	-	0.16	0.39	11/8/03
239	1/4" Screen Auger Sample	1140	820	1	156.58	0.00	-	0.20	0.41	11/8/03
240	1/4" Screen Auger Sample	1160	820	1	156.29	0.00	-	0.20	0.38	11/8/03
241	1/4" Screen Auger Sample	1180	820	1	155.82	0.00	-	0.18	0.40	11/8/03
242	1/4" Srceen Auger Sample	1180	840	1	156.96	0.00	-	0.21	0.40	11/8/03
243	1/4" Srceen Auger Sample	1140	900	1	156.35	0.00	-	0.21	0.39	11/8/03
244	1/4" Srceen Auger Sample	1140	920	1	155.49	0.00	-	0.32	0.43	11/8/03
245	1/4" Srceen Auger Sample	1140	940	1	155.45	0.00	-	0.27	0.37	11/8/03
246	1/4" Srceen Auger Sample	1140	960	1	156.07	0.00	-	0.21	0.46	11/8/03
247	1/4" Screen Auger Sample	1120	980	1	157.50	0.00	-	0.24	0.39	11/8/03
248	1/4" Screen Auger Sample	1140	980	1	157.11	0.00	-	0.26	0.41	11/8/03
249	1/4" Screen Auger Sample	1160	980	1	156.29	0.00	-	0.20	0.35	11/8/03
250	1/4" Screen Auger Sample	1160	1000	1	156.24	0.00	-	0.19	0.37	11/8/03
251	1/4" Screen Auger Sample	1140	1000	1	157.78	0.00	-	0.29	0.43	11/8/03
252	1/4" Screen Auger Sample	1140	1020	1	157.80	0.00	-	0.28	0.39	11/8/03
253	1/4" Screen Auger Sample	1120	1020	1	158.74	0.00	-	0.33	0.36	11/8/03
254	1/4" Screen Auger Sample	1100	1020	1	158.93	0.00	-	0.26	0.41	11/8/03
255	1/4" Screen Auger Sample	1100	1040	1	159.16	0.00	-	0.30	0.42	11/8/03
256	1/4" Srceen Auger Sample	1120	1040	1	158.73	0.00	-	0.25	0.45	11/8/03
257	1/4" Srceen Auger Sample	1140	1040	1	157.24	0.00	-	0.24	0.36	11/8/03
258	1/4" Screen Auger Sample	1120	1060	1	158.62	0.00	-	0.22	0.34	11/8/03
259	1/4" Screen Auger Sample	1100	1060	1	159.46	0.00	-	0.32	0.41	11/8/03
260	1/4" Screen Auger Sample	1100	1080	1	159.66	0.00	-	0.23	0.40	11/8/03
261	1/4" Screen Auger Sample	1120	1080	1	158.53	0.00	-	0.06	0.36	11/8/03

FS#	Collection	Grid N1 (m)	Grid E1 (m)	Level	Surface Elevation (m, amsl)	Depth below Surface 1(m)	Depth below Surface 2 (m)	Max. Depth of Cultural Material (m)	Depth of Auger Sample (m)	Date
262	1/4" Screen Auger Sample	1100	1100	1	159.46	0.00	-	0.21	0.37	11/8/03
263	1/4" Screen Auger Sample	1100	1120	1	158.59	0.00	-	0.16	0.50	11/8/03
264	Piece plot Specimen-89-1	1080	920	1	-	0.59	0.76	-	-	10/25/03
265	Flotation Sample	1080	920	1	-	0.59	0.76	-	-	10/25/03
266	Misc. Sample	1080	920	1	-	0.59	0.76	-	-	10/25/03
267	Soil Sample	1080	920	1	-	0.59	0.76	-	-	10/25/03
268	Special Collection	Unkn	Unkn	-	-	-	-	-	-	1/11/04
269	Special Collection	Unkn	Unkn	-	-	-	-	-	-	1/12/04
270	Special Collection	Unkn	Unkn	-	-	-	-	-	-	1/13/04
271	Special Collection	926.74	952.67	0	-	0.00	-	-	-	7/11/03

Appendix II

Soil Profile Data

Grid N (m)	Grid E (m)	Elevation (m)	FS#	Plow or disturbed zone, culturally sterile	Plow or disturbed zone with cultural materials	Midden or Cultural Stratum 1	Midden or Cultural Stratum 2	A/B OR M1?	Cultural Feature 1	Cultural Feature 2	Culturally Sterile B1 or B horizon	B2 horizon	Bedrock	N of Cultural Strata or Middens	Total Midden Thickness	N of Features in profile	Maximum depth of cultural material (m)	Maximum depth of excavation
797.83	973.1	157.	4	-	0.20	-	-	-	-	-	0.18	-	-	-	-	-	0.20	0.38
820	1000	156.	35	-	0.25	-	-	-	-	-	0.23	-	-	-	-	-	0.25	0.48
840	960	153.	112	-	0.79	-	-	-	-	-	-	-	-	-	-	-	0.79	0.79
840	980	154.	132	0.47	-	-	-	-	-	-	0.01	-	-	-	-	-	0.47	0.49
840	1000	154.	34	-	0.24	-	-	-	-	-	0.28	-	-	-	-	-	0.24	0.52
840	1020	154.	155	-	0.23	-	-	0.39	-	-	0.02	-	-	-	-	-	0.62	0.64
840	1040	155.	156	0.42	-	-	-	0.14	-	-	-	-	-	-	-	-	0.56	0.56
860	960	153.	111	-	0.18	-	-	-	-	-	0.12	0.22	0.01	-	-	-	0.30	0.52
860	980	154.	131	-	0.31	-	-	-	-	-	0.11	-	-	-	-	-	0.32	0.42
860	1000	154.	33	-	0.22	-	-	-	-	-	0.24	-	-	-	-	-	0.22	0.47
860	1020	155.	154	-	0.21	-	-	0.04	-	-	0.31	-	-	-	-	-	0.21	0.56
860	1040	155.	157	-	0.24	-	-	-	-	-	0.07	0.21	-	-	-	-	0.23	0.52
860	1060	155.	177	-	0.22	-	-	-	-	-	0.19	0.05	-	-	-	-	0.22	0.46
880	960	156.	133	-	0.25	-	-	0.08	-	-	0.06	0.12	-	-	-	-	0.23	0.51
880	980	155.	130	-	0.22	-	-	-	-	-	0.19	0.07	-	-	-	-	0.22	0.48
880	1000	156.	32	-	0.17	-	-	-	-	-	0.30	0.07	-	-	-	-	0.17	0.54
880	1020	156.	153	-	0.38	-	-	-	-	-	0.24	-	-	-	-	-	0.38	0.62
880	1040	156.	158	-	0.22	-	-	-	-	-	0.14	0.14	-	-	-	-	0.23	0.50
880	1060	156.	176	-	0.19	-	-	-	-	-	0.09	0.20	-	-	-	-	0.19	0.48
880	1080	156.	178	-	0.20	-	-	-	-	-	0.28	-	-	-	-	-	0.20	0.47
880	1100	157.	197	-	0.41	-	-	-	-	-	0.14	-	-	-	-	-	0.41	0.54
900	940	156.	110	-	0.30	-	-	-	-	-	0.13	-	-	-	-	-	0.30	0.44
900	960	157.	134	-	0.22	-	-	-	-	-	0.21	0.10	-	-	-	-	0.22	0.52
900	980	157.	129	-	0.24	-	-	-	0.28	-	-	0.04	-	-	-	1	0.52	0.56
900	1000	157.	31	-	0.24	0.11	-	-	-	-	0.15	-	-	1	0.11	-	0.35	0.50
900	1020	157.	152	-	0.23	-	-	-	-	-	0.32	-	-	-	-	-	0.22	0.55

Grid N (m)	Grid E (m)	Elevation (m)	FS#	Plow or disturbed zone, culturally sterile	Plow or disturbed zone with cultural materials	Midden or Cultural Stratum 1	Midden or Cultural Stratum 2	A/B OR M1?	Cultural Feature 1	Cultural Feature 2	Culturally Sterile B1 or B horizon	B2 horizon	Bedrock	N of Cultural Strata or Middens	Total Midden Thickness	N of Features in profile	Maximum depth of cultural material (m)	Maximum depth of excavation
900	1040	157.	159	-	0.20	-	-	-	-	-	0.10	0.16	-	-	-	-	0.24	0.47
900	1060	157.	175	-	0.24	-	-	-	-	-	0.14	0.10	-	-	-	-	0.24	0.48
900	1080	157.	179	-	0.20	-	-	-	-	-	0.13	0.11	-	-	-	-	0.20	0.44
900	1100	157.	196	0.22	-	-	-	-	-	-	0.07	0.14	-	-	-	-	0.27	0.43
900	1120	158.	198	-	0.27	-	-	-	-	-	0.10	0.06	-	-	-	-	0.27	0.43
920	900	155.	115	-	0.14	-	-	-	-	-	0.14	-	-	-	-	-	0.14	0.28
920	920	157.	137	-	0.20	0.28	-	-	0.10	-	-	-	-	2	0.28	2	0.48	0.58
920	940	157.	109	-	0.12	0.24	-	-	0.20	-	-	-	-	1	0.24	1	0.56	0.56
920	960	157.	135	-	0.19	0.09	-	-	-	-	0.12	0.18	-	1	0.09	-	0.29	0.58
920	980	157.	128	-	0.58	-	-	0.03	-	-	-	-	-	-	-	-	0.58	0.61
920	1000	157.	29	-	0.22	0.08	-	-	-	-	0.21	-	-	1	0.08	-	0.30	0.51
920	1020	157.	151	-	0.24	-	-	-	0.13	-	0.14	0.05	-	-	-	1	0.35	0.56
920	1040	157.	160	-	0.22	-	-	-	-	-	0.26	-	-	-	-	-	0.21	0.47
920	1060	157.	174	-	0.22	-	-	-	-	-	0.20	0.06	-	-	-	-	0.22	0.48
920	1080	157.	180	-	0.20	-	-	-	-	-	0.07	0.17	-	-	-	-	0.20	0.44
920	1100	158.	195	-	0.23	-	-	-	-	-	0.11	0.13	-	-	-	-	0.23	0.47
920	1120	158.	199	-	0.33	-	-	-	-	-	0.11	0.03	-	-	-	-	0.33	0.46
920	1140	158.	213	-	0.21	-	-	-	-	-	0.28	-	-	-	-	-	0.20	0.49
920	1160	158.	214	-	0.20	-	-	-	-	-	0.19	0.08	-	-	-	-	0.19	0.46
940	880	155.	116	0.12	-	-	-	-	-	-	-	-	-	-	-	-	0.12	0.12
940	900	156.	114	-	0.12	-	-	-	-	-	0.14	0.06	-	-	-	-	0.14	0.32
940	920	157.	113	-	0.24	-	-	-	-	-	0.56	-	-	-	-	-	0.81	0.81
940	940	157.	108	-	0.20	0.38	-	-	0.22	-	-	-	-	1	0.38	2	0.58	0.80
940	960	157.	136	-	0.21	0.13	-	-	0.22	-	-	-	-	-	0.13	2	0.44	0.56
940	980	157.	127	-	0.27	-	-	-	-	-	0.23	0.03	-	-	-	-	0.27	0.53
940	1000	157.	28	-	0.22	0.09	-	-	-	-	0.23	-	-	1	0.09	-	0.31	0.54
940	1020	157.	150	-	0.23	-	-	-	-	-	0.15	0.18	-	-	-	-	0.24	0.56
940	1040	157.	161	-	0.28	-	-	-	0.08	0.19	0.01	-	-	-	-	2	0.56	0.57
940	1060	157.	173	-	0.19	0.13	-	-	0.11	-	0.06	-	-	1	0.13	1	0.44	0.49

Grid N (m)	Grid E (m)	Elevation (m)	FS#	Plow or disturbed zone, culturally sterile	Plow or disturbed zone with cultural materials	Midden or Cultural Stratum 1	Midden or Cultural Stratum 2	A/B OR M1?	Cultural Feature 1	Cultural Feature 2	Culturally Sterile B1 or B horizon	B2 horizon	Bedrock	N of Cultural Strata or Middens	Total Midden Thickness	N of Features in profile	Maximum depth of cultural material (m)	Maximum depth of excavation
940	1080	157.	181	-	0.24	-	-	-	-	-	0.18	-	-	-	-	-	0.24	0.42
940	1100	157.	194	-	0.22	0.11	-	-	-	-	0.09	0.13	-	1	0.11	-	0.42	0.55
940	1120	158.	200	-	0.26	-	-	-	-	-	0.18	-	-	-	-	-	0.27	0.43
940	1140	158.	212	-	0.30	-	-	-	-	-	0.15	-	-	-	-	-	0.30	0.45
940	1160	158.	215	-	0.16	-	-	-	0.25	-	-	0.03	-	-	-	1	0.16	0.44
940	1180	159.	226	-	0.28	-	-	0.22	-	-	0.04	-	-	-	-	-	0.28	0.54
957.87	897.3	156.	2	-	0.47	-	-	-	-	-	-	-	-	-	-	-	0.47	0.47
960	880	155.	117	-	0.08	-	-	-	-	-	0.02	-	-	-	-	-	0.10	0.10
960	900	157.	122	-	0.11	0.15	0.32	-	-	-	-	-	-	3	0.47	-	0.58	0.58
960	920	157.	123	-	0.36	-	-	-	-	-	0.13	0.10	-	-	-	-	0.35	0.59
960	940	157.	124	-	0.24	-	-	-	-	-	0.29	0.02	-	-	-	-	0.24	0.55
960	960	157.	125	-	0.24	-	-	-	-	-	0.14	0.14	-	-	-	-	0.38	0.52
960	980	157.	126	-	0.20	-	-	-	0.18	0.13	-	0.06	-	-	-	2	0.37	0.56
960	1000	157.	27	-	0.25	-	-	-	-	-	0.13	0.15	-	-	-	-	0.24	0.53
960	1020	157.	149	-	0.33	-	-	-	-	-	0.05	0.20	-	-	-	-	0.38	0.58
960	1040	158.	162	-	0.35	-	-	-	-	-	0.21	-	-	-	-	-	0.35	0.56
960	1060	158.	172	-	0.31	-	-	-	-	-	0.08	-	-	-	-	-	0.29	0.39
960	1080	158.	182	-	0.27	-	-	-	-	-	0.11	0.09	-	-	-	-	0.27	0.47
960	1100	158.	193	-	0.27	-	-	-	-	-	0.06	0.16	-	-	-	-	0.27	0.49
960	1120	158.	201	-	0.26	-	-	-	-	-	0.19	0.03	-	-	-	-	0.27	0.47
960	1140	158.	211	-	0.23	-	-	-	-	-	0.22	0.09	-	-	-	-	0.23	0.54
960	1160	159.	216	-	0.21	-	-	-	-	-	0.27	-	-	-	-	-	0.21	0.48
960	1180	159.	225	-	0.28	-	-	-	-	-	0.17	-	-	-	-	-	0.28	0.45
960	1200	160.	227	-	0.22	-	-	-	-	-	0.20	0.12	-	-	-	-	0.22	0.54
960	1220	161.	235	0.20	-	-	-	-	-	-	0.20	-	-	-	-	-	0.19	0.40
973.94	892.8	157.	44	-	0.20	0.34	0.26	-	0.11	-	-	-	-	3	0.60	1	0.91	0.91
980	860	156.	119	-	0.19	-	-	-	-	-	0.02	-	-	-	-	-	0.21	0.21
980	880	156.	118	-	0.16	-	-	-	-	-	0.14	0.18	-	-	-	-	0.32	0.49
980	900	157.	45	-	0.24	0.23	0.31	-	-	-	0.16	-	-	2	0.54	1	0.79	0.94

Grid N (m)	Grid E (m)	Elevation (m)	FS#	Plow or disturbed zone, culturally sterile	Plow or disturbed zone with cultural materials	Midden or Cultural Stratum 1	Midden or Cultural Stratum 2	A/B OR M1?	Cultural Feature 1	Cultural Feature 2	Culturally Sterile B1 or B horizon	B2 horizon	Bedrock	N of Cultural Strata or Middens	Total Midden Thickness	N of Features in profile	Maximum depth of cultural material (m)	Maximum depth of excavation
980	920	157.	64	-	0.23	-	-	-	-	-	0.27	0.15	-	-	-	-	0.23	0.65
980	940	157.	63	-	0.33	-	-	-	-	-	0.18	-	-	-	-	-	0.32	0.52
980	960	157.	62	-	0.22	-	-	-	-	-	0.08	0.20	-	-	-	-	0.30	0.50
980	980	157.	61	-	0.24	-	-	-	0.34	0.05	0.04	-	-	1	-	2	0.58	0.67
980	1000	157.	26	-	0.23	-	-	-	-	-	0.17	0.23	-	-	-	-	0.23	0.63
980	1020	157.	55	-	0.23	-	-	-	-	-	0.17	0.16	-	-	-	-	0.23	0.56
980	1040	158.	54	-	0.23	-	-	-	-	-	0.18	0.15	-	-	-	-	0.23	0.57
980	1060	158.	171	-	0.20	-	-	-	-	-	0.20	0.02	-	-	-	-	0.20	0.42
980	1080	158.	183	-	0.23	-	-	-	-	-	0.22	-	-	-	-	-	0.23	0.45
980	1100	158.	192	-	0.21	-	-	-	-	-	0.18	0.01	-	-	-	-	0.21	0.40
980	1120	158.	202	-	0.32	-	-	-	-	-	0.11	0.07	-	-	-	-	0.32	0.50
980	1140	159.	210	-	0.24	-	-	-	-	-	0.22	-	-	-	-	-	0.23	0.46
980	1160	159.	217	-	0.24	-	-	-	-	-	0.17	0.10	-	-	-	-	0.24	0.51
980	1180	160.	224	-	0.20	-	-	-	-	-	0.21	-	-	-	-	-	0.20	0.41
980	1200	161.	228	-	0.28	-	-	0.14	-	-	0.04	-	-	-	-	-	0.28	0.46
980	1220	161.	234	-	0.21	-	-	0.21	-	-	0.03	-	-	-	-	-	0.21	0.45
980	1240	161.	236	-	0.21	-	-	0.22	-	-	0.05	-	-	-	-	-	0.21	0.47
1000	860	156.	30	-	0.25	-	-	-	-	-	0.22	-	0.01	-	-	-	0.25	0.48
1000	880	156.	5	-	0.20	-	-	-	0.23	-	0.25	-	-	-	-	1	0.40	0.68
1000	900	157.	6	-	0.22	0.23	-	-	-	-	0.05	-	-	1	0.23	-	0.45	0.50
1000	920	157.	7	-	0.29	0.07	-	-	0.21	-	-	-	-	1	0.07	1	0.56	0.57
1000	940	157.	8	-	0.30	0.09	-	-	-	-	0.04	-	-	1	0.09	-	0.39	0.43
1000	960	157.	9	-	0.26	0.14	-	-	0.14	-	-	-	-	1	0.14	-	0.40	0.54
1000	980	157.	10	-	0.30	-	-	-	0.50	-	0.19	-	-	-	-	1	0.80	0.99
1000	1000	157.	37	-	0.26	0.12	-	-	-	-	0.24	-	-	1	0.12	-	0.37	0.62
1000	1020	158.	13	-	0.23	-	-	0.14	-	-	0.26	0.09	-	-	-	-	0.23	0.72
1000	1040	158.	14	-	0.26	-	-	-	-	-	0.21	0.17	-	-	-	-	0.26	0.64
1000	1060	158.	15	-	0.28	-	-	-	-	-	0.16	0.23	-	-	-	-	0.26	0.67
1000	1080	158.	16	-	0.28	-	-	-	-	-	0.14	0.15	-	-	-	-	0.30	0.57

Grid N (m)	Grid E (m)	Elevation (m)	FS#	Plow or disturbed zone, culturally sterile	Plow or disturbed zone with cultural materials	Midden or Cultural Stratum 1	Midden or Cultural Stratum 2	A/B OR M1?	Cultural Feature 1	Cultural Feature 2	Culturally Sterile B1 or B horizon	B2 horizon	Bedrock	N of Cultural Strata or Middens	Total Midden Thickness	N of Features in profile	Maximum depth of cultural material (m)	Maximum depth of excavation
1000	1100	158.	17	-	0.24	-	-	-	-	-	0.16	0.17	-	-	-	-	0.24	0.57
1000	1120	158.	18	-	0.27	-	-	-	-	-	0.14	0.15	-	-	-	-	0.27	0.56
1000	1140	159.	20	-	0.24	-	-	-	-	-	0.15	0.16	-	-	-	-	0.24	0.55
1000	1160	159.	21	-	0.28	-	-	-	-	-	0.21	-	-	-	-	-	0.28	0.50
1000	1180	160.	22	-	0.27	-	-	-	-	-	0.11	0.08	-	-	-	-	0.38	0.46
1000	1200	161.	23	-	0.31	-	-	-	-	-	0.06	0.09	-	-	-	-	0.31	0.46
1000	1220	161.	24	-	0.22	-	-	-	-	-	0.18	0.15	-	-	-	-	0.22	0.55
1000	1240	161.	25	-	0.23	-	-	-	-	-	0.21	0.12	0.01	-	-	-	0.23	0.56
1020	860	154.	81	-	0.16	-	-	-	-	-	0.34	-	-	-	-	-	0.16	0.50
1020	880	156.	120	-	0.21	-	-	0.06	-	-	0.21	-	-	-	-	-	0.21	0.48
1020	900	156.	46	-	0.24	-	-	0.06	-	-	0.22	-	-	-	-	-	0.23	0.52
1020	920	157.	138	-	0.26	0.12	-	-	-	-	0.12	-	-	-	0.12	-	0.31	0.50
1020	1000	158.	38	-	0.40	-	-	0.10	-	-	0.16	-	-	-	-	-	0.50	0.65
1020	1020	158.	148	-	0.19	-	-	-	-	-	0.20	0.12	-	-	-	-	0.20	0.51
1020	1040	158.	163	-	0.22	-	-	-	-	-	0.11	0.21	-	-	-	-	0.22	0.54
1020	1060	158.	170	0.25	-	-	-	-	-	-	0.13	-	-	-	-	-	0.25	0.38
1020	1080	158.	184	-	0.21	-	-	-	-	-	0.26	-	-	-	-	-	0.21	0.47
1020	1100	158.	191	-	0.27	-	-	-	-	-	0.22	-	-	-	-	-	0.27	0.49
1020	1120	158.	203	-	0.18	-	-	-	-	-	0.24	-	-	-	-	-	0.18	0.42
1020	1140	159.	209	0.20	-	-	-	-	-	-	0.32	-	-	-	-	-	0.20	0.52
1020	1160	159.	218	-	0.18	-	-	-	-	-	0.31	0.05	-	-	-	-	0.18	0.54
1020	1180	160.	223	-	0.20	-	-	-	-	-	0.24	-	-	-	-	-	0.20	0.44
1020	1200	160.	229	-	0.23	-	-	-	-	-	0.16	0.08	-	-	-	-	0.23	0.47
1020	1220	162.	233	-	0.26	-	-	0.19	-	-	0.05	-	-	-	-	-	0.26	0.50
1040	860	155.	80	-	0.25	-	-	-	0.30	-	0.10	-	-	-	-	2	0.55	0.65
1040	880	156.	82	-	0.31	-	-	-	0.25	-	-	-	-	-	-	1	0.55	0.55
1040	900	156.	47	-	0.25	-	-	-	-	-	0.29	-	-	-	-	-	0.24	0.54
1040	920	157.	91	-	0.19	0.18	-	-	0.19	-	0.03	-	-	1	0.18	2	0.56	0.58
1040	980	157.	139	-	0.45	0.14	-	-	-	-	0.10	-	-	1	0.14	-	0.59	0.69

Grid N (m)	Grid E (m)	Elevation (m)	FS#	Plow or disturbed zone, culturally sterile	Plow or disturbed zone with cultural materials	Midden or Cultural Stratum 1	Midden or Cultural Stratum 2	A/B OR M1?	Cultural Feature 1	Cultural Feature 2	Culturally Sterile B1 or B horizon	B2 horizon	Bedrock	N of Cultural Strata or Middens	Total Midden Thickness	N of Features in profile	Maximum depth of cultural material (m)	Maximum depth of excavation
1040	1000	157.	39	-	0.25	-	-	-	-	-	0.10	0.21	-	-	-	-	0.25	0.56
1040	1020	158.	147	-	0.20	-	-	-	-	-	0.18	0.16	-	-	-	-	0.20	0.54
1040	1040	158.	164	-	0.26	-	-	-	-	-	0.22	0.07	-	-	-	-	0.26	0.55
1040	1060	158.	169	-	0.19	-	-	-	-	-	0.15	-	-	-	-	-	0.19	0.34
1040	1080	158.	185	-	0.22	-	-	-	-	-	0.18	0.08	-	-	-	-	0.22	0.48
1040	1100	159.	190	-	0.22	-	-	-	-	-	0.24	0.03	-	-	-	-	0.21	0.49
1040	1120	159.	204	0.26	-	-	-	-	-	-	0.22	-	-	-	-	-	0.26	0.48
1040	1140	159.	208	-	0.25	-	-	-	-	-	0.24	-	-	-	-	-	0.24	0.49
1040	1160	159.	219	-	0.31	-	-	-	-	-	0.22	-	-	-	-	-	0.21	0.52
1040	1180	160.	222	-	0.30	-	-	-	-	-	0.17	-	-	-	-	-	0.28	0.47
1040	1200	160.	230	-	0.28	-	-	0.24	-	-	0.07	-	-	-	-	-	0.28	0.59
1040	1220	161.	232	0.27	-	-	-	0.14	-	-	0.10	-	-	-	-	-	0.27	0.51
1060	840	156.	72	-	0.20	-	-	-	-	-	0.13	0.19	0.01	-	-	-	0.21	0.53
1060	860	156.	79	-	0.19	-	-	-	-	-	0.09	0.33	-	-	-	-	0.28	0.60
1060	880	156.	83	-	0.25	-	-	-	-	-	0.21	0.08	-	-	-	-	0.23	0.55
1060	900	157.	48	-	0.35	-	-	-	-	-	0.11	0.11	-	-	-	-	0.34	0.57
1060	920	157.	90	-	0.24	-	-	-	-	-	0.15	0.27	-	-	-	-	0.25	0.66
1060	940	157.	92	-	0.28	0.16	-	-	-	-	0.18	-	-	1	0.16	-	0.62	0.62
1060	960	157.	99	-	0.24	0.13	-	-	-	-	0.22	0.23	-	1	0.13	-	0.35	0.83
1060	980	157.	140	-	0.24	-	-	-	-	-	0.20	0.17	-	-	-	-	0.45	0.61
1060	1000	158.	40	-	0.28	-	-	-	-	-	0.21	0.05	-	-	-	-	0.49	0.54
1060	1020	158.	146	-	0.21	-	-	-	-	-	0.28	0.06	-	-	-	-	0.21	0.56
1060	1040	158.	165	-	0.22	-	-	-	-	-	0.23	0.08	-	-	-	-	0.22	0.53
1060	1060	159.	168	0.22	-	-	-	-	-	-	0.18	0.06	-	-	-	-	0.22	0.46
1060	1080	159.	186	-	0.28	-	-	-	-	-	0.20	-	-	-	-	-	0.28	0.48
1060	1100	159.	189	-	0.23	-	-	-	-	-	0.10	0.14	-	-	-	-	0.23	0.47
1060	1120	159.	205	-	0.22	-	-	-	-	-	0.16	0.08	-	-	-	-	0.21	0.47
1060	1140	159.	207	-	0.19	-	-	-	-	-	0.16	0.07	-	-	-	-	0.19	0.43
1060	1160	159.	220	0.23	-	-	-	-	0.19	-	0.01	0.04	-	-	-	1	0.23	0.47

Grid N (m)	Grid E (m)	Elevation (m)	FS#	Plow or disturbed zone, culturally sterile	Plow or disturbed zone with cultural materials	Midden or Cultural Stratum 1	Midden or Cultural Stratum 2	A/B OR M1?	Cultural Feature 1	Cultural Feature 2	Culturally Sterile B1 or B horizon	B2 horizon	Bedrock	N of Cultural Strata or Middens	Total Midden Thickness	N of Features in profile	Maximum depth of cultural material (m)	Maximum depth of excavation
1060	1180	159.	221	-	0.20	-	-	0.22	-	-	-	0.03	-	-	-	-	0.20	0.44
1060	1200	160.	231	-	0.25	-	-	0.17	-	-	0.05	-	-	-	-	-	0.25	0.47
1066.29	824.3	156.	3	-	-	-	-	-	-	-	0.42	0.18	0.10	-	-	-	0.10	0.60
1080	820	156.	71	-	0.19	-	-	-	-	-	0.16	0.02	0.01	-	-	-	0.19	0.38
1080	840	157.	73	-	0.19	-	-	-	-	-	0.13	0.22	0.01	-	-	-	0.33	0.54
1080	860	157.	78	-	0.26	0.11	-	-	-	-	0.15	-	-	1	0.11	-	0.37	0.53
1080	880	157.	84	-	0.24	-	-	-	-	-	0.11	0.27	-	-	-	-	0.24	0.63
1080	900	157.	49	-	0.22	-	-	-	-	-	0.31	-	-	-	-	-	0.22	0.53
1080	920	157.	89	-	0.28	0.23	-	-	0.27	-	-	-	-	-	0.23	1	0.76	0.78
1080	940	157.	93	-	0.25	-	-	-	0.24	-	0.09	-	-	-	-	1	0.48	0.58
1080	960	157.	98	-	0.22	0.17	0.16	-	-	-	-	-	-	1	0.33	-	0.40	0.55
1080	980	157.	141	-	0.36	-	-	-	-	-	0.11	0.01	-	-	-	-	0.35	0.48
1080	1000	158.	41	0.31	-	-	-	-	-	-	0.20	-	-	-	-	-	0.31	0.51
1080	1020	158.	145	-	0.25	-	-	0.09	-	-	0.10	0.11	-	-	-	-	0.24	0.55
1080	1040	159.	166	-	0.25	-	-	-	-	-	0.24	0.02	-	-	-	-	0.25	0.51
1080	1060	159.	167	0.22	-	-	-	-	-	-	0.19	0.02	-	-	-	-	0.22	0.43
1080	1080	159.	187	-	0.21	-	-	-	-	-	0.13	0.06	-	-	-	-	0.21	0.40
1080	1100	159.	188	0.23	-	-	-	-	-	-	0.17	0.05	-	-	-	-	0.23	0.45
1080	1120	159.	206	-	0.22	-	-	-	-	-	0.23	0.03	-	-	-	-	0.22	0.48
1080.21	845.5	157.	52	-	0.23	-	-	-	-	-	0.09	0.17	-	-	-	-	0.23	0.49
1100	800	155.	237	-	0.25	-	-	-	-	-	0.10	-	-	-	-	-	0.25	0.35
1100	820	156.	70	-	0.23	-	-	-	-	-	0.30	-	-	-	-	-	0.24	0.52
1100	840	157.	74	-	0.23	0.11	-	-	0.22	-	-	-	-	1	0.11	2	0.35	0.56
1100	860	157.	77	-	0.25	-	-	0.17	-	-	0.20	-	-	-	-	-	0.41	0.62
1100	880	157.	85	-	0.23	-	-	-	-	-	0.31	-	-	-	-	-	0.22	0.54
1100	900	157.	50	-	0.27	-	-	-	-	-	0.25	-	-	-	-	-	0.27	0.52
1100	920	157.	88	-	0.30	-	-	-	-	-	0.08	0.20	-	-	-	-	0.27	0.59
1100	940	157.	94	-	0.28	-	-	0.12	-	-	0.13	0.04	-	-	-	-	0.28	0.58
1100	960	156.	97	-	0.29	-	-	-	-	-	0.18	0.21	-	-	-	-	0.29	0.68

Grid N (m)	Grid E (m)	Elevation (m)	FS#	Plow or disturbed zone, culturally sterile	Plow or disturbed zone with cultural materials	Midden or Cultural Stratum 1	Midden or Cultural Stratum 2	A/B OR M1?	Cultural Feature 1	Cultural Feature 2	Culturally Sterile B1 or B horizon	B2 horizon	Bedrock	N of Cultural Strata or Middens	Total Midden Thickness	N of Features in profile	Maximum depth of cultural material (m)	Maximum depth of excavation
1100	980	156.	142	-	0.16	-	-	-	-	-	0.19	0.16	-	-	-	-	0.16	0.51
1100	1000	158.	42	-	0.25	-	-	-	-	-	0.34	-	-	-	-	-	0.25	0.59
1100	1020	158.	254	-	0.26	-	-	0.15	-	-	-	-	-	-	-	-	0.26	0.41
1100	1040	159.	255	-	0.30	-	-	0.12	-	-	-	-	-	-	-	-	0.30	0.42
1100	1060	159.	259	0.23	-	-	-	0.08	-	-	0.09	-	-	-	-	-	0.32	0.41
1100	1080	159.	260	-	0.23	-	-	0.17	-	-	-	-	-	-	-	-	0.23	0.40
1100	1100	159.	262	-	0.21	-	-	0.16	-	-	-	-	-	-	-	-	0.21	0.37
1100	1120	158.	263	-	0.16	-	-	0.13	-	-	0.13	0.08	-	-	-	-	0.16	0.50
1120	800	155.	238	-	0.16	-	-	0.18	-	-	0.05	-	-	-	-	-	0.16	0.39
1120	820	156.	69	-	0.25	-	-	-	-	-	0.29	-	-	-	-	-	0.23	0.55
1120	840	157.	75	-	0.23	-	-	-	-	-	0.31	-	-	-	-	-	0.23	0.54
1120	860	157.	76	-	0.21	-	-	-	-	-	0.22	0.21	-	-	-	-	0.33	0.64
1120	880	157.	86	-	0.20	-	-	-	-	-	0.15	0.22	-	-	-	-	0.19	0.57
1120	900	157.	51	0.23	-	-	-	-	-	-	0.11	0.14	-	-	-	-	0.22	0.48
1120	920	156.	87	-	0.21	-	-	-	-	-	0.12	0.19	-	-	-	-	0.34	0.52
1120	940	155.	95	-	0.25	-	-	-	-	-	0.12	0.17	-	-	-	-	0.26	0.55
1120	960	156.	96	-	0.26	-	-	-	-	-	0.21	0.25	-	-	-	-	0.26	0.72
1120	980	157.	247	-	0.24	-	-	0.15	-	-	-	-	-	-	-	-	0.24	0.39
1120	1000	158.	65	-	0.27	-	-	-	-	-	0.23	0.04	-	-	-	-	0.27	0.53
1120	1020	158.	253	0.33	-	-	-	-	-	-	0.04	-	-	-	-	-	0.33	0.36
1120	1040	158.	256	0.25	-	-	-	-	-	-	0.10	0.10	-	-	-	-	0.25	0.45
1120	1060	158.	258	-	0.23	-	-	-	-	-	0.11	-	-	-	-	-	0.22	0.34
1120	1080	158. 53	261	0.06	-	-	-	-	-	-	0.16	0.14	-	-	-	-	0.06	0.36
1140	820	156.	239	-	0.21	-	-	0.15	-	-	0.05	-	-	-	-	-	0.20	0.41
1140	840	157.	101	-	0.21	-	-	-	-	-	0.19	0.20	-	-	-	-	0.22	0.60
1140	860	157.	102	-	0.20	-	-	-	-	-	0.12	0.22	-	-	-	-	0.20	0.55
1140	880	157.	107	0.21	-	-	-	-	-	-	0.07	0.28	-	-	-	-	0.21	0.56
1140	900	156.	243	0.21	-	-	-	0.14	-	-	0.04	-	-	-	-	-	0.21	0.39
1140	920	155.	244	-	0.32	-	-	-	-	-	0.11	-	-	-	-	-	0.32	0.43

Grid N (m)	Grid E (m)	Elevation (m)	FS#	Plow or disturbed zone, culturally sterile	Plow or disturbed zone with cultural materials	Midden or Cultural Stratum 1	Midden or Cultural Stratum 2	A/B OR M1?	Cultural Feature 1	Cultural Feature 2	Culturally Sterile B1 or B horizon	B2 horizon	Bedrock	N of Cultural Strata or Middens	Total Midden Thickness	N of Features in profile	Maximum depth of cultural material (m)	Maximum depth of excavation
1140	940	155.	245	-	0.27	-	-	-	-	-	0.10	-	-	-	-	-	0.27	0.37
1140	960	156.	246	-	0.21	-	-	-	-	-	0.26	-	-	-	-	-	0.21	0.46
1140	980	157.	248	0.26	-	-	-	0.15	-	-	-	-	-	-	-	-	0.26	0.41
1140	1000	157.	251	-	0.29	-	-	0.14	-	-	-	-	-	-	-	-	0.29	0.43
1140	1020	157.	252	-	0.28	-	-	0.11	-	-	-	-	-	-	-	-	0.28	0.39
1140	1040	157.	257	-	0.24	-	-	0.12	-	-	-	-	-	-	-	-	0.24	0.36
1153.2	861.4	157.	53	0.22	-	-	-	-	-	-	0.23	0.08	-	-	-	-	0.22	0.53
1160	820	156.	240	-	0.20	-	-	-	-	-	0.18	-	-	-	-	-	0.20	0.38
1160	840	157.	100	-	0.23	-	-	-	-	-	0.07	0.25	-	-	-	-	0.23	0.55
1160	860	157.	103	-	0.20	-	-	-	-	-	0.08	0.27	-	-	-	-	0.19	0.55
1160	880	157.	106	-	0.22	-	-	-	-	-	0.07	0.27	-	-	-	-	0.21	0.56
1160	980	156.	249	-	0.20	-	-	-	-	-	0.16	-	-	-	-	-	0.20	0.35
1160	1000	156.	250	0.19	-	-	-	-	-	-	0.18	-	-	-	-	-	0.19	0.37
1180	820	155.	241	0.18	-	-	-	0.18	-	-	0.04	-	-	-	-	-	0.18	0.40
1180	840	156.	242	-	0.21	-	-	-	-	-	0.16	0.03	-	-	-	-	0.21	0.40
1180	860	157.	104	-	0.21	-	-	-	-	-	0.16	0.13	-	-	-	-	0.20	0.50
1200	860	157.	105	-	0.20	-	-	-	-	-	0.16	0.16	-	-	-	-	0.19	0.52

Appendix III

Auger/Shovel–Probe Sample Record

Site: Prather (12 - CL - 4) FS#_____

Primary excavation method (circle): 12" auger ____ size auger Grid North_____

shovel postholedigger other_____ Grid East_____

Surface Elevation _____ Level _____ Screened sample (depths below surface):

Horizontal Size: _____ _____ top

Date sample begun _____ _____ base of cultural zone

Sample processed using (circle): ¼" screen flotation trowel _____ base of excavation

Observations by Excavators and Screeners below. Soil profile map and notes recorded on reverse.

	Excavators	Screeners	List Comments and your initials.
Name(s)			
Date completed			
Cultural Matierals & Residues Observed in Soil (including those that pass through the screen): relative amounts Key: absent = –; light = L; medium = M; heavy = H			(e.g., seen but not recovered in screen; wrapped in foil; very well preserved; poorly preserved; red painted pottery, wash carefully; rock includes large amount of coal; historics = glass, metal, ceramics; shell temper only; some sherds have grit temp, etc.)
historic artifacts			
ash			
bone			
charcoal flecks			
charcoal pieces >5 mm			
chert flakes			
chert tools			
daub/fired clay flecks			
daub pieces >5 mm			
oxidized (reddened) soil			
pottery sherds			
rock (all types)			
shell (mussel)			
other, list			

Profile documented by:_____

Date: _____ Surface Elevation:_____

Mapped Profile of Side (circle): N E S W

Key for point plotting (adapt as needed):

a = ash b = bone
x = charcoal fleck X = charcoal $\geq$ 5 mm
d = daub/fired clay fleck D = daub piece $\geq$ 5 mm
c = chert flake L = lithic tool (describe)
p = pottery (temper: -sh (shell); -ls (limestone); -gt (grit); -gg (grog)
r = rock (type:- cl (coal); -hs (hardstone); - ls (limestone); -sl (shale); -ss (sandstone)
s = shell (i.e. mussel, other)

Grid North: _____

Grid East: _____

Horizontal measurement (circle): straight curved

Check list: ✔ bar scale (prefer 10 cm: 1 inch; use additional graph paper if needed); ✔ direction arrow; ✔descriptions for numbered & labeled soils 1, 2, 3, ... (list Munsell color, texture, size-%-color of mottles, boundaries, disturbances including plowing, & differences in cultural inclusions).

Distinguish anthrosols & culturally sterile subsoil. Note: manganese is natural in the lower soils. The base of the cultural zone is defined by presence of cultural materials (including charcoal or daub flecks) and soil distinctions. Note the average depth of the cultural zone on profile and front side of form.

Appendix IV. Accidental Discovery of Human Remains at the Prather Site (12-CL-4), Clark County, Indiana

During the course of auger sampling at the Prather site, the drilling of one sample (N1040, E940) revealed human bones. This discovery was reported promptly in accordance with IC 14-21-1 and 312 IAC 22 to the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology and to Mr. Max Spainhour, District 8 Conservation Officer, as well as to the landowner, Dr. T. Harold Martin.

After consultation, the auger hole was cleaned by careful hand excavation to remove soils and materials displaced during drilling. The loose soil was screened to recover displaced elements and other materials. Then the sides and base of the hole were cleaned of loose soil to expose *in situ* skeletal material. Among the displaced elements are portions of a left femur shaft, a left radius shaft, and a tibia fragment of unknown side, which were identified by Dr. Della C. Cook, Department of Anthropology, Indiana University. Exposed *in situ* elements were not removed and tentatively identified as portions of two femurs (two proximal ends and one shaft), two tibia (?) shafts, an unidentified long bone that may be an arm bone, and a portion of a pelvis (?). Neither tibia fragment showed a nearby element that might have been a fibula, which suggests that the tibia were not associated with a primary interment. We found no indications of ribs, vertebrae, or hand and foot elements. The orientations of the exposed portions of the long bones are approximately parallel to each other and aligned with grid south-southeast/north-northwest.

The minimum depth of the observed elements was 0.38 m, and was well below the plow-zone boundary at 0.24-0.26 m. The maximum depth of the observed elements was 0.48 m. At a depth of 0.48-0.49 m, the dark soils exhibited a sharp but undulating boundary with the underlying B Horizon soils. This boundary indicates the elements were placed in a pit or excavated hole of some type, either a grave or another kind of depression. No associated grave goods were found. The matrix of the burial included dark soil and artifacts typical of the adjacent midden.

There was little question that the remains are prehistoric, given the historic reports of burials and the excavations by looters and amateurs. However, the mode of burial is unclear. Given the absence of fibulae and elements of the torso, it is possible that the burial is a primary inhumation placed in a flexed position, with the hands and feet, head, and torso positioned beyond the limits of the auger hole. Alternatively, the burial may have been a secondary interment of primarily long bones that were deposited either in a Mississippian grave pit or pit feature or in a more recent discard pit by looters or amateurs who did not want to collect skeletal material.

The known location of the still *in situ* elements of this burial presents an excellent opportunity to learn whether geophysical surveys at Prather can detect burials at a depth of 0.35-0.50 m. Identifying a geophysical "signature" for burial features would be a valuable contribution for further research at the site, so that archaeological excavations can proceed while avoiding impacts to burials.