Climbing the Social Ladder: Archaeology at the Enos Hardin Farmstead, Owen County, 1825-1870

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Chapter One

INTRODUCTION TO THE PROJECT AREA AND ENVIRONMENT

Introduction

Between September 13 and October 11, 1994 Wilbur Smith Associates (WSA) completed Phase II archaeological testing of sites 15On55 and 15On57. Between December 2, 1996 and February 14, 1997 WSA completed the Phase III archaeological mitigation of these sites. These projects were completed for the Kentucky Transportation Cabinet (KTC) as part of the proposed U.S. 127 realignment in Owen County, Kentucky. Figure 1.1 shows the project location in Kentucky and the location of sites 15On55 and 15On57 within the project corridor. These two sites comprise a single nineteenth century farmstead founded in 1825 by Enos Hardin and sold after his death in 1863. During the period that Enos Hardin occupied the farmstead, he increased the value of the land, his own wealth and the social standing of his family. How he did this, and what he sought to accomplish with his wealth is the subject of this study. Analysis of key artifact types such as ceramics, used here as indices of wealth, and social etiquette, are coupled with the study of documentary records located in county archives, historic commentaries, and other archaeological studies to establish a picture of Hardin, his way of life, and his involvement in slavery, capitalism and the growth of middle class life in the southern states.

Fieldwork for the Phase II investigation was directed by James P. Fenton and fieldwork for the Phase III investigation was supervised by Thomas A. Stetar. Dr. W. Stephen McBride acted as Principal Investigator for the Phase III investigation. Laboratory analyses of the recovered materials was carried out by staff members of Wilbur Smith Associates during May and June of 1998 under the supervision of Susan C. Andrews. Botanical analysis for both Phase II and III was conducted by Dr. Jack Rossen (Appendix A). A geoarchaeologist, Sarah Sherwood, was consulted during the Phase III (Appendix B). Specialized faunal analysis was conducted by Sean P. Coughlin for the Phase II assemblage and Judith A. Patterson for the Phase III (Appendix C). All artifacts or cultural materials collected, as well as field notes, photographs, and other data from the project, have been curated at the Museum of Anthropology, University of Kentucky, Lexington.

Phase II and III archaeological investigations were undertaken in agreement with provisions of the National Historic Preservation Act of 1966 (P.L. 89-665; 80 Stat. 915, 16U.S.C. 470 et seq.), the National Environmental Policy Act of 1969 (P.L. 910190; 83 Stat. 852, 42 U.S.C. 4321 et seq.), Procedures of the Advisory Council on Historic Preservation (36CRF800), and Executive Order 11593, Protection and Enhancement of the Cultural Environment (16 U.S.C. 470; Supp. 1, 1971).

Previous Investigations

The Hardin farmstead was originally discovered by Dr. Jack Schock in 1989 during a Phase I survey conducted as part of the U.S. 127 realignment in Franklin and Owen Counties (Schock 1989).

Figure 1.1 Location of Site 15On55/57, the Hardin Farmstead

Schock assigned two site numbers as he had two discrete concentrations of artifacts and did not conduct the extensive archival research that WSA did to link the two sites into a single farmstead. In 1994, WSA archaeologists conducted Phase II testing of seven sites in the proposed corridor. As a result, sites 15On55 and 15On57 were found to contain potentially significant historic components and one site (15On55) to have a potentially significant Early/Middle Woodland prehistoric component. Both sites were also found to be part of the same farmstead with the archaeological remains of a residence (15On55) and barn (15On57). From this point on, both sites were treated as one site, the Hardin farmstead, and found eligible for recommendation to the National Register of Historic Places (NRHP) by the Kentucky Transportation Cabinet (KTC) and the Kentucky Heritage Council (KHC) (Appendix F).

Phase III investigations were initiated when a determination of no adverse effect through archaeological mitigation was made. A proposal by WSA to conduct Phase III archaeological investigations at the site was submitted by W. Stephen McBride to the KTC and the KHC in 1995. This data recovery plan was used during the Phase III investigation. Kurt Fiegel (KTC) and David Pollack (KHC) were consulted before any changes in the methods were made. This report contains the findings of the Phase II and Phase III investigations of the Hardin farmstead.

Location

The Hardin farmstead is located within the Outer Blue Grass cultural landscape of north central Kentucky. Figure 1.2 is a map of the site and Figures 1.3 and 1.4 are photographs. More specifically, the site is within a plowed alluvial floodplain between existing U.S. 127 and Cedar Creek, south of Monterey in Owen County. The site is located in UTM Zone 16, between N 1234567 and E 123456, on the Monterey Quadrangle, (USGS 1953) at an elevation of 359 ft amsl. Site soils consist of the Woolper silt loams Series (Wesienberger and Richardson 1976). An unimproved farm road, a stone fence, and an intermittent run, all three of which parallel one another in an east - west orientation, separate the two main areas of the site. These two main areas of the site are divided into a domestic area (15On55) and an agricultural/ livestock area (15On57). The domestic area is located south of the stone fence and contains the archaeological remains of the Hardin houselot and ancillary structures.

To the north of the fence is an outer farmlot containing the footprints of a barn. The shallow intermittent run that in part separates the two areas of the site, originates west of U.S. 127 and continues eastward to Cedar Creek. The farmstead dates from the 1820s to the 1870s with some prehistoric material and some slight mid to late twentieth century roadside debris. No standing structures are present. Phase III excavation indicated that only a single prehistoric feature was within the project right-of-way, which was excavated in Phase II (see Appendix D, Prehistoric Artifacts). Few prehistoric artifacts and no other prehistoric features were found inside the right-of-way during the Phase III investigation. Consequently, it is now believed that the prehistoric component is outside the project right-of-way and is unaffected by construction.

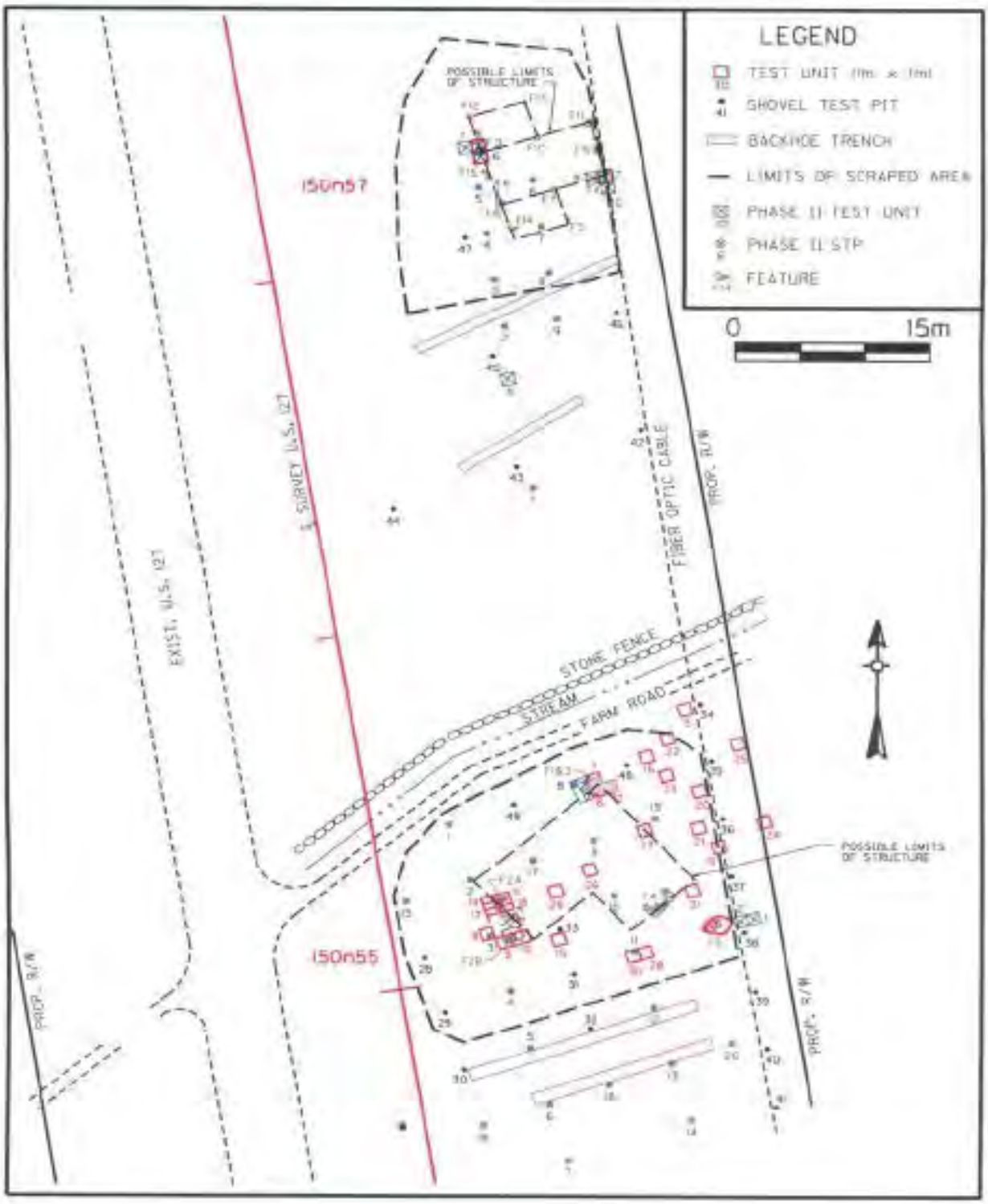

Figure 1.2 Map of the Hardin Farmstead

Figure 1.3 Photograph of Site 15On55, the Domestic Area

Figure 1.4 Photograph of Site 15On57, the Barn

Environmental Setting

Owen County is bounded on the north by Carroll, Gallatin, and Grant Counties, to the east by Grant and Scott Counties, to the south by Scott and Franklin counties, and to the west by Henry County. It is drained by the Kentucky River and Eagle Creek and major tributaries, which include the Big and Little Twin, Cedar, Big Indian, Caney, Clay Lick, and Severn Creeks. Cedar Creek drains directly into the Kentucky River.

The county is underlain by mostly Upper and some Middle Ordovician limestone and shale formations. The latter is more specific to the valley of the Kentucky River as far north as the mouth of Drennon Creek and again in restricted areas of the the upper waters of Eagle Creek. Recent Pleistocene alluvial and glacial sediments make up the floodplain of the Kentucky River and lower Eagle Creek adjacent to the Carroll and Gallatin limestones. Principle mineral resource of the county is limestone which is produced for highway and railroad bed construction. Other minerals include barite, galena, sphalerite, and calcite. Mudstone is found on a ridge between Cedar and Eagle Creeks. County soil associations consist of Eden, Otwell-Nolin-Markland, and Lowell-Nicholson. These limestone soils with a clay base are particularly adapted for grazing purposes. Local soils for 15On55/57 consist of the Woolper silty clay loam Series. Woolper Series soils consist of well-drained, nearly level to strongly sloping soils or foot slopes of alluvial fans at the base of steep hills and are formed in colluvium or local alluvium that washed mostly from Fairmount soils. The Woolper silty clay loam with 0 to 2% slopes are located within the project area. These soils are considerably rich for cultivation and are located in long, narrow areas of low-lying stream terraces and alluvial fans (Weisenberger and Richardson 1976).

Owen County lies within the Western Mesophytic Forest Region (Braun 1950). Native forests consisted of a mixed hardwood forest with several species of oak, yellow poplar, white ash, black walnut, and other deciduous trees. Today honey locust, black locust, osage-orange, red cedar, hawthorn, hickory, elm, sassafras, persimmon, black cherry, and buckbrush are in upland areas while ash and sycamore are in lowland areas. What forests remain today are situated in isolated spots and bluffs along the main streams. Most of the land was cleared for farming corn and for sheep grazing (Weisenberger and Richardson 1976).

Fruitbearing trees include the sugar tree, walnut, pawpaw, hickory, and mulberry. Wild edible berries include the strawberry, blackberry, dewberry, gooseberry, and the raspberry. Wild flowers include bloodroot, buttercups, Dutchmen breeches, bluebells, columbine, lady slipper, goldenrod, pinks, wild roses, violets, asters, daisy, blue phlox, and morning glory.

Fauna no longer found in the county today includes: buffalo, bear, wolf, panther, elk, and wild cat. White-tailed deer, opossum, rabbit, beaver, muskrat, rat, chipmunk, squirrel, mole, raccoon, skunk, mink, weasel, and fox are still present. Birds include killdeer, quail, grouse, buzzard, hawk, owl, woodpecker, yellow hammer, whip-poor-will, chimney swift, humming bird, blue jay, crow, blackbird, field lark, oriole, English sparrow, redbird, swallow, mockingbird,

chickadees, wild turkey, and the blue bird. Fish found in creeks include sunfish, catfish, suckers, perch, and bass; while fish found in rivers include catfish, gar, carp, newlite, and buffalo.

Research Issues and Goals at the Hardin Farmstead

As a result of these investigations, we identified archaeological deposits associated with a historic farmstead occupying 4.4 hectares within the project right-of-way. Excavation, artifact analysis and archival research identified this site as a farmstead built by Enos Hardin around 1825 to about 1863 when it was sold among his heirs. We collected numerous artifacts, uncovered several features including cellars and two chimney bases and identified the inner domestic yard area and the outer yard barn area. These cultural materials form the substance of our analysis to show how a nineteenth century slave owner created wealth, social prestige and power within the rural community of which he was a part. Based on our analysis, the farmstead contained a dwelling, with associated outbuildings, only one of which left an archaeological footprint inside the project right-of-way, the large barn documented at 15On57.

Chapter Two presents research issues relevant to the study and interpretation of this archaeological site. Several research questions are raised. These research questions include: the organization and layout of a farmstead of the nineteenth century; production for market using slave labor; patterns of wealth consumption and the social dynamics of status building and consolidation in the ante-bellum years in Central Kentucky. Individual chapters are organized around these research themes.

Chapter Three and Four present the data recovered from excavation and archival research. These materials are described in full and establish some of the more interesting research questions that are more fully developed in subsequent chapters. Detailed listing of artifacts recovered is presented in the Appendix - Materials Recovered.

Chapter Five addresses the organization and layout of the farmstead using the archaeological findings, coupled with documentary evidence and historic commentaries. This part of the analysis contributes to the establishment of methodologies that are useful for identifying building locations based on surrounding midden and features. Maps showing the relative distributions of key artifact types are used to assess how the farmstead might have been laid out, and what functions and activities might have been associated with buildings that are no longer extant. Although the study of farmstead layout is an important one in historic archaeology, the present analysis should be viewed as tentative, as these are limited by several factors. One factor is that the entire farmstead layout was not available for study, as the right of way limited access to some areas. It was considered very likely that additional buildings were located outside the right-of-way, as concentrations of midden occurred east towards Cedar Creek. Those portions outside the right-of-way could not be studied to gather further information. A second limitation on farmstead layout is that most models tend towards ideal types, either representing large plantations of the Deep South, or small owner-operated or tenant farmsteads associated with the mountainous areas of the Upland South. Hardin's

farmstead, a 500 acre farm in the Bluegrass operated by slave labor, represents a distinct type not commonly studied archaeologically.

A second research question focuses on the identification and documentation of Hardin's economic and social standing, and his involvement in the economic conditions that promoted and maintained slavery in the American South using documentary and archaeological data. Chapter Six addresses these research questions. In the last couple of decades, the archaeological study of slavery in the United States has focused on the social and economic lives of enslaved people. Studies have explored the carry-overs of various Africanisms (Ferguson 1992; LaRoche 1994; Stine *et al.* 1996; Young 1996), spatio-temporal variations in diet, health and life expectancy (Gibbs *et al.* 1980; McKee 1987), resistance to the oppression of slavery (Young 1991), as well as studies of how slaves sought to improve their lives by alternative economic pursuits outside the demands made on them by their masters (Brown 1994; Otto 19984, 1976; Singleton 1985; Wheaton and Garrow 1985; Wheaton *et al.* 1983). These studies reveal the diversity of the institution of slavery experienced by enslaved peoples, document the efforts that slaves made to survive, illuminate many aspects of their lives and demonstrate their efforts to preserve familial relationships of slave owners' willingness to convert people to cash.

In a recent editorial in African American Archaeology, however, Epperson (1999) has argued that the current focus of African American archaeology on the lives of enslaved African Americans, negates or obscures the real relations of slavery by omitting from the picture the actions of those individuals who held power over slaves and controlled the social and economic conditions of slavery; in other words, white slave owners of the seventeenth, eighteenth and nineteenth centuries. The absence of any significant reference to white slave owners, what Epperson has termed 'their invisibility' points up several problems with the study of slavery in America today. Three issues are at stake.

The first issue concerns the recognition that slavery was fully a part of the capitalist enterprise in the nineteenth century, and probably in earlier centuries, at least in southern North America. Slave owners invested in slaves both as a bonded labour force that generated wealth from agricultural and other labour, as well as in the production (breeding) of slaves for market. Slave breeding for market, particularly in the more northerly slave states such as Kentucky and Virginia, which were net exporters of slaves to the southern plantations of Mississippi and Louisiana, has been documented both in oral accounts given by ex-slaves in the 1930s to Works Progress Administration historians (Perdue *et al.* 1980) and by more recent historians (Sutch 1975). After real estate, slaves were one of the best long term investments in terms of increased market value.

A second issue is that the study of slavery must encompass the analysis of the economic advantages that it gave to slave-owners over those who used free labour. To do so requires that the archaeological analyses of slavery include or develop models that incorporate the economic strategies of slave owners, as these affected the entire system of slavery. As slavery was part of the capitalist economy it follows that the history of capitalism in America has important consequences for the

study of slavery. By failing to focus on the entire system of slavery, archaeologists risk misunderstanding its true nature and history. Without such a broad perspective, explanations of the slavery system that fail to integrate enslaved African Americans and slave-owning white Americans into a single economic and social system will be incomplete.

A third issue relates to the contribution of increased, slave-derived wealth, to the social life of slave-owning society. We believe that individuals participated in slavery because it afforded them profitable returns which they could then invest in the kinds of 'social capital' that could improve their social, as well as their economic, standing within their respective communities. To paraphrase a common statement, if all politics are to be understood at a local level, then economics are also to be studied locally. The social aspirations and motives of nineteenth century slave owners must be addressed if we are to understand the social factors that promoted slave ownership and in effect structured the changing history of slave society. Slave owners could not have been insensible to the abhorrence with which many in the north, as well as internationally, viewed slavery. The irony that they were able to convert the 'distasteful' wealth produced by slavery into a social currency that attested to their good taste, good breeding, and higher civility cannot have been lost on commentators of the day.

Archaeological studies of a farmstead occupied by a white slave-owning family would appear, by the current definitions of historic archaeology, to fall outside the commonly defined notion of the archaeology of slavery, since we have no direct archaeological evidence of slaves, no slave cabins, no evidence of Africanisms. However, we believe that by examining the economic and social conditions that promoted the slavery system, we can better understand slavery, and by extension the conditions under which African American slaves were forced to live. Without wishing to be polemical, and without demeaning the experience and history of enslaved African Americans, our starting premise is that the study of slavery as an economic and social system is first and foremost about white slave owners, since it was they who developed, promoted and preserved it. It is a lot less about the African Americans who were forced to live under it.

We retain the terms 'slave' 'slave ownership' and 'slavery' and related terms in this paper, as we believe they more accurately portray how nineteenth century slave-owning individuals viewed what they believed to be their property - no different for them than other kinds of property. We recognize that slavery is not an innate condition of people and that 'enslaved person' is a more accurate, humanizing description of a slave, but we wish to emphasize that slavery constituted a world radically different from our own. In mid-nineteenth century southern states people were property, bought, sold, bred and invested in like any other livestock. It is this world-view, so abhorrent to our own, that demands the kinds of informed and expanded study that we feel Epperson (1999) is calling for in his evaluation of 'African American Archaeology'. The results of this analysis detail Hardin's involvement in the local capitalist markets, using slave labor to create greater wealth for himself. Interpretation of the findings demonstrated that this slave-run farmstead was fully integrated into the capitalist economy as it grew and developed both at the regional, and at the national and international levels.

Chapter Seven addresses what Hardin accomplished with the wealth he gained from his farming operation. A comparative analysis of archaeological remains of the Hardin homestead site coupled with the insights drawn from associated historic documents (land transactions, taxes, census records) allowed us to examine Hardin's economic and social decisions and activities between about 1820 and 1870. While historic documents can attest to the economic advantages of slavery for the slave owner, only rarely can they furnish information on the social conditions that motivated individuals to seek wealth, or to examine what they sought to accomplish with it. These questions can be better addressed by examining the social, symbolic and ritual aspects of the material culture that constituted and made real the social relations that existed among family members, and with the broader community of which they were a part. Study of the Hardin household's material culture recovered as archaeological assemblages reveals the family's concerns to demonstrate its membership in a social class that was much higher in status and wealth than the one into which Hardin himself was most likely born.

This window into the complex social world of slave owners seeking to convert what might be viewed (even by them) as tainted wealth into more socially acceptable means of wealth is provided by the analysis of the tea wares, dinner and table wares used in the performance of the everyday rituals of etiquette, genteel dining and representation of social class affiliation. Studies of these artifacts demonstrate that Hardin and his family participated in the socially complex dining rituals that developed during the course of the nineteenth century and which they believed marked them as individuals of good breeding and high civility. Artifact analysis indicates that Hardin bought into the cultural dynamics of his day, and sought to use his wealth to create a higher social standing in his community for himself and his family. The purchase of expensive ceramics, and their use in the complex social rituals associated with taking tea and evening dining serve as indices of Hardin's efforts at social betterment.

Finally, Chapter Eight summarizes the study and offers some conclusions about the role archaeology has to play in the discovery of information about the nineteenth century that is otherwise not available. This study has benefited greatly from the informed use of documentary data with archaeological analyses, and demonstrates the strength of their interaction to further research goals. Further studies of similar sites in the future offer a better opportunity to evaluate the Hardin farmstead within a broader context of US history and archeology.

Chapter Two

RESEARCH DESIGN AND METHODOLOGY

Introduction

One of the most pressing problems for social historians and historical archaeologists is the agrarian origin of American capitalism. Were eighteenth and nineteenth century farmers in America integrated into the capitalist world economy? When did the integration occur? Is the degree of integration reflected by the commercialization of the agrarian holding? There are scholars who contend that historical archaeology is the archaeology of the spread of capitalism or the material expressions of European expansion. The capitalist elaboration's of agrarian strategies seen in early America suggest that farmers and in fact, the whole economy was changing to accommodate commercial modes of production, at least by the early nineteenth century. This production to ensure surplus for sale epitomizes the shift from household economy to commercial agriculture. The perceived need for production to acquire capital that would be reinvested in the farm acted to differentiate successful farmers from those that were not successful, from producers and consumers, from the wealthy and the not so wealthy. Capitalism served to differentiate rural America into classes as surely as it did urban dwellers. With capitalism, the demise of post-Revolutionary War gentility, and the rise of the middle class in America, there arose values and ideals that shaped human behavior and guided the formation of American culture.

To explore these issues a case study will be examined. How or to what degree did an early to mid-nineteenth century farmer participate in commercial agriculture? If the household was producing for local, national, or even world markets, were they engaged in social emulation, conspicuous consumption or other values associated with a capitalist world-view? Identifying and exploring the mechanisms within the rural economy that triggered social differentiation are important if archaeologists are to understand consumer behavior, and material correlates of class in a rural context. Censuses, documentary records, and material culture provide a snapshot of country life that reflects a society that placed a premium on creating a class-based system where wealth and the outward displays of wealth (material culture) mediated and negotiated membership in a given class. Archaeology provides a new avenue of inquiry as a microscopic perspective of how one farmer in the early nineteenth century actually participated in producing for local and national markets to acquire the material culture and gentile behaviors necessary for middle class membership.

Historic archaeology can contribute to the understanding of social processes within capitalism that affect us today as they did the subjects of our analyses in the past. Analyses of archaeological material say as much about present realities as they do about past societies. Capitalism is composed of a continuously changing set of complex social relationships that influenced consumer decisions about material culture and its use in class formation and negotiation. Material culture gives us a window to these behaviors and the desires of their owners to participate in new social standards and behaviors. The important question is not whether status differentiation took place--we know it did--but what role material culture played in creating, negotiating, and maintaining systems of inequality. How are social identities and relationships between people of

different social position materially expressed and negotiated? Historians and archaeologists are trying to untangle questions of supply and demand, dropping prices, and rising incomes, symbolic power and economic value that resulted in the domestic and consumer revolutions.

These questions and the related question of capitalist formation have been considered archaeologically most recently on urban sites, but not in agrarian context. Analysis of the Hardin farmstead was designed and initiated to specifically address capitalist elaboration's of agriculture and how the elaborations affected or are reflected by material culture, and how those manifestations observed in urban contexts are different or similar to those in rural ones. This chapter describes the research design, field and laboratory methods for data recovery of the Hardin farmstead. Phase II evaluation of the Hardin farm resulted in the identification and approximate location of the Hardin home, an activity area/workyard behind the home and in the eastern side yard, and a large earthfast outbuilding to the north of the house. The analysis of the artifacts suggested occupation beginning in about 1820 and ending around the time of the Civil War. Archival research identified the owner and resident of the site as Enos Hardin, from 1825 until his death in 1863 and then possibly by his son Enos, Jr. until 1870 and finally Grandison Shipp from 1870 to 1871.

The site was considered highly significant as to its data content, and the kinds of research questions that could be addressed. Specifically, the site serves as a laboratory to assess how this part of the Upland South participated in the growing social and economic changes that swept America before the Civil War. To study the archaeological evidence of these processes we developed a research design. The research design guided the recovery of artifacts, the identification and interpretation of features, and the analysis of the cultural materials we collected during the excavation. Archaeological deposits from the dwelling house, associated outbuildings and yard area, coupled with extensive documents suggested that research questions addressing the strategies used by this nineteenth century agrarian landowner to accumulate wealth, and define and maintain his social standing could be examined. Analytical procedures were devised to collect and collate diverse finds of data so that these issues could be addressed. In a reflexive and dialectic approach, archival and artifactural data provide complementary sources of information about the home life of Enos Hardin, gentleman farmer, and provide an example of the changing economic conditions of late nineteenth century rural Kentucky.

Research Themes

The nineteenth century saw significant changes in rural life, ways brought on by changes in the economy and increased transportation. The extent to which farmers participated in this increasingly capitalist mode of production in the Upland South has been an important and controversial research theme both in American social history and in historical archaeology. Several schools of thought concerning how nineteenth century Americans adapted to these changes, and the degree to which they participated are current. While social historians have been actively engaged in discussions of agrarian origins and extent of capitalism, historical archaeologists have been more concerned with urban manifestations of capitalism like class formation and negotiation. According to historians who subscribe to the entrepreneurial school of agricultural history, the dominant theme of nineteenth century American agriculture was the steady shift from household self-sufficiency to

market-oriented farming (Schlotterbeck 1982). Other scholars maintain that capitalism originated first on the countryside (Aron 1996).

Scholars have argued that rural output was for family or local consumption, that involvement in the market was usually limited, and that a complex network of exchange relations existed within each rural community (Clark 1979). Subsistence level or self sufficiency are terms used by these scholars to describe the farms involvement in local markets to sell incidental surplus that hardly ever led to great profit. This network of exchange is termed local self-sufficiency. Most if not all scholars have conceded that self-sufficiency on individual farms was not possible (Shammas 1982; Appleby 1982). The household mode of production was not profit-oriented. The outside market was resorted to in order to acquire necessities that were not available inside the region such as iron, sugar, salt and rum or in certain instances to purchase luxury items that could not be produced locally. Rather than relying on the market, rural families supplied their wants both by producing their own goods for consumption and by entering into complex networks of exchange relationships with their neighbors and relatives to provide for needs that they could not or chose not to provide for themselves.

What forces or influences acted to change the household economy? A number of factors after the Revolution were to effect a crisis in the household economy that would lead rural society to embark on a course of market development. Economic factors originating outside the rural society interfered with the rural exchange system and farmers had to redouble their efforts to supply their needs. Landholders began to cultivate their land more intensively and buy more land resulting in a drop in the amount of improved land. In the Upland and Lowland South, the accumulation of slave wealth was the most direct means for farm households to overcome these constraints and increase their commercial production. Both developments encouraged the growth of market relationships by increasing the potential surplus of goods available for trade. Some families saw market exchange as a way to make money and pass something onto their children. This extra profit paid for their children's education, bought land, and increased surplus through planting and land acquisition which in turn would increase profit (Clark 1979; Friend 1999).

Other scholars argue that beginning in 1607 farmers were actively engaged in the economic formation of a capitalistic nation. In this scenario, farmers played a leadership role. From America's earliest settlement, farmers, and entrepreneurs were involved in global trade, especially by the Revolutionary War. Farms were extensions of the commercial society, and farmers actively pursued profit as capitalists. In Kentucky, the Bluegrass System, the political economy backed by the elites of Lexington and vicinity epitomized the capitalist underpinnings that began during frontier settlement (Aron 1996). Observers of the time suggested that the Inner Bluegrass society and economy were modeled after the Chesapeake Tidewater. In the words of one scholar,

> *"The barons of the Bluegrass lived like Tidewater grandees, and they thought like them also, styling their behavior and appearance to impress equals and awe inferiors. In attire and address, the patriarchs of Bluegrass estates imitated the fashions and customs of Virginia, and by extension English, gentlemen. Their dress*

and comportment, their houses and grounds displayed the same fondness for ostentation" (Aron 1996).

The Hardin farmstead provides a perfect means to assess how the processes, values, and ideals embodied in capitalism affected rural Kentucky between 1825 and 1870. The Bluegrass System encouraged a profit-minded spirit and promoted Kentucky's thorough integration into the national and international market world (Aron 1996). By examining the archival and artifactual record, we can chart the strategies used by Enos Hardin to adapt and take advantage of the changing economic conditions of his day. Was Hardin engaged in farming for profit and social gain? Did Enos Hardin aspire to become a gentleman like his Inner Bluegrass counterparts? More than fancy attire, polite manners, and livestock, the ownership of vast lands and numerous slaves ultimately determined who was a gentleman. Through historic documents, like agricultural censuses, tax records, and wills we will show that Hardin did own sufficient amounts of land and enslaved African Americans to produce successfully for local and national markets. He was engaged in commercial agriculture and was a participant in the capitalistic Bluegrass System. Enos Hardin also aspired to become part of the middle and even upper classes. His choice in ceramics suggests that his household participated in genteel dining with the requisite polite table manners. He and his household were active participants in class formation and negotiation in an agrarian setting -- a setting not examined before archaeologically.

Farmer/Capitalist Enterprise Model

"Instead of cultivating the earth to produce materials for domestic manufacture, they [farmers and emigrants in Kentucky from Virginia] have been in the habit of consuming foreign articles altogether. . . The moral reputation became mortgaged for the fanatic productions of foreign countries, and credit ensued." (Aristedes in Friend 1999:140-141)

So wrote Aristedes in an 1803 edition of the *Kentucky Gazette* of most farmers and emigrants from Virginia. Some recent studies suggest that early Kentucky farmers of the late eighteenth and early nineteenth centuries participated in a larger European economic sphere than originally believed through active participation in local and national markets (Andrews 1996, 1999; Friend 1997, 1999; Martin 1994; Perkins 1991; Shammas 1982). This shift towards capitalism is similar to a later change which occurred in the late nineteenth and early twentieth centuries, in which changes in the agricultural system were reflected in the creation of a rigid, hierarchal order of social stratification called the "agricultural ladder" (Stine 1990). The system was based on farm occupation and credit and soon became associated with economic stratification in that those farmers who owned their own farms were superior economically and socially to farmers who were tenants. Similarly in the early nineteenth century, Kentuckians not only pursued the purchasing of land, but became involved in a market network, and attempted to secure its availability (Friend 1999:142-3). Although household production was important for the family to survive, farmers were also producing surpluses of food and cash items for profit.

The quality of transportation obviously affects participation in the consumer market. Many changes occurred in the transportation systems of Central Kentucky between 1820 and 1930. The location of Hardin's farm so near a major and early river port town, Monterey, was a major factor in his ready access to consumer products and national markets. Monterey was a key riverport town for outgoing and incoming supplies in northern Kentucky during the early to middle nineteenth century (Houchens 1977; Murphy 1976). Tobacco farmers from Owen, Henry, and Grant counties brought their produce to Monterey to be stored in warehouses and later shipped on the Kentucky River to Frankfort, Louisville, and Cincinnati. Likewise, stored merchandise was distributed from Monterey to other stores throughout the same counties (Murphy 1976).

According to Friend (1999), Kentucky farmers were "budding capitalists". Connections to market networks, adequate money, and a little luck could make a successful farmer in Kentucky in the first half of the nineteenth century. Farmers struggled to take advantage of the market and insure its permanency. With the above discussion in mind, several research questions to test the capitalistic model were developed that address occupation, acreage, production for the market, and consumerism and material goods. Both archaeological and archival data are important to answer these research questions.

Land Acquisition

Land acquisition has been used as a measure of economic stability and status on several farmsteads throughout Kentucky and the South (Andrews 1998; McCorvie et al. 1989; Stine 1990; Wagner et al. 1992; and Wagner 1995). During the early part of the nineteenth century, Kentucky underwent an agricultural change similar to Stine's (1990) "agricultural ladder" which took place during the late nineteenth and early twentieth centuries. This entailed the creation of the hierarchical order of social stratification in which farmers who owned land, no matter how little, were considered superior to those who did not. The system was based on farm occupation and credit. Becoming a farm owner represented upward mobility and was equated with profits, good management, security, and autonomy from farm creditors (Stine 1990). Just as the late nineteenth century agrarians were ensnared in the "agricultural ladder" a similar hierarchy was created in frontier Kentucky. In trans-Appalachian lands like Kentucky, fewer than half of all landholders owned 30 acres of land by 1800 (Friend 1999:128). Land was expensive in Kentucky and land distribution was the least egalitarian of the western settlements and "ranked with the more stratified societies" in the east (Friend 1999:129). The ownership of enough land to support the farmer and his family conferred a level of freedom and autonomy that differentiated him from those in dependence such as enslaved laborers, tenant farmers and propertyless laborers. Questions for our own research include: 1) where was Hardin on this "agricultural ladder?" 2) Was Hardin a landowner? If so, how much land did he own and how did he acquire it? 3) How did Hardin compare with the rest of his neighbors and other landowners in the Ohio Valley and elsewhere? By comparing Enos Hardin's land holdings to his neighbors, and other farmsteads and plantations across the South and Midwest we can develop a context within which these questions can be meaningfully answered.

Production for the Household and Market

According to Winters (1994) in his study of antebellum farmers of Tennessee, *"Virtually all farmers participated at some level in the pursuit of profitable ventures. They understood that to realize their ambition to improve their own material well-being and that of their offspring required involvement in a commercial world beyond the farm. Though their success varied widely, they shared a commitment to the business of farming.*" The same can be said for neighboring Kentucky farmers during this period. In fact, most farmers simultaneously produced for the family and for the market on what one scholar has called "composite farms" (Bushman 1998). A fluid boundary existed between household production, self-sufficiency and commercial production in which the success of a farm was measured by the ratio of commercial to household production. The farm that could produce more for the market would have more capital to spend on purchasing more land, livestock, and goods.

According to Friend (1999:138) the production of corn strongly influenced the pursuit of profit. Its production dominated rudimentary commercial or marketing activity in Kentucky and became imbedded in the state's economy. Money could be made raising and selling corn, grinding corn, marketing cornmeal, distilling whiskey, and generating grain and fodder for livestock. Although the success of corn cultivation raised expectations for profit among farmers, household production was important to the total success of the farm.

Early in Kentucky's history, land took on a monetary value as speculators used land as a commodity, but it also held premarket value in that familial and communal obligations required older residents to pass property onto the next generation (Friend 1999). In short, the need for capital to purchase land and create a viable farm mitigated attempts by settlers to live solely on household production--they had to produce for the market to buy more land. Farms did not produce many items and these had to be bought or traded. Consequently, cash was needed to buy and secure title to the land, plus the labor to clear forests. Materials and labor were needed to construct farm buildings and the dwelling, as well as to buy livestock. This need for cash hastened the capitalist replacement of the agrarian economy of early Kentucky.

Rural Slavery as Labor

Slave holdings in Kentucky and the Upland South, overall had a different character than those in the Lower South. Slave holdings were smaller even on large farms and many farmers owned only one or two enslaved African Americans. The dependency on mixed or diversified farming in Kentucky mitigated against the labor and large holding of enslaved peoples. The mixed farming system was complex with limited task specialization. This required an efficient use of slave labor to ensure economic success. Those farmers in Kentucky that did own enslaved laborers were committed to commercial production since they needed the market to supply and maintain a labor force required to produce profitable crops for sale in the market (Friend 1999:138). The profitability of slavery and of a farm that utilized enslaved labor depended upon the capacity of the farming operation to keep workers occupied at commercial production. Consequently, the institution of slavery was more suited to systems that needed labor throughout most of the year than to those that

needed labor only intermittently during the growing season. A diversified farm producing corn, various grains (wheat, rye, and oats), butter, honey, wool, and livestock required a flexible and well-managed labor force for successful farm-making.

More important to our discussion is the fact that enslaved African Americans not only provided labor that enabled production for the market but enslaved individuals had market value as well. In fact, the growth of the cotton kingdom, together with the post-War of 1812 slump in Lexington industries, combined to make slaves more valuable in the Lower South than in the Bluegrass (Aron 1996). As Lexington faded as a center of trans-Appalachian commerce, it became a center for the transfer of human property from the Bluegrass to the Deep South (Aron 1996). Although values tended to fluctuate with commodity prices, the extremely high monetary value of slaves would double the wealth of a slave owner elevating him to a higher economic and (perhaps) social status in his community. Even a few slaves, well managed, would make a profitable difference in production on a rural farmstead. For those times in mixed farming when work was less intensive, i.e., before harvest or during the winter, hiring-out enslaved labor was a popular viable solution. In considering Enos Hardin's wealth a comparison between the number of enslaved people at the Hardin farmstead and other rural slave farmsteads should provide new information on the socioeconomic status of rural slave holding farmers and reveal differences and/or similarities in wealth between farmers employing free labor, and slave holding farmers in the Upland South.

Consumerism and Material Culture

In this report, a layered contextual approach is used to explore the material life of Enos Hardin. These years were the height of the consumer revolution where technological innovation and transportation enabled the production, distribution, and affordability of material goods. A social revolution was well underway with the emergence of a large, newly formed middle class and the redefining of gentility in Post-Revolutionary War America. It was a time that saw a domestic revolution, as well, as the commodification of labor, and changing ideas about the roles of women acted together to restructure the American family and the burgeoning middle class, in general. The origins and trajectory of these sweeping changes are currently under debate by historians, economists, sociologists, and archaeologists. The effects of these changes on human behavior are complex and syncretistic but circumstances combined so that along with the middle class there emerged a pervasive materialism and a universal ambition for personal advancement (Persons 1973). The disappearance of hereditary privilege coupled with the diffusion of knowledge and social mobility in post-Revolutionary War America fueled the gospel of success and the myth of upward mobility (Persons 1973:6-7). How the notions of success, wealth and class, and upward mobility are reflected by the material culture of a nineteenth century landowner and farmer in Owen County, Kentucky is a focus of our research.

Archaeologists have always used material culture as their dominant avenue of inquiry. Material culture studies have become an increasingly important and viable area of study over the past 20 years. From within this broad approach two trends have emerged that are beginning to shape historical archaeology, if recent journal articles and books are any indication. The first trend is the notion that material objects function as a kind of text. For the historian and anthropologist of

material culture to place in a context and to decipher their message, this leads to the second trend in material culture studies--emphasis on the contextual understanding of human behavior (Martin and Garrison 1997). Meaning of any sort depends upon the context in which social relationships occur. The meanings of things cannot be gleaned from discrete, observable phenomena but as connected patterns of behavior (Martin and Garrison 1997). A contextual approach juxtaposes various types of material culture and documentary data through time, across space, and among disciplines to explore new avenues of inquiry--particularly, what meanings objects may have had to those who made, purchased, used, and witnessed them (Martin 1996:74). In studying the life and household of Enos Hardin using his material culture, a contextual approach will be used that will allow us to tap into larger themes of the early to mid-nineteenth centuries that affected the production, marketing, value, use, and discard of material objects. In this way, we will not only say something about Enos Hardin in particular, but about human behavior in rural nineteenth century Kentucky as a whole.

Many recent scholars have focused on the "cult of domesticity," and the related ideas of gentility, and class distinction or formation. Social historians in the past have used probate records, etiquette literature, and even fiction to shed light on these complicated topics (Williams 1987; Kasson 1987; Wall 1994a, 1994b). Although this literature is biased when combined with archaeology, it does provide compelling arguments for class construction and the development of the middle class in nineteenth century America. Drawing on this literature and archaeology, several recent efforts using data collected in New York City have proven fruitful (Fitts 1999; Wall 1999). These same questions have not been examined using data collected from rural, agrarian settings in peripheral areas of the United States, however. Preliminary analysis suggests that Hardin was wealthy enough to afford expensive ceramics, purchase more land, and a private education for his children. Hardin was an active participant in the social differentiation of the middle class in the nineteenth century. He was not simply buying goods but buying passage into a way of life that was more fluid in America than anywhere in the world. Hardin used material culture to define himself and to maintain or create class boundaries or bridge barriers. He was engaged in producing and accumulating monetary capital for conspicuous consumption of material goods to secure the correct props needed for membership in the middle and upper classes. Cultural capital was also sought after and obtained, legitimizing and reidentifying him and his family's membership in a class that wealth alone could not guarantee. By looking at the material culture, particularly ceramics and table glass, between and within classes, archaeologists can explore social class formation, coalescence, and boundary making types.

The Spatial Layout of the Hardin Farmstead

Scholars working across the South, and Midsouth, and Southeast have used the notion of Upland (Upper) South Tradition for explaining a particular lifestyle and farming pattern (Andrews 1992a, 1992b, 1997; Blanton 1989; Fiegel 1989 Glassie 1968; Gray 1933; Kniffen 1965; Mitchell 1972; Majewski and O'Brien 1989; Mason 1984; McCorvie 1987; Moir and Jurney 1987; Newton 1974 O Malley 1987; Otto 1989; Rotenizer 1992; Wagner et al. 1992). The Upland South, sometimes called the Trans-Appalachian South comprises an area south of the Ohio and Missouri Rivers that has a six-month growing season and is characterized by uplands, highlands, and

intermontaine valleys where mixed hardwood and pine forests dominated a landscape interspersed with grasslands and cane breaks (Otto 1989).

The interplay of two groups from two hearth areas -- southeastern Pennsylvania with its emphasis on corn, wheat, and livestock and the Chesapeake region with its tobacco, hemp, and slavery -- occurred in western Virginia by 1750 and spread rapidly after 1780 into central Kentucky (Majewski and O'Brien 1989; Mitchell 1972). The initial settlement of the Upland South reflected a pattern of agricultural practices termed woodlands agriculture characterized by clearing fields from upland forests and grazing livestock in the unfenced woods and was highly adaptive (Glassie 1968; Kniffen 1965; Otto 1989). As settlers moved westward in search of better or less exhausted land, this method of farming traveled with them.

A host of diagnostic characteristics identified by geographers and historical archaeologists can be used to explain or categorize farmsteads in many areas of the Midwest, Midsouth, South and North. These characteristics are not unique to the Upland South model, however as research in the Tidewater and Piedmont of Virginia and Maryland have documented many of the same characteristics on eighteenth and nineteenth century farmsteads there. Other research in Tennessee and Kentucky (Andrews and Young 1992) also suggests that these spatial characteristics can be found on nineteenth century Upland South plantations (enslaved laborers exceed 20 individuals). These characteristics can be summarized by several general elements:

1. *seemingly random clustered structures reflecting individualistic notions of convenience*
2. *an array of functionally specific buildings*
3. *recognition of a yard area comprising the house and various outbuildings considered the female activity area*
4. *male activity areas are farther from the house and contain the barn, animal pens, forges, and tool sheds*
5. *a house oriented toward a path of human approach*
6. *the arrangement of fields to conform to natural rather than artificial features*
7. *diversified farming techniques with a reliance on corn and livestock particularly hogs (Otto 1989; Hilliard 1972; Gray 1933)*
8. *pork is a common constituent of the diet (Hilliard 1972; 1988)*

Since the Upland South model is embodied within a household economy/self-sufficiency model of farm output, differences in spatial organization may be documented for the Hardin farmstead. Bearing this in mind, several research questions regarding the spatial organization of the Enos Hardin farmstead were developed for the Phase III mitigation. We will examine if the Hardin's farming and economic behavior contributed to changes in the houselot/farmlot spatial organization as defined by the Upland South model.

Site Layout

According to the Upland South model, as derived from research in the hearth areas and the Midsouth and Midwest, the dwelling, by the nineteenth century, will face the main approach. Although not exclusively a trait of Upland South farmsteads, it does aid in determining activity and dumping areas around the main house. The front yard, visible from the road and to visitors, would have been kept clean, especially after the mid-nineteenth century when issues of cleanliness and class coalesced. Consequently, few artifacts should be recovered in this area. Female activities related to household chores or discard would have occurred in the back or side yards of the dwelling. In eighteenth and nineteenth century farmsteads, one side yard is often used as the dominant work or activity area (Andrews 1992a; 1992b; Keeler 1978; King 1990; Pogue 1988). Male activities related to agriculture, farm maintenance, and livestock tending would have occurred in areas farther from the house. Fewer artifacts would be expected to be recovered from these outer yard areas. Both the domestic area and the agricultural area were often separated by a natural feature (i.e., a creek) which might in turn dictate the arrangement of fields. How and to what degree site layout will be affected by commercial agriculture and concomitant capitalist values and ideals can be speculated upon. Commercial agriculture, especially in areas of mixed farming, would have required good management and coordination of equipment, labor, and processing to produce surplus grain and grain products for market. To this end one may expect a centralized houselot that contained the main dwelling and numerous functionally specific outbuildings. Quarters for enslaved laborers would be relatively close to the main house for control and management. Outbuildings for processing and storage of food and other female-oriented activities would be present on the houselot in close proximity to the main dwelling.

Spatial Patterning

A primary topic of interest in the Upland South model is the investigation of houselot and farmyard spatial patterning, particularly the identification of specialized activity areas, swept areas, outbuildings, and refuse disposal areas. Previous farmstead studies have had success in identifying activity areas such as living areas, butchering areas, blacksmithing areas, storage areas, and refuse areas; as well as outbuildings of various functions (Moir and Jurney 1987; Price 1985). Identification of these activity areas and outbuildings is critical to understanding the extent of the farm operation, what functions were performed, how traditional (folk) or modern (popular) a farm may have been operated, and if the spatial patterning follows documented regularities (from other sites in the state or region) by socioeconomic class, region, ethnicity, and temporal period. Spatial analysis of artifact distributions around the houselot and barn areas was conducted to identify any spatial patterning. Using the Surfer mapping program, this investigation will generate maps using artifact frequencies to show how the dwelling at the Hardin farmstead was oriented and identify associated activity areas and buildings. The location of any outbuildings or activity areas within the outer yard will also be investigated.

Past Built Environment

The past built environment will also be a major topic of study. The size, construction techniques, and orientation of the dwelling and outbuilding will be documented and compared with known patterns within Kentucky, the Upland South, and the occupant's place of origin. Many studies over the past several years have been used to determine the types of structures at archaeological sites based on nail length and type (Lees 1986; McCorvie et al. 1989; Wagner and McCorvie et al. 1990; Young and Carr 1989). Other studies have used the Moir (1987) dating formula for determining a mean window glass date from the mean thickness (Andrews 1997; Andrews and Stetar 1995; McBride and Fenton 1996; McBride and Sharp 1991). Moir has found that the thickness of window glass increases over time. What these studies suggest is that we can: 1) determine the composition of the dwelling (i.e. frame, log, or brick); 2) reveal whether a foundation or piers were present; 3) define the dwelling orientation and dimensions; and 4) reveal whether it was built in one or multiple episodes or extensions. The barn will also be investigated for size and function. In addition, structural features from dwellings and outbuildings will be necessary to study questions related to the built environment, and Phase II investigations appeared to have both.

Foodways

The degree of fit of the faunal and floral assemblages from the Hardin farmstead to the Upland South foodways complex, with its emphasis on corn, pork, and wild game, is another research question of particular interest (McCorvie 1987). How and where foods were processed and their expense will be addressed. Foodways at the Hardin farmstead between 1825 and 1873 will be investigated, with particular attention given to how changes in the foodways system may relate to environment, farm production (degree of commercialization), marketing changes, and economic status. During occupation of these sites a reduction in the proportion of wild game, perhaps in part due to extinction by over hunting and an increase in the proportion of exotics due to improvements in transportation may occur. A reduction in the dominance of pork may also occur over time, as beef and other meats rose in popularity nationally. Comparisons between archaeologically recovered fauna and flora and documented crops and livestock produced at the Hardin farmstead will help examine questions of for-home versus for-sale production. Comparisons with other sites should help identify degrees of variability.

Rural Slavery

The institution of slavery is not generally considered a characteristic of the Upland South model, especially in the model's most nostalgic form, but it played an integral part in much of the Upland South region (Aron 1996; Majewski and O'Brien 1989; Mitchell 1978; Otto 1980b:35-52). To date, very little archaeological and historical information about the lives of enslaved peoples on rural farm sites in Kentucky has been recovered (Andrews and Young 1992:1-2; Otto 1980b:35-52). In the past most studies of slavery have been conducted on large, mono-crop plantations of the Lower South. Although the Phase II archaeological and limited archival investigations did not reveal the presence of slaves at the Hardin farmstead, the Phase III archival investigations did.

Unfortunately, Phase III investigations were unable to document archaeological information on Hardin's enslaved laborers since only part of the site was within the right-of-way. However, the archival research, combined with additional comparative historical research, and a comparison of the Hardin farmstead with other studies of rural slave holding farmsteads and plantations (Andrews and Young 1992:1-12; Otto 1980b:35-52) may provide more information concerning the relationship of the enslaved African Americans and their master, where the enslaved workers might have lived on the property, and what role these enslaved peoples fulfilled on the Hardin farmstead.

The Upland South model was developed from research on farms and plantations in Virginia, Maryland, Tennessee, Kentucky, Missouri, and Illinois. Many of the spatial characteristics of Upland South farms are commonly found on farms outside the Upland South. In this report the Upland South model has been used as a yardstick against which the Hardin farmstead has been compared. Indications are that the Hardin farmstead practiced commercial agriculture producing corn for local and national markets. Our purpose in this aspect of the research is to discern how commercial production and slavery affected the spatial layout of a farmstead in the Upland South. How or will it differ from the Upland South model used in similar research to date? Using Surfer generated maps of functionally specific artifact distributions, many maps were constructed that aid in this interpretation.

Research Design Summary

The Hardin farmstead has the integrity and temporal span necessary to address many broad issues in antebellum farmstead archaeology. The first research question is whether Enos Hardin was clinging to traditional notions of self-sufficiency or household economy with a disdain for consumer goods or whether he was a budding capitalist engaged in the Bluegrass System. The second question concerns Hardin' and his household's consumption patterns. Were they involved in the domestic and consumer revolutions of the nineteenth century? Hardin's involvement in these revolutions and consumption patterns are indicative of his social and economic status and will be used in these discussions. The last set of research questions are site specific and pertain to farm layout and if that layout differs from the Upland South model. Does commercial agriculture with enslaved labor contribute to changes in the farmlot/houselot spatial organization? What differences in houselot usage might a researcher expect? Depending upon the success of the farm, we might expect to find more or varied activity areas, disposal areas, or functionally specific ancillary structures. Structure placement would still be determined by topography and convenience to the main dwelling with inner and outer yards gender-influenced. Spacial organization of servants quarters would be determined by convenience and management strategies on a successful farmstead and would be near the main dwelling and work yard or side yard (Keeler 1978; Andrews and Young 1992). Profitable farm-making strategies on a diversified farm would influence labor relations and management, spatial layout, and consumer decisions about material culture.

METHODOLOGY

The goal of the Phase III research was to find out who occupied the site during the nineteenth century; what the nature and layout of the structures and activity areas were on the site and how or if

they changed over time. Also important was to find out what the consumption patterns of the Hardin family were, particularly in beverages and food, in service equipage such as ceramics and glassware, and in furnishings. An attempt would be made to find out how this farm compared with other farmsteads of the period and what this may tell us about life along the Kentucky River. Were there changes in these consumption patterns over time, and how do they relate to broader economic changes that affected Monterey and north central Kentucky? Did the food ways practiced at the site match the Upland South Model found at domestic sites in the Upper South and Ohio Valley or are they different? Did Hardin's ownership of enslaved laborers contribute to his wealth? How? Overall, how does the site fit into the range of variability found in nineteenth century farmsteads? The work at the Hardin farmstead should be used toward creating a model of functions, layout, and quality of services, particularly in rural areas. Therefore, the following methodology was used.

Archival Research

Archival research conducted for the Phase I investigation included very little information. Phase II research consisted of archival research and included the identification of the chain of titles and location of a 1883 atlas. This research suggested that the Hardin farmstead was settled about 1825 by the Enos Hardin family who held it until 1870 (Owen County Deed Book B: 49; Will Book E: 215). After 1870 the land passed to W.H. Walker who in turn sold it to Grandison Shipp, who in turn sold it back to Walker in 1873. The deeds and the 1883 county atlas suggest that Shipp was the last resident of the Hardin farmstead.

Phase III investigations were directed towards recovery of information about the Hardin family, comparative data on other antebellum farms, slavery, and patterns of consumption. To accomplish this, archival and literature research was conducted at the Special Collections and Archives of the M. I. King Library at the University of Kentucky in Lexington; Kentucky Department of Libraries and Archives, Frankfort; The Kentucky Historical Society Library, Frankfort; the City of Owenton Public Library, and the Young Library at the University of Kentucky. Records checked included population census, agricultural census, slave census, tax records, deed books, order books, wills, death and birth records, and various literature sources.

Field and Lab Methods

The field methods carried out for the Phase II and III excavations were conducted following the 1991 Kentucky SHPO guidelines. Archaeological Phase II investigations were conducted over a period of 13 days from September 13 to October 12, 1994 and consisted of a controlled surface collection, STP excavation, larger unit excavation, and backhoe trenching. At the Hardin residence (15On55) an area 40 m by 25 m was plowed and disced by Wilbur Smith Associates while the outbuilding/barn area (15On57) was already plowed by the landowner. These investigations resulted in the recovery of many historic artifacts, and information on site stratigraphy and subsurface features.

Phase III investigation of the Hardin houselot was directed toward understanding the spatial layout of the site, locating and excavating features, and recovering a good sample of nineteenth

century material culture to examine consumption patterns and wealth. To meet these goals, a three-step approach involving additional shovel test probe and test unit excavation with mechanical stripping of the site was employed. A total of 21, 50 x 50 cm STPs were excavated on the site during Phase III. These STPs were scattered across the site in areas that had been poorly investigated during the previous phase with the dual purpose of finding dense artifact areas for further investigation, and attaining a better understanding of the overall distribution of artifacts on the site. Although no particularly dense historic or prehistoric artifact concentrations were identified in the STPs, they did show that the highest density of historic artifacts was found along the eastern side of the site. The prehistoric artifacts were very sparse across the site.

Larger test units were excavated in the residence area to obtain a more adequate sample of plowzone artifacts and identify subsurface features. A total of 25 test units, 20 1 x 1 m and five 1 x .5 m, were excavated during Phase III. These units were scattered over the entire site although a higher density was placed in the artifact rich eastern side of the site. Units in the central and western parts of the site generally produced a low quantity of historic artifacts, while the units along the eastern side produced a moderate amount.

Phase III excavations at the outer barn area consisted of stripping the plowzone to expose features. Since very few artifacts had been recovered from the Phase II investigation, the strategy was to strip the plowzone for features. A total area of 225 m^2 was stripped in all.

All fill from each STP and unit was screened through 0.25 inch mesh and described as to color, artifact content, and degree of disturbance. Detailed notes concerning provenience, soils, and artifacts were recorded on excavation forms for each excavated test unit level. Coordinates of STPs and units were then recorded with a laser transit. The highest corner of each unit was chosen for a vertical datum corner (generally the southwest), with all measurements within each unit taken from these corners using a line level and a hand held tape. Each unit was then given an individual identification number. Floors and walls of these units were then inspected and all soil zones recorded. The base of each level was troweled and mapped if soil staining was documented. A profile map of soil zones was drawn for two walls from each of the test unit excavations. Test unit plan views documenting soil staining and all soil profiles were photographed.

Potential features were mapped, photographed, and cross-sectioned at the base of the level in which they appeared. All feature fill was dry screened through 0.25 inch mesh hardware cloth. In addition a flotation sample(s) was taken from most of the recognizable feature fill zones. Detailed notes concerning provenience, contents, form, and probable function were recorded for each feature on appropriate forms.

Laboratory Methods

Artifacts recovered during field investigations were brought to the WSA Archaeology Laboratory in Lexington, Kentucky for cataloging and analysis. Materials were washed and sorted by general material type (i.e., Historic vs. Prehistoric). The artifacts were then analyzed according to specific methods. Historic artifacts were washed and sorted into major material categories. These

were then cataloged according to the system of artifact-function association modified from South (1977). All artifacts were assigned to functional groups (kitchen, architecture), then to a material class (e.g., ceramic, glass, metal), to a type (e.g., base of a bottle, jar lip), and to a subtype (e.g., color, decoration type). A complete description of functional groups and diagnostic artifacts within material classes is included in Appendix D. Otherwise, detailed descriptions of the laboratory and analysis methods will be included in the analysis sections of this report.

Chapter Three

ARCHIVAL RESEARCH OF THE HARDIN FARMSTEAD

Introduction

In this chapter a history of the Hardin family and farmstead is presented. The occupation of the Hardin farmstead is viewed against the local environment, topography, history, and society to illustrate how these variables interacted to shape the cultural and economic development of Owen County. To place the site in a broader perspective, a brief historic overview of the early history of the county is presented.

Owen County and Monterey

The first Europeans to arrive in Owen County were explorers, hunters, and surveyors. The earliest exploration of this area of Kentucky was in 1751 by explorer and surveyor Christopher Gist who traveled down the Ohio River for the Ohio Land Company of Virginia. Settlers began arriving in Kentucky after 1774, and most came from Virginia and both of the Carolinas. In 1776 Virginia formed Kentucky County and in 1780 it was divided into Fayette, Lincoln, and Jefferson counties. Influx of settlers to the areas required further subdivision and in 1784 Woodford County was created from Fayette County, a county that comprised most of northern Kentucky. Owen County was formed much later on February 6, 1819 from sections of several counties including Franklin, Gallatin, and Scott (Bryant 1992; Houchens 1977). It was named for Colonel Abraham Owen, who was a member of Kentucky's constitutional convention and legislature and who was killed at the battle of Tippecanoe. Owenton is the county seat.

In 1780 Stephen French, an early surveyor, was one of the first landowners to be warranted 1,000 acres near present-day Monterey (Houchens 1977; The News-Herald 1957). However, it was not until the early 1790s that the Owen County area was first settled. Settlers progressed up the valleys and streams, establishing posts and farms along the way, particularly where creeks emptied into the Kentucky River. Many of these settlers were veterans of the American Revolution who were given land grants. One of the first settlements was in 1792 and was called Rowlett's Landing, at the mouth of Severn's Creek. The settlement had a trading post, mail service, and three houses. In 1795 four families from South Carolina with 100 acre claims settled near what is now known as Lusby's Mill, either on or near a spring on the banks of Eagle Creek (Houchens 1977).

Upstream from Lusby's Mill, at the mouth of Cedar Creek, James Williams bought a large tract of land and established a trading post on it in 1805. James came from Maryland with his brother Alexander, who also purchased a large tract of land on Pond Branch Road. The trading post was originally called Williams' trading post and by 1819, as the community developed, it was called Williamsburg Village. For a time it was also referred to as Mouth of Cedar Creek. By 1845 the town's name was changed to Monterey.

Late eighteenth and early nineteenth century settlers in this area of the state produced tobacco, corn, and whiskey as important commercial commodities. Shipment of these products was tied to the Kentucky River and its ports. By 1800, the flatboat business in New Orleans expanded to several water ways in Owen County and shipments of goods in and out of this area increased with the introduction of the steamboat in the late 1810s and 1820s (Verhoeff 1917; Houchens 1977). Various trails and turnpikes also entered the area in the eighteenth and early nineteenth centuries contributing to an increase in shipments. For example, Old US 227 may have connected Owenton with Georgetown and Lexington. The turnpike from Frankfort to Owenton that roughly followed U.S. 127 was begun in 1822. The section of this road between Monterey and Frankfort that ran along Cedar Creek was referred to, at least in 1883 (Figure 3.1), as the Monterey and Cedar Creek Turnpike (Lake 1883). Frankfort was in turn connected by turnpikes to Lexington, Louisville, Shelbyville, Georgetown, Versailles, Paris, and other nearby towns. By the 1830s, a railroad connecting Frankfort and Lexington had been completed.

Several gristmills were recorded in the county between 1792 and 1819, some of which were located on Cedar Creek. These included John Duvall's Mill, on Elk Lick Fork of Cedar Creek about a quarter of a mile above Monterey, Andy Hodson's Mill, located about three miles further up the creek, and Branham's Mill on Cedar Creek (Houchens 1977). In 1819 five licenses for taverns were granted with James Williams granted one to operate in Monterey (then Williamsburg Village). Rates listed in the Court Order Book (Owen County Court Order Book A) were fixed at:

Bed, Dinner or Supper	25 cents
Overnight Lodging	12 1/2 cents
Imported Liquors	50 cents per 1/2 pint
Whiskey or Brandy	12 1/2 per 1/2 pint
Horse Feed	12 1/2 cents per gallon

Monterey continued to flourish with construction of warehouses for stored goods and merchandise that in turn was distributed to stores throughout Owen, Henry, and Grant Counties. By 1821, a small store operated by John Weems stocked whiskey, sugar, coffee, tallow candles, powder, and lead (Murphy 1976). Between the years 1820 and 1830 the county population more than doubled to 5,786 (Table 3.1). The slave population also more than doubled between the same years, an indication of increasing labor demands for products such as tobacco that required a substantial work force to process. Free African Americans were present, but few.

Unlike the counties to the south where hemp was dominant, tobacco was the major crop in Owen County and other counties close to the Ohio River for most of the nineteenth and twentieth centuries, but Monterey was a major center for buying, trading and distribution of the crop. According to the 1849-50 Federal Census, the farmers of Owen County produced 746,871 pounds of tobacco. Only 10 years later production nearly tripled with 2,153,307 pounds. The introduction of the Selected white burley tobacco sometime after 1864 ensured the demand for tobacco.

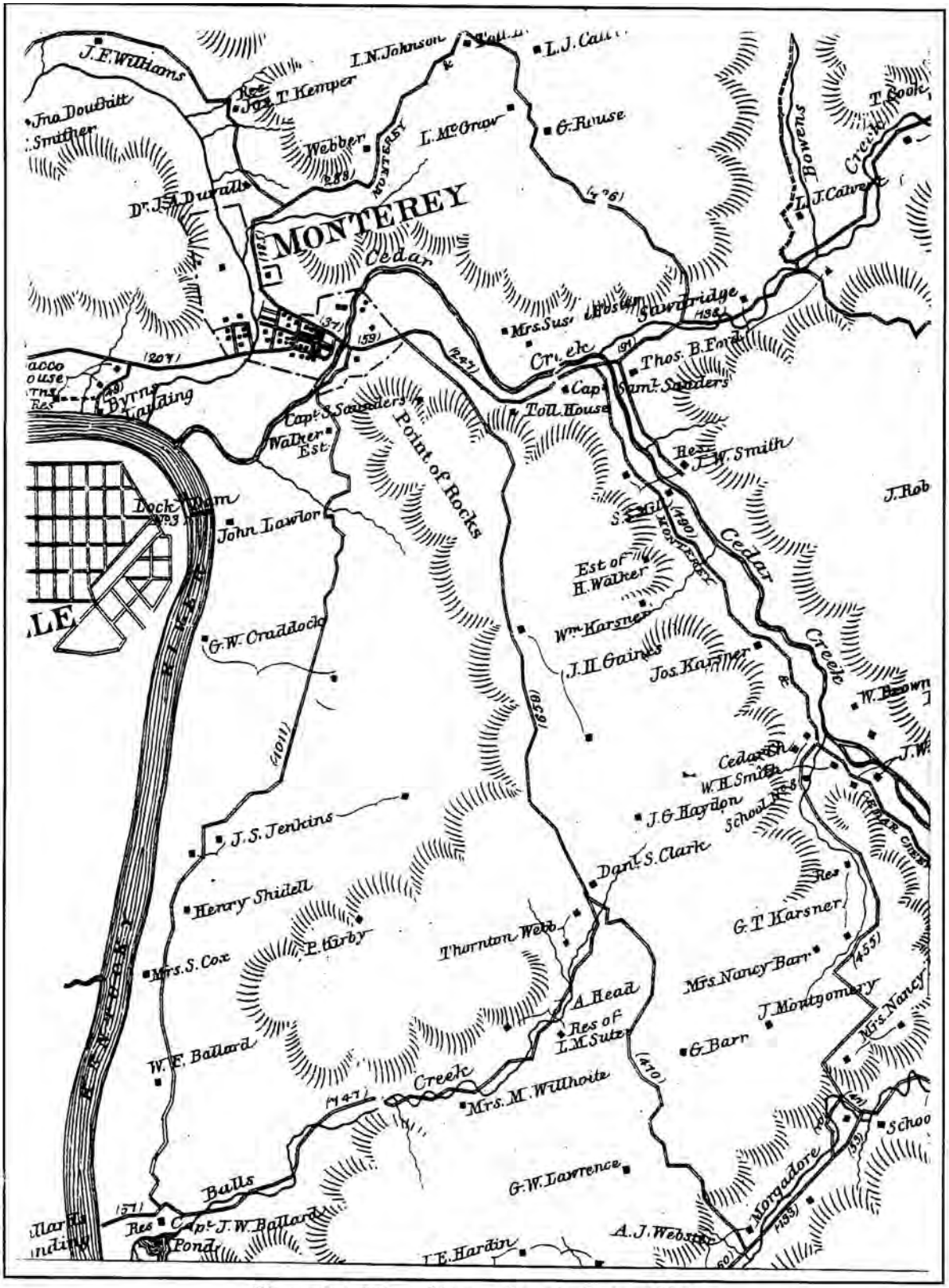

Figure 3.1 Atlas of Owen County (Lake 1883)

Table 3.1 Population Owen County*

Year	White	Free African American	Enslaved African Americans	% Slaves to Total	Total Pop
1820	1,823	1	207	10.2%	2,031
1830	4,901	95	790	13.6%	5,786
1840	6,915	36	1,281	15.5%	8,232
1850	8,882	48	1,514	14.5%	10,444
1860	10,989	70	1,660	13.0%	12,719
1870	13,133	1,176			14,309
1880	15,898	1,503			17,401
1890	16,249	1,427			17,676
1900	16,083	1,470			17,553

* Adapted from Houchens 1977 (page 66)

Hemp also was important during the middle nineteenth century, but more so in the Inner Bluegrass counties. Owen County has always been more agricultural than industrial, unlike neighboring Franklin County to the south where coach making and distilling became prominent. During the middle nineteenth century Monterey had several businesses including blacksmith shops, livery stables, dry goods stores, medical doctors, hotels, drug stores, and saloons (Houchens 1977).

In 1818 only small steamboats could navigate the rivers. To open the waterways and improve navigation, a series of locks and dams were placed throughout the state of Kentucky in 1836. By 1843 the locks and dams had been completed up the Kentucky River to Frankfort (Clark 1960) and in 1844 an early packet named "Little Ben Franklin" was making runs between Cincinnati and Frankfort (Houchens 1977). Even more boats were running between Louisville and Frankfort and all were stopping at many private landings that included Monterey, Gratz, Ball's Landing, and Moxley (Houchens 1977).

By 1850 the county population was no longer doubling, but continued to increase slowly as did the population of enslaved people (Table 3.1). For the 1,514 slaves in Owen County, 360 slaveholders were documented, most of who were men, but some women and minors (Houchens

1977). After the Civil War it appears that most of the former enslaved African Americans stayed in the county (Table 3.1). In 1880 a small increase in the county population occurred, but for the rest of the century there would be no further growth. Tobacco continued to be the leading export of the county and Monterey was a tobacco-marketing center with up to 200,000 pounds moving through it every year.

Owen County also had natural scenic wonders that attracted many people as a recreational activity. Some of these places were located very near Monterey. Lewis Collins wrote about some of these spots in 1874.

> "*There were several remarkable places in Owen, which merit a description. The 'Jump Off' on the Kentucky River, is a perpendicular precipice, at least one hundred feet high, with a hollow passing through its centre about wide enough for a wagon road. The 'Point of Rocks' on Cedar Creek, just above its mouth, and near Williamsburg, is a beautiful and highly romantic spot, where an immense rock, about seventy-five feet high, overhangs a place in the creek called the 'Deep Hole,' to which no bottom has ever been found, and which abounds with fish of a fine quality. 'Pond Branch' is a stream of water which flows from a large pond in a rich, alluvial valley, which, from its general appearance, is supposed to have been at one time the bed of the Kentucky River. It is about a mile and a half distant from Lock and Dam number 3. The water flows from the pond and empties into the river, but two outlets, and thus forms a complete mountain island, two and a half miles long and a mile and a half wide in its broadest point* (Collins 1968)."

In 1869, a railroad "short line" ran through Carroll and Gallatin Counties just north of Owen County and in 1869 the first train went through Sparta to Lexington. To go through Sparta or a nearby station one had to change at LaGrange. A traveler's account, dated October 20, 1869, of a trip from Liberty Station to Missouri describes the landscape and the growing local towns along the route.

> "*Having left home the 12th on business in Missouri, it may be interesting to our readers to report some items which form a portion of the discovery on this far distant journey. We took the short line railroad frm [from] Liberty Station to Cincinnati, had a pleasant snug ride; the road is crooked but very firm and substantial. The handsomest portion of that route lies along the valley of Eagle Creek. We noticed every few miles a depot; many new buildings and flourishing towns springing up.*
>
> *At Liberty Station, they have two stores, grocery and are building other new houses. This is a point of considerable importance to the road, perhaps not much excelled by any other.*
>
> *Sparta, the next station has evidences of great prosperity; The Messrs Coxes have a large store, there are two hotels and a livery stable; the omnibuses connect here for Owenton, with passengers. This town will have a good trade to support and build it up.*

The next station is Glenco, a number of new houses are going up here and they will have a respectable trade.

The next is Ellstons, and here too they are alive with improvements. All these stations are very much dependent on the trade from Owen County. Directly after leaving Eagle Creek, we pass through a tunnel, thence meandering the deep valleys of its tributaries until we rise on the table of Verona and the flourishing town of Walton, thence on to Covington through the deep winding valley of Bank Lick, and over some very high iron bridges, that look rather dangerous (Houchens 1977)."

An attempt to run a railroad through Owen County failed in 1912 and by 1914, with road improvements and an increase in automobile and truck popularity, the chance for a railroad line ended. The steamboats also dominated the transportation of goods and people well into the early twentieth century. Today tobacco, hay, and corn are the major crops in the county, not so unlike the nineteenth century. Farmland still makes up 79 percent of Owen County today.

The Hardin Years

Unfortunately no original deed of the property was found. The first deed found in the archival search of the property is in 1825 when Benjamin Hardin, of Henry County, sold Enos Hardin, of Owen County, the 214-acre property "lying and being in said County of Owen on the Kentucky River lying between George Hardins land and Mrs. Stevens land" for $600 (Owen County Deed Book B:49). The relationship between the two Hardins is unclear. However, it appears that Benjamin Hardin was the original owner of the land. Benjamin was a resident of Owen County before moving to Henry and is listed in the 1820 Federal Census of Owen County. Members of his household included himself, over 45 and: one son under 10 years old, two sons between the ages of 10 and 16, one daughter under 10, and a wife over 45. No slaves were listed and the total number of persons engaged in agriculture was two.

Information from an Owen County Order Book (Order Book C:42) revealed that Benjamin Hardin served in the revolutionary war and was granted land in Owen County by the United States:

". . . being about of record for the District and County of Owen Benjamin Hardin aged 78 years resident of Henry County in said district who being first duly Sworn according to Law doth on his oath declare that he enlisted in Hampshire County in the state of Virginia in the year 1776 for two years and there in the company of Commanded by Captain Stephen Ashly to guard the frontiers and rendevouz at Wheeling that he served in said army for ten months that he again enlisted under the same captain for three years and that he served for ten months under the last enlistment that he was honorably discharged and received his pension certificate number. And I do solemnly swear that I was a resident citizen of the United States on the 18th day of March 1818 and that I have not since that time by gift sale or in any manner disposed of my property or any part thereof with intent thereby so to determine it as to bring myself within the provisions of an act of congress entitled [an act to provide for certain pensions engaged in the land and naval services of the

United States in the revolutionary war] On the 18th day of March 1818 and that I have not now nor has any pension in trust for me any property or securities, contracts or debts due to me nor have I any income other than what is contained in the schedule hereto annexed and by me subscribed.

That he has one bed	$15
One horse	$40
Household furniture	$10
	$65

That he is by trade a Blacksmith very old and unable to pursue it with any advantage. My family consists of two children a girl and a boy the girl aged 10 years the boy aged 12 years.

Benj Hardin [Mark]

Sworn to and declared on the 6th day of June 1831"

Hardin moved to Henry County around 1825 after his land in Owen County was sold. He appears in the 1830 census for Henry County. When Hardin arrived in Owen County cannot be answered, however. It is possible that he arrived as early as the 1790s when other veterans of the American Revolution began to claim their land grants. Based on the above information, it seems likely that Benjamin Hardin was the original owner of the land, but whether or not he lived on the land is unknown. No archaeological evidence was found at the site to suggest that he lived there. It is likely that Benjamin Hardin lived on some other part of his land holding.

As mentioned earlier, Benjamin Hardin sold Enos Hardin the property in 1825 after which time Enos lived on and farmed this property. Enos Hardin was not found in the 1820 Federal Census, but he does appear on the 1830 Owen County schedule. He is listed as Ennis Hardin and his household included: himself, between 30 and 40 years old, one son under 5 years, two sons between 15 and 20 years, one daughter under 5 years, and a wife between 20 and 30. In addition, there are two slaves between the ages of 10 and 24 years old.

Looking at tax assessment books from counties often reveals useful information on the wealth of heads of households on a year to year bases over an individual's entire life. The earliest tax records for Owen County are very basic, but reveal the value and acreage of land owned, the types and quantity as well as the value of livestock, and the quantity and value of enslaved workers (Table 3.2).

The tax assessments revealed a significant growth of wealth for Hardin from 1820 until 1825. This was a major turning point for him. His total value, according to the tax assessment, escalated seven times from $100 in 1819 to $2,300 in 1825. Interestingly, Hardin was listed as having land in three counties during 1821, 1822, and 1823. These lands were located in Owen County (234 acres), Henry County (600 acres), and Franklin County (144 acres). Possible explanations for such a large land acquisition is that Hardin may have inherited the tracts or inherited money or received a loan.

These large amounts of land holdings allowed him to sell his property in Henry and Franklin counties a few years after acquiring them and expand his acreage and wealth in Owen County. Between 1825 and 1840 there appears to have been considerable selling and purchasing of land. A possibility for such fluctuation may be an adjustment to the depression in the early 1820s and a panic from 1837 to 1843.

Table 3.2 Owen County Tax Book Record of Enos Hardin

Year	Land	Horses/ Mares	Cattle	Hog	Slaves	Child	Personal	Total Value
1819	blank	blank	blank	N/A	2/$100	N/A	N/A	$100
1820	blank	3	blank	N/A	blank	N/A	N/A	$300
1825	550	2	blank	N/A	1	N/A	N/A	$2300
1830	blank	3	blank	N/A	1	N/A	N/A	$550
1835	200	6	$100	N/A	2	N/A	N/A	$500
1840	378	6/$180	15/$70	N/A	2/$2300	4	N/A	$6,520
1845	425/$4000	5/$150	12/$25	N/A	11/$3000	4	N/A	$7,290
1851	100/$1000 400/$4000	14/$700	--/$100	N/A	10/$4000	--	N/A	$9,500
1855	400/$4800	12/$1000	8/$20	40	12/$4200	4	N/A	$10,020
1858	388/$5820	12/$760	7/$50	20	12/$6000	2	$5	$12,835

In 1840 Hardin's estate value escalated up to $6,520 and in the years following this he became considerably more prosperous. By 1858 his total value was as high as $12,835. Some of this growth is no doubt attributable to inflation, but the dramatic increase in slaves from two in 1840 to 12 in 1858 is substantial. Likewise, there were only five to six horses and/or mares from 1835 to 1850 and then as many as 12 and higher from 1851 to his death in 1863, a considerable increase. So what caused such a dramatic increase in wealth for Hardin?

Even though Hardin does not appear to be buying and selling much land, his farm production was substantial. Hardin's later farm production was examined using the U. S. Agricultural Census (Table 3.3). Although the census was first conducted in 1850 and every 10 years thereafter, it provides additional data on a part of Enos Hardin's life after 1850, particularly the type and amount of livestock and produce. According to the 1850 census he was growing large amounts of corn as well as other commodities. The importance of corn cannot be overlooked. Farming in Kentucky began with the cultivation of corn. Not only was Kentucky soil suited to producing surpluses of corn, but

Table 3.3 Agricultural Census (1850 and 1860) Data for Enos Hardin

	1850	**1860**
Acres of land improved	200	240
Acres of unimproved land	200	148
Cash value	$6,500	$6,208
Value of farm implements and machinery	$150	-
Horses	18	6
Milch cows	4	2
Working oxen	9	2
Other cattle	1	2
Sheep	8	-
Swine	30	-
Value of livestock	$978	$500
Bushels Indian corn	2,500	500
Bushels oats	300	-
Bushels wheat	-	100
Bushels rye	-	100
Pounds wool	40	-
Pounds butter	250	-
Tons hay	24	-
Pounds beeswax/honey	300	-
Value of homemade manufactured products	$100	-
Value of animals slaughtered	$300	$150

the growing of corn was seen as enriching the land and making it suitable to slow European grains like wheat and oats (Friend 1999). In fact, one historian maintains that "The culture of corn produced sustenance early in the settlement process, became the foundation for future farming and farm-making, and early evidenced the commercial mind set of the Kentucky farmer (Friend 1999:136-137)." Corn could be ground for meal or distilled into liquor to sell, to trade, and use at home. The fodder was fed to livestock. Corn, for Kentuckians, was the perfect all-purpose crop.

Although Hardin is not listed as growing tobacco in 1850 or 1860, there is written evidence in his will of 1863 that tobacco was grown on his land. In the will his son Enos is mentioned as

having a crop of tobacco on the land which was not to be considered as part of the elder Enos's estate. Why there was no evidence of tobacco on either the 1850 (Table 3.3) or the 1860 (Table 3.4) agricultural census is unknown. A few possibilities include crop rotation, a recording error, or the crop was not reported on his tax record. No tax record for the younger Hardin, who lived with his father until the time he died, was found. At any rate, we know tobacco was produced at least in 1863 and it is likely it was produced sometime before that. There was an increase in the demand for tobacco and hemp in the mid nineteenth century and such a crop, even a small one, would have raised his wealth significantly.

Hardin's family size also increased significantly from six family members in 1830 to nine in 1840. His number of enslaved African Americans also grew from two in 1830 to eight in 1840. Hardin is listed as a farmer in the 1840 census with four of the family members employed in the field. Hardin's household in 1840 included: himself, an illiterate, between 40 and 50, one son under 5 years old, one son between 10 and 15, one son between 15 and 20, one daughter under 5 years old, two daughters between 5 and 10, one daughter between 10 and 15, and a wife between 30 and 40.

Slaves in the census numbered eight and included two boys less than 10 years old, four girls less than 10 years old, and two females between the ages of 24 and 36. Although the 1840 tax record lists only two slaves, the 1840 population census lists eight. The tax record was either incorrect or the slaves were bought after the tax record was conducted and the census was recorded afterwards. By 1845, Hardin had 11 slaves, a significant amount for the county.

By 1850 Hardin's family included: himself, 53 years old, his wife Elizabeth, 50 years old, daughters Amanda Ann (18), Sally Ann (12), America (no age), and sons George (12) and the younger Enos (7). All were born in Kentucky and George, Sally Ann, and America all attended school. Both Enos and Elizabeth were listed as illiterates. Enslaved African Americans listed on the separate 1850 Slave Census included mostly women and girls aged in descending order from 37, 35, 18, 15, 13, 1, and 6 months. Enslaved men and boys numbered five, aged 19, 15, 13, 5, and 3 years old.

By 1860 "Enis" Harden was 63 years old, widowed, and living with him were his sons George (21) and Enos (18). Another male named S.W. House (55) also resided there. He had his own estate value listed at $1,500 and his occupation was a farmer. It is unclear whether he was a tenant, border or related. Hardin and sons were all farmers and his real estate value was $6,208 while his personal estate was $8,770. Tax records in 1858 showed 12 enslaved workers. Hardin's grain and livestock produce is somewhat different than 10 years earlier. He produced less corn than he had in 1850 and had switched from oats to wheat and rye. He also downsized his livestock considerably although he still retained 12 slaves to work the large farm. Although Hardin's household decreased in size, the demand for labor continued, unabated. The fact that his slave workforce did not decrease is not surprising, as Hardin, aged and possibly unable to work the farm, also had lost the help of three daughters and a wife, greatly reducing his household and farm production.

Enos Hardin died in 1863 and his will was recorded in the county records (Owen County Will Book E:215). He stipulated in his will that after his debts were paid off to sell his farm on which he resided, provided the land would bring 20 or 21 dollars per acre. His land was listed as about 388 acres, the same as the 1858 tax record and the 1860 agricultural census show. If the land did not sell, he requested that it should be leased or rented out.

His personal estate, except two colts, was to be sold and divided equally between his children: Livingston Hardin, Martha Montgomery and children (Mary J., William, Marsha, and Sarah), Amanda Daily, George Thomas Hardin, Sarah Ann Thornburg, Enos Hardin, and America Hardin. The two colts were to remain with the youngest son, Enos and daughter, America. He also gave to America a female slave, Eka. There were 10 remaining slaves who were also listed and included: three women (Sally, Rhody, Polina), two girls (Sarah and Helen), and five males (Renkins, Arthur, Wyatt, Benjamin, and Warren). The slaves were to be equally divided between the children if possible and if they had to be sold Hardin asked " . . . that the woman Polina and her two youngest go together" (Owen County Will Book E:215).

The youngest son Enos also had a colt as well as the crop of tobacco on the land which was not to be considered part of the senior Enos's estate. Besides the mention of the tobacco grown by his son, of interest in the will is evidence of irrigation activities. There is mention of a ditch excavated by both Hardin and neighbor W.J. Spires "which is to remain as it is" (Owen County Will Book E:215).

It appears from the information that Hardin was a wealthy man. Hardin was engaged in commercial farming, actively producing surpluses of grains and cash crops for sale or barter at local and readily accessible markets. The production of a staple crop like tobacco brought greater profits or could be used as "commodity money" in local markets (Friend 1999:136). Although he did not list tobacco on census schedules or tax books, we have documentation that his youngest son was growing tobacco on his father's land, and so may have paid a rent or share to his father. As with most early Kentucky farms, farm-making began with corn cultivation. Indian Corn also provided commodity money but its uses were versatile. Hardin was also growing an extremely large quantity of Indian corn in 1850, produced other cash crops and owned considerable livestock. Much of his produce brought him both a sizable profit from selling and bartering and probably supported his household diet easily. Of the 10,444 residents of Owen County, 360 were slave owners. The majority of these (74%) owned one to five slaves. Hardin owned between 10 and 12 slaves for almost 20 years. His slave holdings rank him within the upper 10% of other slave owners in the county. Hardin went from very little in 1825 to being a man of considerable wealth and property when he died in 1863.

Post-Hardin Occupation

Between the years 1863 and 1870 the 15On55/57 site was still part of the Hardin estate. In 1870 however, W.H. (William Henry) Walker purchased the land at public auction (Deed Book U:160) and then sold it to Grandison (or Granderson) Shipp in 1871 (Deed Book U:364) who then sold it back to Walker in 1873 (Deed Book W:259).

Grandison Shipp was a farmer who resided in the Monterey District according to the census of 1860. He had a small family: himself (29), Asmilda (25), Louisa (3), and Henry T. (1). The value of his real estate was $1,000 and his personal estate $350. He was not listed in the tax records for that year; however, listing in the 1867 tax records revealed that he was growing mostly tobacco (4,000 pounds) and corn (200 bushels).

Shipp inherited a portion of 92 acres, located on Cedar Creek, along with his siblings from the estate of his father in 1850 (Deed Book K:257) and also bought a couple more tracts of land 1869 to 1871. In 1869 he purchased 100 acres on Cedar Creek from William G. Haydon (Deed Book T:336) and in 1870 he purchased 100 acres on Cedar Creek from the same man (Deed Book U:55).

The 70 acres of land Walker bought was sold to Shipp for $730 in 1871 and was described as being on the Monterey to Frankfort Pike and adjoined to the lands of John G. Haydon, Captain Sam Sanders, and Elgin Spires and being the same purchased by W. H. Walker (Deed Book U:364). Then in 1873 Shipp sold the land back to Walker for $850. Grandison Shipp was living on the land at least for the short time he owned it. Proof of this is found on the deed of sale to Walker " . . . land on which I the Said Shipp now resides and bounded on the north by the lands of Jno. W. Smith and Samuel Sanders on the east by the lands of John W. Smith on the west by the lands of W. R. Karsner and on the south by James M. Cash now the lands of said W.H. Walker containing fifty acres more or less and all the estate title and interest of the said Grandison Shipp" (Deed Book U:364).

We know from the above information that Shipp lived on the land for the two years he owned it. It is also possible that he might have lived at the site before his purchase. Another possibility is that the younger Enos Hardin remained there until it was sold. It is likely that members of Enos Hardin's family lived there while the estate was settled. Unfortunately, there was no document found to support either possibility. What is certain is that after 1873 the residence was abandoned. The next owner, W. H. Walker, a retail merchant, lived in Monterey in 1870. Rather than leasing out his lands he appears to have farmed them. Being the owner of his own business in Monterey, Walker's direct involvement with the farming was doubtless very minimal.

An 1883 atlas of Owen County (Lake 1883) shows the estate of Walker as a house on the west side of U.S. 127, across from the Hardin farmstead. A steam powered saw mill is listed very near the site, but it does not appear to be part of it since archival information shows no mill on the site property and no evidence was recorded archaeologically. Looking closely at the map, the mill appears to be situated close to or on Cedar Creek and clearly outside of the righ of way. It also appears that very little change has occurred to the highway location suggesting that the Hardin residence was no longer there by 1883. Questions then arise about who built the newer house across the road and when. W.H. Walker is the likely possibility since it would have been very close to his business in town. Other possibilities include Shipp or even Hardin, although this is unlikely. Based on archival evidence, the site was abandoned after 1873.

After W. H. Walker, the land remained in the family until it was sold in 1892 by P.Y. Walker and R. J. Peak to J.W. Lawrence (Deed Book 38:243). The land is ". . . bounded by Karsner and J. W. Smith farm on which Harry Pace now lives. Same land as granted Grandison Shipp to W. H. Walker." In 1907 Lawrence sold the land to Alex Williams, Jr. (Deed Book 51:265).

Chapter Summary

Archival research has revealed that 15On55/57 was a farmstead owned by Enos Hardin from 1825 until his death in 1863 and abandoned about 1873. Hardin was a prosperous farmer who operated a large, mixed farming operation that produced Indian corn, other grains, livestock, and other commodities like honey and butter for household use and commercial profit. Although this type of farming with its seasonal demands for labor militated against the use of large numbers of slaves, Hardin ranked in the upper 10% of slave owners in Owen County. The location of the Hardin farmstead so near Monterey, on the Kentucky River, allowed for direct access for selling and bartering of his own produce. Such access to local and national markets enabled him to procure newly arrived merchandise and participate in the consumer economy of the nineteenth century. Monterey was a major hub throughout much of the nineteenth century and would have provided most goods and merchandise for Owen County and surrounding counties. It was the place where farmers brought their tobacco and other commodities to be bought or bartered, stored and eventually shipped by river boat to regional, national and international markets.

Although little information exists about who inhabited the house after Enos Hardin's death in 1863, it is possible that Enos, Jr. continued to live there while the will was probated and t the land leased as the senior Hardin requested in his will if the property could not be sold. We know from historical documents that Grandison Shipp bought the property in 1871 and owned it until 1873 when he sold it to W. H. Walker. While owning the property, evidence suggests that Shipp also lived there. By 1873, however, the residence is abandoned. W. H. Walker, who bought the property in 1873, lived in town and may have also built a house to the west of the site since an 1883 atlas indicates a dwelling under his estate. From the late nineteenth century, the property has been continually used for farming. The dwelling at the Hardin farmstead may have been torn down for cultivation as early as the 1870s. Only the barn located at the Hardin farmstead may have been used into the late nineteenth century. Archaeological evidence discussed in the following chapter on the field investigations suggests that the house site was abandoned by 1870 and the large outbuilding or barn in the outer farmlot continued to be used by later owners of the property.

Chapter Four

FIELD WORK RESULTS

Introduction

This chapter describes the findings of the different phases of fieldwork at the Hardin farmstead. The Hardin farmstead is located in the Outer Blue Grass region of Kentucky within a plowed alluvial floodplain between existing U.S. 127 and Cedar Creek (Figures 1.1). Only a field road and stone fence separate the houselot (15On55) and outer farmlot (15On57). The field road, the stone fence, and an intermittent stream parallel one another east - west.

Previous Phase I Archaeological Investigations

The farmstead was initially located and recorded as two sites by Jack Schock in 1989 as part of a Phase I survey for relocation of U.S. 127 in Owen and Franklin Counties (Schock 1989). Site 15On55 (houselot) was defined as a dwelling house site with a historic artifact scatter entirely within the right of way and situated in the northwest corner east of U.S. 127 and south of a field road and stone fence. Site 15On57 (outer farmlot) was defined as a continuous light lithic scatter extending from the north side of the stone fence northward 200 feet. Neither site was shovel tested as the plowed field conditions allowed a surface collection. Site 15On55 was identified as at least 150 feet in diameter and produced a historic assemblage that consisted of shell edged whiteware, plain whiteware, lead glazed redware, salt glazed stoneware, green bottle glass, and a few chert flakes (Table 4.1). Schock suggested that 15On55 was a mid-nineteenth century site and recommended testing (1989).

Table 4.1 Houselot (15On55) Phase I Artifacts From Surface

Artifact Group	**Total**
Kitchen Group	
Whiteware	21
Stoneware	2
Redware	1
Bottle/Jar Glass	1
Historic Total	25
Prehistoric Total (2Utilized Flake & 1 Waste Flake)	2
Grand Total	28

Schock also recommended testing site 15On57 after he recovered an Archaic point, three bifaces, and about 40 chert flakes over a very large area (183 m x 61 m). The only visible surface feature was a dry laid stone fence. The fence was in place when U.S. 127 was built in the 1930s.

Phase II Investigation

Phase II testing of the Hardin farmstead (i.e., 15On55 and 15On57) was undertaken by WSA from September 13 to October 12, 1994. The Phase II investigations consisted of a controlled surface excavation, hand excavation of 11, 1 m x 1 m test units, one 2 m x .5 m trench, several round shovel probes to locate concentrations followed by 36 0.25 m^2 shovel test probes (STPs), a 1 m x .5 m trench, and three backhoe trenches (Figures 4.1, 4.2, and 4.3). A total of 3,441 artifacts was

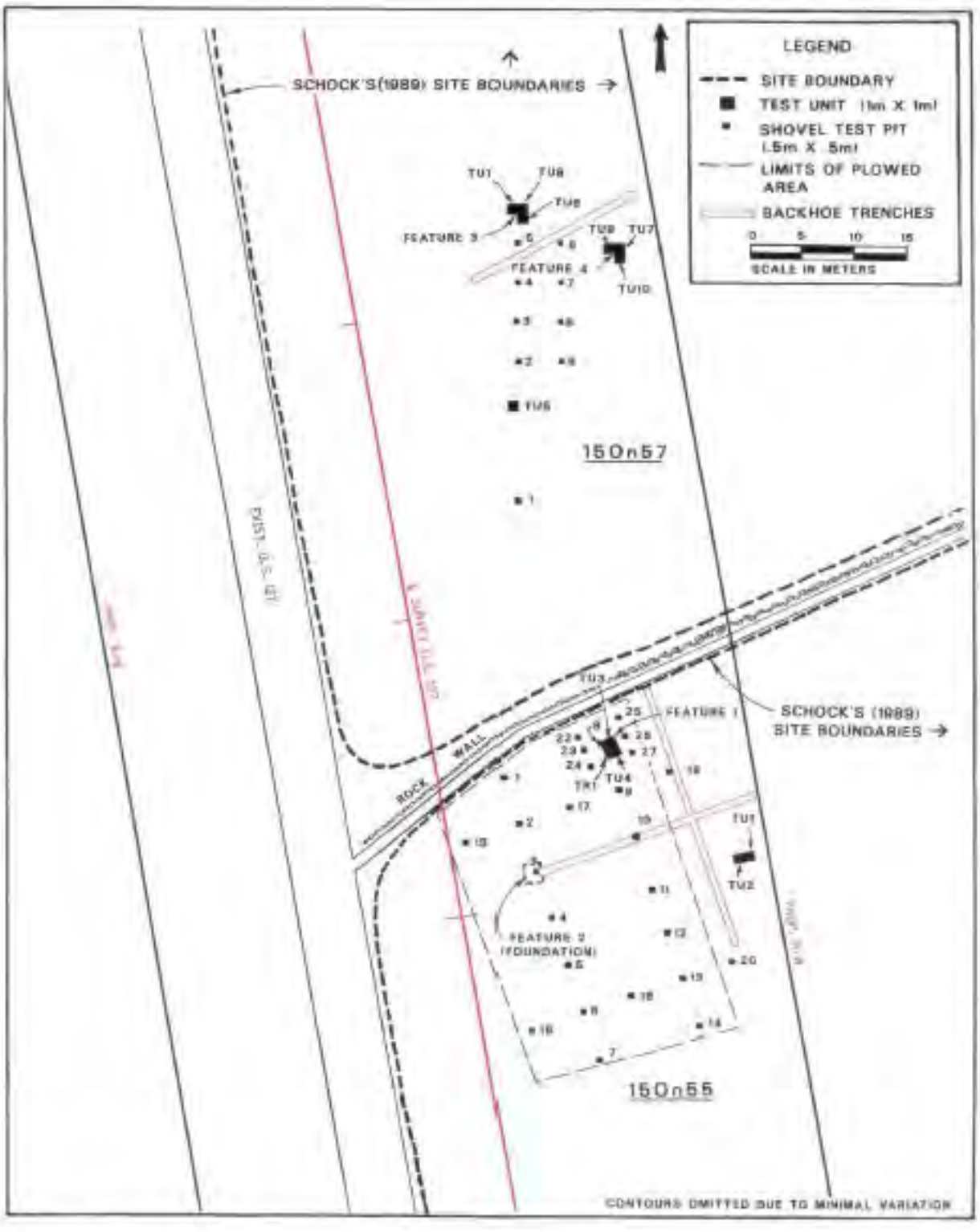

Figure 4.1 Phase II Plan View of Hardin Farmstead (15On55/57)

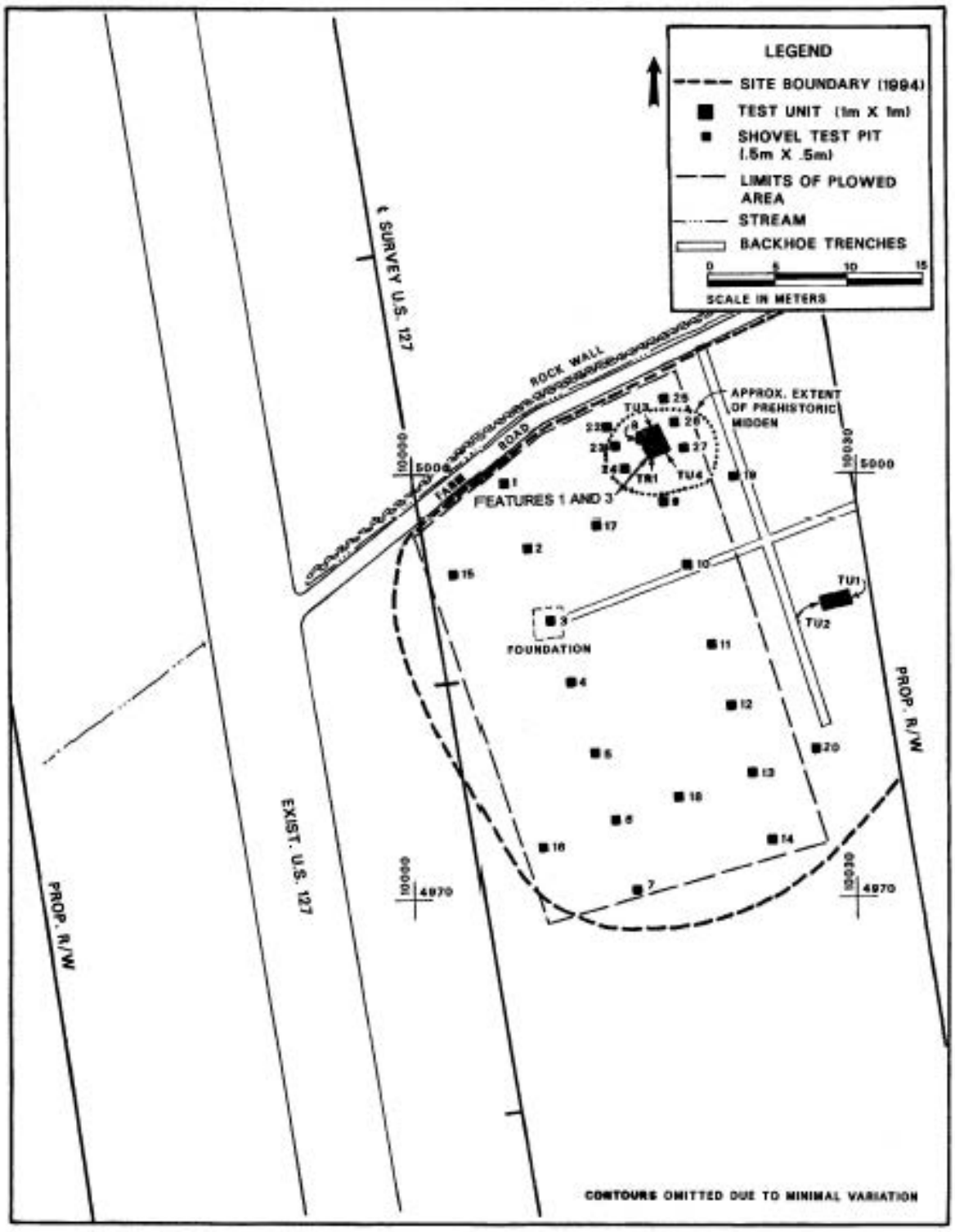

Figure 4.2 Phase II Map of the Houselot (15On55)

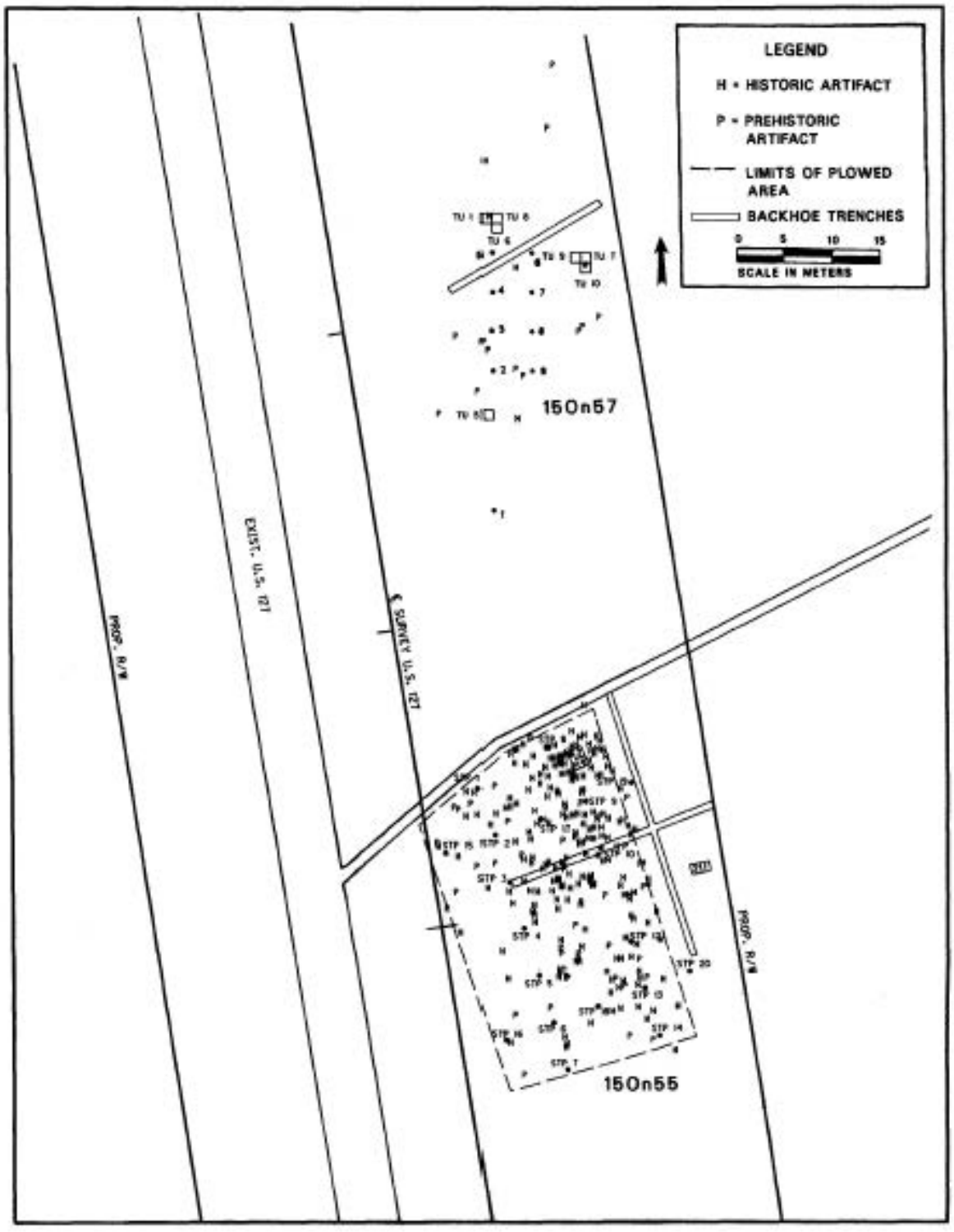

Figure 4.3 Phase II Surface Artifacts at the Hardin Site

recovered from the Hardin farmstead. The combined Hardin artifact assemblage included 343 artifacts from surface collection and 3,098 from shovel test probes (STP) and unit excavation. Overall, considerably more historic artifacts (n=2,489) were recovered compared with prehistoric (n=955). Of these artifacts, 2,704 were recovered from the houselot and 740 from the outer farmlot. A total of 2,238 historic artifacts was recovered from the surface, STPs and unit excavation of the houselot and 251 historic artifacts were recovered from the barn area or outer farmlot. As for the prehistoric assemblage, 466 were recovered from surface, STPs and unit excavation of 15On55 and 489 from 15On57 (Table 4.3). Table 4.2 lists the historic artifacts recovered from the houselot, Table 4.3 lists the historic artifacts from the outer farmlot, Table 4.4 lists the prehistoric artifacts recovered from the houselot and 4.5 lists the prehistoric artifacts from the outer farmlot.

From the testing, four subsurface features were identified in the houselot area of the site and two subsurface features were identified in the outer farmlot. These included a possible Early/Middle Woodland pit (Feature 1), a possible prehistoric midden, a dry laid limestone foundation (Feature 2), and a historic intrusion (Feature 3) in the houselot area and two large postholes in the outer farmlot area.

Houselot (15On55)

Within the houselot, plowing and discing was conducted over an area approximately 40 m x 25 m or 1,000 m^2, resulting in the identification of a large concentration of historic artifacts and a light scatter of prehistoric material (Figure 4.3). A systematic surface collection was conducted by walk over transects spaced less than 2 m apart immediately after discing. In all, 343 (243 historic and 100 prehistoric) piece plots were mapped with the laser transit and each plot given an individual identification number.

The greatest concentration of historic artifacts was defined in the northeastern and eastern area of the houselot while the rest of the area was covered by only a moderate scatter. Most of the historic artifacts within the heaviest concentration were kitchen-related, and of these, bottle glass and ceramics were most prominent. Besides the kitchen material, a moderate amount of architectural debris was recovered and a very light amount of personal, clothing, and furnishing-related material. The heavy concentration of kitchen material mixed with architectural-related material in the northeastern area suggested that a domestic refuse area was possibly located there. It was concluded that an associated dwelling may be nearby. As for the prehistoric artifacts, most of the material was light and concentrated over the western and southern portions of the site. Due to the sparseness of material (only 20% of the total surface material was prehistoric) artifact densities were ambiguous. The lack of projectile points and tools, with, the low frequency of debitage provided very little information on activities that might have occurred in this area.

The stratigraphy of the houselot was rather complex for a plowed area; a condition thought to be the result of both natural and cultural action. The typical profile had a dark brown 30 cm plowzone of 10YR 4/2 dark grayish brown (Zone I) overlaying a mottled transitional zone (Zone II) to a 10YR 5/6 yellowish brown subsoil (Zone III). STPs placed along the western and southwestern area of the houselot revealed a dark brown sandy silt alluvial soil was under the plowzone. In STPs where this occurred the dark soil continued to depths of up to 92 cm below surface (Figure 4.4). Elsewhere across the houselot, subsoil was reached in some probes at 60 cm below surface (Figure 4.5).

Table 4.2 Historic Artifacts from Hardin Houselot (15On55)

Artifact Groups	Phase II	Phase III	Total	Percent
Kitchen Group	**1522**	**3305**	**4827**	**61.23**
Bone China	43	93	136	
Creamware	12	7	19	
Pearlware	125	203	328	
Porcelain	23	25	48	
Whiteware	583	1417	2000	
Ironstone	98	52	150	
Stoneware	89	90	179	
Redware	155	309	464	
Yellow ware	19	45	64	
Unident Refined Earthen	26	97	123	
Table Glass	40	97	137	
Bottle/Jar Glass	118	185	303	
Unident Glass	110	372	482	
Melted Glass	19	56	75	
Bone Handle	-	4	4	
Utensils, Kitchen	1	2	3	
Kettle	7	5	12	
Other Kitchen Metal	1	-	1	
Fauna	53	246	299	
Architecture	**605**	**2084**	**2689**	**34.11**
Nails, Wrought	2	3	5	
Nails, Early Cut	2	1	3	
Nails, Late Cut	137	516	653	
Nails, Cut Unknown	67	322	389	
Nails, Wire	-	7	7	
Nails, Unidentified	38	60	98	
Nuts/Bolts/Screws	1	3	4	
Door Hardware	1	5	6	
Architectural Metal	6	7	13	
Flat Glass	208	697	905	
Brick, Fragments	6	38	44	
Tile/Ceramic	2	-	2	
Mortar	132	421	553	
Architectural Stone	-	4	4	
Chinking/Daub	3	-	3	
Clothing	**14**	**33**	**47**	**0.6**
Buttons & Clothing Fasteners	14	33	47	
House Furnishings	**7**	**38**	**45**	**0.57**
Lamp Chimney	4	33	37	
Other Furniture Glass	1	-	1	
Other Light/Electrical Glass	1	-	1	

Table 4.2 continued overleaf

Table 4.2. Historic Artifacts From the Houselot, 15On55 (contd.)

Artifact Groups	Phase II	Phase III	Total	Percent
Stove Part	1	5	6	
Activities	**3**	**9**	**12**	**0.15**
Awl/Auger	-	1	1	
Bar Stock (Blacksmithing)	-	3	3	
Other Blacksmithing Tool	1	-	1	
Machinery:Chain	-	1	1	
Machinery:Other	-	1	1	
Other Metal Tool	2	3	5	
Personal	**15**	**64**	**79**	**1.0**
Coins	-	3	3	
Jewelry	-	1	1	
Marble (Stone)	-	1	1	
Marble, Hand blown (Glass)	-	1	1	
Toy Marble (Ceramic)	-	2	2	
Mirror	-	1	1	
Rubber Comb	-	1	1	
Slate Pencil	1	4	5	
Writing Slate	7	38	45	
Smoking Pipe	3	8	11	
Pocket Knife	2	1	3	
Unidentified Key or Pin	-	1	1	
Arms	**0**	**5**	**5**	**0.06**
Gun flint, Local Stone	-	1	1	
Rimfire Cartridge .22 Caliber	-	3	3	
Percussion Cap	-	1	1	
Transportation	**6**	**18**	**24**	**0.3**
Animal Shoe Nail	2	3	5	
Metal Animal Shoe	3	10	13	
Metal Harness Part	-	4	4	
Metal Wagon Part	-	1	1	
Other Transportation Metal	1	-	1	
Coal/Cinders/Fuel	**18**	**27**	**45**	**0.57**
Other	**48**	**62**	**110**	**1.4**
Other Metal	26	52	78	
Plastic	-	10	10	
Stone	22	-	22	
Total	**2238**	**5605**	**7883**	**99.00**

Table 4.3 Historic Artifacts From the Outer Farmlot, 15On57

Artifact Groups	Phase II	Phase III	Total	Percent
Kitchen Group	**107**	**33**	**140**	**47.62**
Bone China	1	-	1	
Pearlware	2	-	2	
Porcelain	1	-	1	
Whiteware	15	2	17	
Ironstone	2	-	2	
Stoneware	1	-	1	
Redware	2	-	2	
Table Glass	1	-	1	
Bottle/Jar Glass	48	2	50	
Undetermined Glass	4	2	6	
Kettle	1	-	1	
Fauna	29	27	56	
Architecture	**132**	**7**	**139**	**47.28**
Nail, Late Cut	37	3	40	
Nail, Cut	40	3	43	
Nail, Unidentified	46	-	46	
Metal Wire	1	-	1	
Metal Door Handle	1	-	1	
Flat Glass	6	1	7	
Architectural Stone	1	-	1	
Clothing	**2**	**-**	**2**	**0.68**
Buttons/Rivets/Fasteners	2	-	2	
Furnishings	**4**	**2**	**6**	**2.04**
Lamp Chimney	4	2	6	
Personal	**2**	**-**	**2**	**0.68**
Pocket Knife	1	-	1	
Thimble	1	-	1	
Transportation	**1**	**1**	**2**	**0.68**
Metal Animal Shoe	1	1	2	
Fuel	**2**	**-**	**2**	**0.68**
Charcoal	2	-	2	
Other	**1**	**1**	**2**	**0.68**
Unidentified Ceramic	1	-	1	
Total	**251**	**44**	**295**	**100.00**

Table 4.4 Prehistoric Artifacts From the Hardin Houselot, 15On55

Artifact Groups	Phase II	Phase III	Total	Percent
PP/K		1	1	0.11
PP/K Distal		2	2	0.23
PP/K Medial		1	1	0.11
PP/K Fragment	6		6	0.69
Preform		9	9	1.03
Biface	1	17	18	2.06
Biface Fragment	2	8	10	1.15
Uniface	1	12	13	1.49
Core	10	6	16	1.83
Primary Flake	75	152	227	26.00
Secondary Flake	94	81	175	20.05
Tertiary Flake	143	118	261	29.90
Rock	102		102	11.68
Other	31		31	3.55
Ceramic	1		1	0.11
Total	**466**	**407**	**873**	**99.99%**

Table 4.5 Prehistoric Artifacts From the Outer Farmlot, 15On57

Artifact Groups	Phase II	Phase III	Total	Percent
PP/K	4		4	0.75
Biface Fragments	4	1	5	0.93
Core	8		8	1.49
Primary Flake	26	13	39	7.28
Secondary Flake	65		65	12.13
Tertiary Flake	170		170	31.72
Broken Flakes	93	4	97	18.09
Blocky Fragments	118	29	147	27.43
Utilized Blocky Fragments	1		1	0.18
Total	**489**	**47**	**536**	**100%**

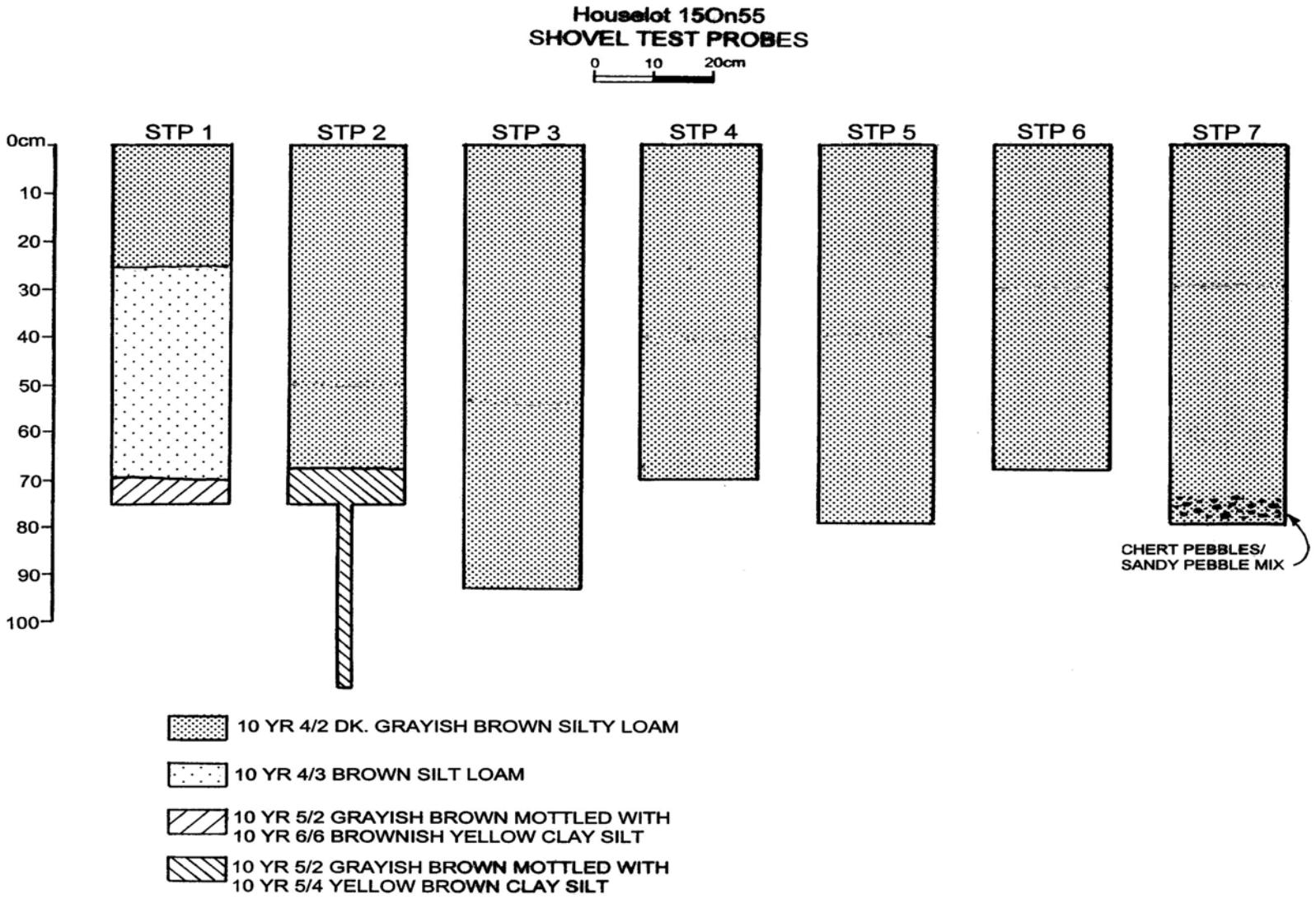

Figure 4.4 Houselot (15ON55) Soil Profiles

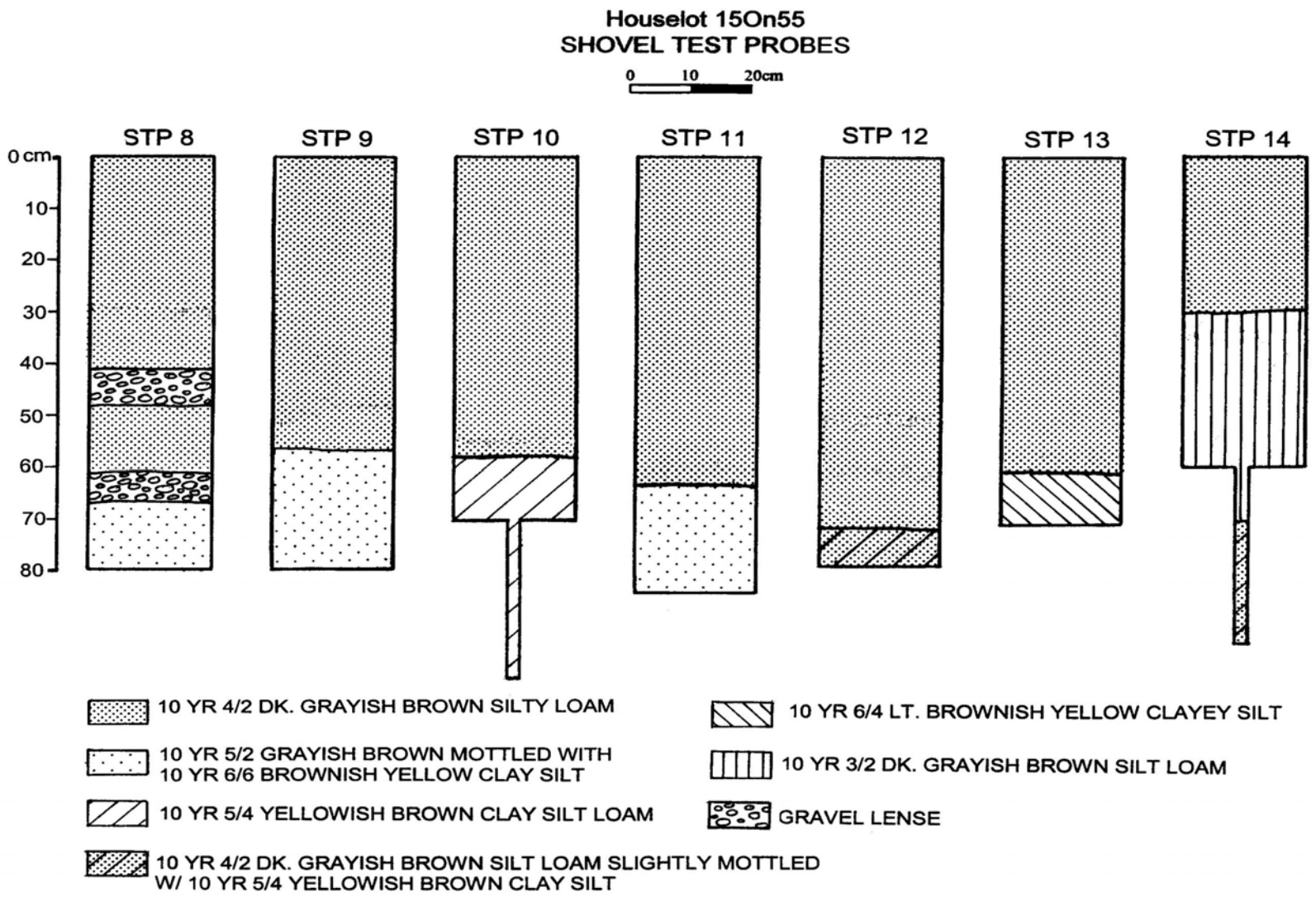

Figure 4.5 Houselot (15On55) Soil Profiles

An unusual episode of natural gravel deposits occurred in STP 8 where buried alluvial deposits were identified, and unique to this probe (Figure 4.5). One gravel layer was encountered at 42 to 48 cm below surface in the probe and a second one at 60 to 66 cm below surface. Historic and prehistoric artifacts occurred within the first gravel layer, which was thought to be an historic intrusion. Below this was a darker soil that was devoid of gravels and contained two flakes. The dark soil continued 15 cm and was overlaid by another gravel layer that measured 6 cm in thickness and was underlain by sterile subsoil at 66 cm below surface. Excavation of Trench 1 (.5 m x 2 m north – south) and Units 3 and 4 (1 m by 1 m) revealed a prehistoric pit (Feature 1) and midden, and an historic intrusion (Feature 3).

FEATURE 1

Feature 1 was the second gravel layer in STP 8. Running east - west across the southern portion of Trench 1 and Units 3 and 4, Feature 1 was a roughly linear stain, originating beneath a transitional zone, Zone II (Figure 4.6). Prehistoric material included two secondary flakes, seven tertiary flakes, one broken flake, two blocky fragments, one heated chert, and cobbles and pea-size gravel. The base of the feature was roughly basin - like and sloped downward toward the south. Color was a 10YR3/2 very dark grayish brown and texture a silt loam. An Adena projectile point was recovered from the base of Feature 1, Unit 4 at about 70 cm below surface. Flotation samples and column samples were taken from the feature but produced very little. An indeterminate mammal bone fragment and four wood specimens, (one piece of hickory) (Appendix A) were identified.

MIDDEN

The darker soil recorded beneath the historic intrusion in STP 8 was at the same depositional level as Feature 1, but was void of the cobbles (cobbles being greater than 3 inches in diameter) and gravel (Figure 4.6). Soil was a 10YR3/2 very dark grayish brown to 10YR3/3 dark brown silt loam and was defined within the southern half of Trench 1 and Units 3 and 4, sloping upwards to the north and continuing beyond the east and west walls. Only prehistoric artifacts were recovered from this zone which included a moderate amount of debitage. Interpretation at this point was that this might be the remains of a buried prehistoric midden.

FEATURE 3

Feature 3 (Figure 4.6) was the first gravel lens encountered in STP 8 and originated within and beneath the plowzone, cutting into a transitional zone and two dark zones below to a depth of 50 cm. The feature extended both south, east, and west beyond the limits of the trench and was irregular in plan view and profile. Artifacts recovered from this feature were few and included nineteenth century kitchen artifacts (an undecorated bone china sherd, three undecorated whiteware sherds, and a bottle or jar base with a pontil scar), architectural artifacts (an unidentifiable nail and mortar fragment), and an unidentifiable metal fragment. Interpretation at the time was a historic intrusion.

In addition to Trench 1 and Units 3 and 4, six STPs (22 -27) were strategically placed outside the excavation block in order to define the limits of the one historic feature and two prehistoric features (Figures 4.1 and 4.2). All but STP 22 encountered the midden, which was considered to be fairly localized (8 m x 8 m). It appears that alternate scouring and deposition of pebbles and cobbles has destroyed the carbonized remains and impacted the possible feature and midden area, making interpretation difficult. This area was adjacent to the intermittent stream and during heavy rains, run off from the uplands across the turnpike would flood the channel. This type of flooding would result in the deposition of layers, pebbles and cobbles, much like a Point Bar Sequence.

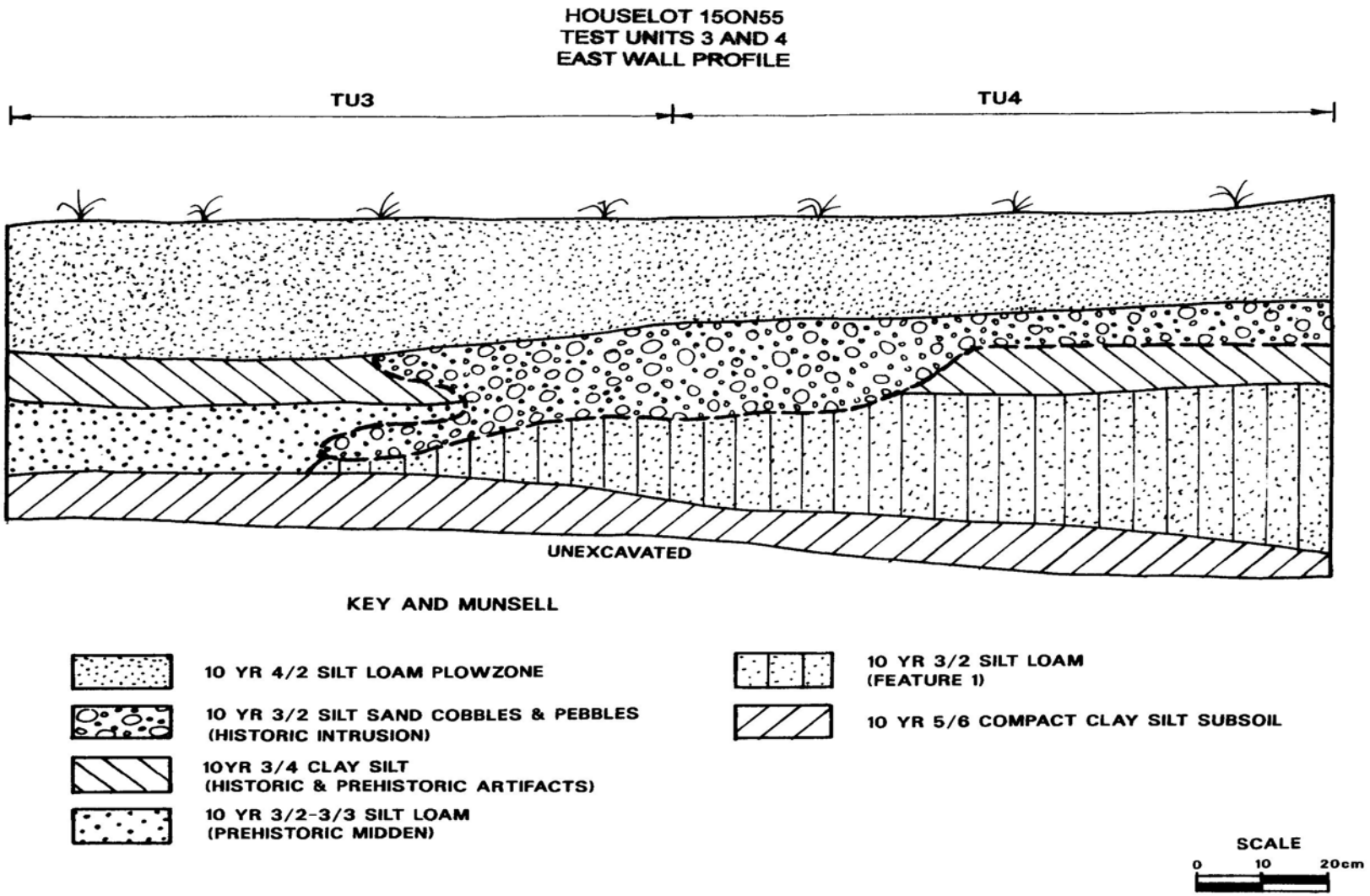

Figure 4.6 Test units 3 and 4 Profile, Houselot

The last part of the Phase II excavation consisted of two long backhoe trenches on a cross axis to investigate the unusually deep alluvial soils. One trench ran 27 m north - south and the other 23 m east - west. Both trenches showed the dark sandy zone extending toward the northern portion of the site. The best interpretation at the time of the Phase II investigation was that the zone was an old swale, sinkhole(s), or abandoned stream channel filled with alluvial deposits. Furthermore, the absence of historic or prehistoric artifacts from undisturbed parts of this channel suggested that it was very old. More investigation would be needed to confirm this interpretation.

FEATURE 2

At the western end of the east - west trench another feature (Feature 2) was encountered beneath the plowzone (Figures 4.1 and 4.2). Only partially uncovered during Phase II, the feature was thought to be either a limestone chimney pad or foundation.

Phase II investigations led to the interpretation that 15On55 was the location of a houselot with a domestic structure and midden area that dated from the early to middle nineteenth century. An Early/Middle Woodland component was also present and interpreted as a possible Adena habitation locale.

Outer Farmlot (15On57)

Of four features identified in the Phase II investigation of the outer farmlot, two were post holes (Features 3 and 4) and two (Features 1 and 2) were found to be naturally occurring. Surface collecting was first conducted over a large area since the field had been plowed previously by the landowner. The result was the identification of a light scatter of historic and prehistoric material (Figure 4.3). Surface collection was conducted in the same way as the houselot by walk-over transects spaced less than 2 m apart. In all, a total of 207 (54 historic and 153 prehistoric) mapped, surface piece plots were identified and catalogued.

Unlike the houselot, only a light concentration of historic artifacts was defined from the surface collection, and no discernable prehistoric concentration was identified. Instead, the prehistoric artifacts consisted of a continuous light scatter of nondiagnostic debris across the area (Figure 4.3). Of the historic artifacts, most were machine-made bottle glass fragments (n = 45), no doubt a result of roadside discard from adjacent U.S. 127 to the west. The bottle fragments were mostly concentrated between road stations 740 + 00 and 745 + 00. Of the few nineteenth century artifacts recovered, stoneware, undecorated whiteware and ironstone, and a pearlware sherd were identified as a light concentration in the southern portion of the area near the houselot (Figure 4.3).

Shovel probes, spaced 4 m apart north - south and 2 m apart east - west, were excavated across the site area with the highest density of artifacts (Figures 4.3 and 4.7). What the probes revealed was a deep brown 10YR 4/3 continuous alluvial deposit with some pea - size gravel over a meter in depth (Figure 4.8). The deposit was deepest in STPs 5 and 6 and decreased in depth gradually to the south where probes extended about 30 cm below surface, the depth of the plowzone. Very few artifacts were recovered from the probes and no artifacts were recovered below 40 cm.

FEATURE 3 (Posthole)

Feature 3, a large posthole, was discovered through excavation of a line of five 1 m x 1 m units across the site at 30 m intervals (Figure 4.7). This was done to pinpoint any concentrations over the extremely long site as defined by Schock (1989). Feature 3 was located within Units 6 and 8 (Figure 4.7). It extended approximately 100 cm below surface and contained a limestone slab lining and evidence of extensive burning around the edges. In profile, the sides were vertical and

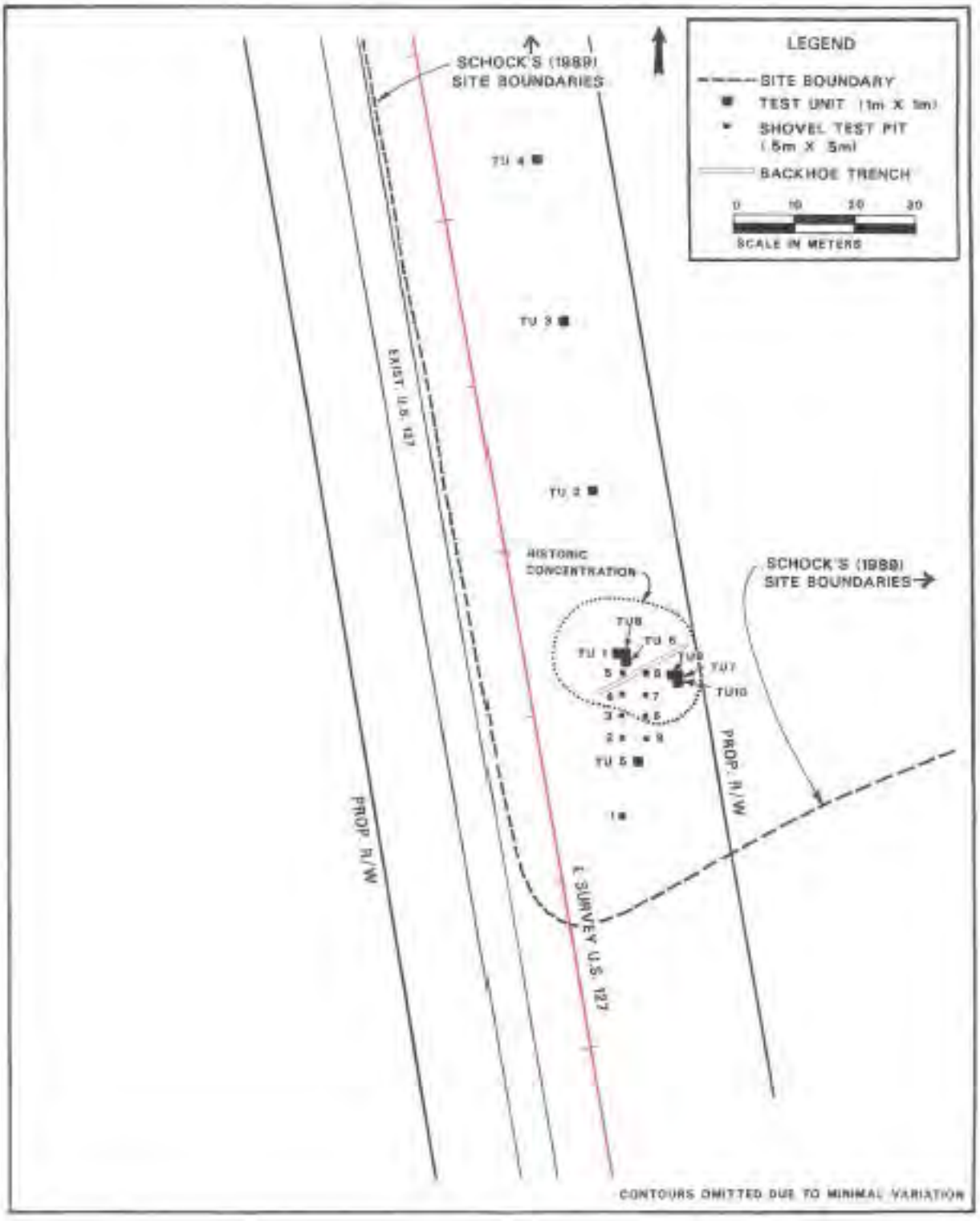

Figure 4.7 Phase II Map of Outer Farmlot (15On57)

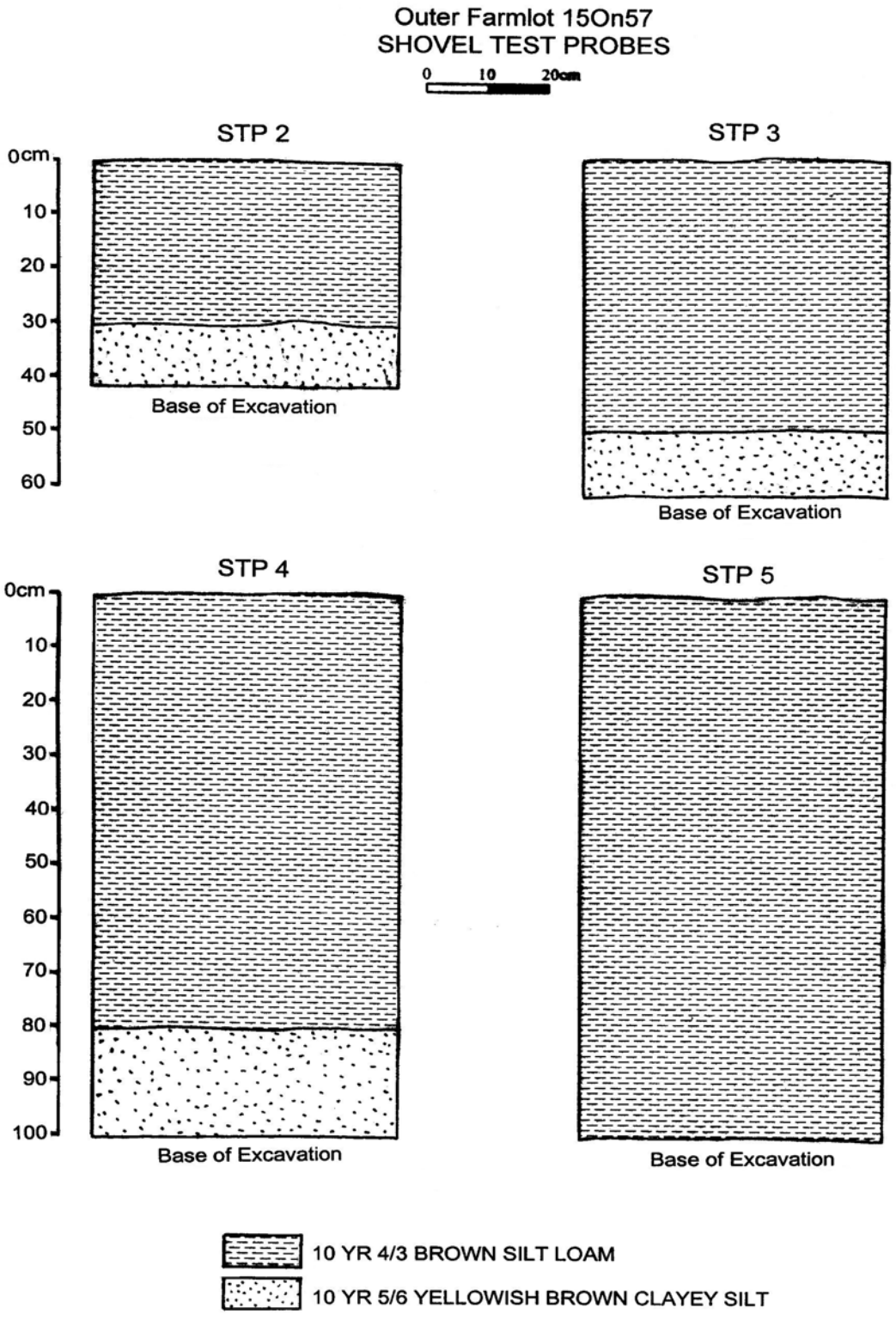

Figure 4.8 Outer Farmlot (15On57) Soil Profiles

the base relatively flat (Figure 4.9). Material recovered from Feature 3 included architectural artifacts, specifically six cut nails and one unidentifiable nail. Other material included a seed bead, as well as a horseshoe found at the base. Charcoal was found throughout and a small portion of a cedar post (eastern red cedar). The post fragment was vertically oriented and discovered at the base. Also recovered from flotation sampling were several forms of carbonized seeds such as Chenopod and Nightshade (Appendix A).

FEATURE 4 (Posthole)

Feature 4, a post hole and burned post, was first encountered in STP 11 where an unusual amount of limestone and wood fragments were recovered. It was roughly rectangular in plan view with straight vertical walls lined with limestone slabs that continued to a depth of 74 cm below surface (Figure 4.10). The burned wooden post was vertically in situ and off-center within the post hole. Post hole fill was brown 10YR 4/3 silty loam with pieces of wood and other small limestone rocks. Artifacts recovered from the post hole were from the upper portion only and included an iron leg for a large kettle, an unidentifiable table glass body sherd, an unspecified cut nail, an unidentifiable nail, and two unidentifiable bone fragments. Flotation samples recovered white ash, unidentifiable wood and a small amount of black walnut. Seeds recovered were few consisting of Chenopods and grasses (Appendix A).

In order to explore and follow these two posts, two units (Units 9 and 10) were placed to the west and south (Figure 4.7). Excavation was conducted to the base of plowzone and carefully scraped to identify any possible features. None were identified.

The last part of excavation was an east - west backhoe trench across the deep alluvial area to form a better understanding of the deposits (Figure 4.7). The trench revealed the deep alluvium to be channel-like and oriented east -west, very similar to the deep deposits at the houselot.

Based on the Phase II findings, this area was interpreted to be the location of an outbuilding or some kind of non-domestic structure associated with the houselot to the south and a light prehistoric lithic scatter. The recovery of cut nails from the post holes dated the structure to the nineteenth century. The building technique was found to be typical of early nineteenth century post-in-the-ground structures. Also the size of the post holes and amount of chinking suggested a large structure, much like a barn.

Summary of Phase II Testing

Historic artifacts recovered from the houselot of the Hardin farmstead included creamware (pre-1830), decorated pearlware (pre-1840), early decorated whiteware (1830-1870), plain whiteware and ironstone, overglaze enameled Chinese export porcelain (pre-1830), overglaze painted bone china (pre-1870), redware (pre-1850), salt glazed stoneware, bottle glass with a few roughly applied bottle lips (pre-1870), wrought nails (pre-1860), late cut nails (1830-1880), window glass, brick, and faunal remains.

Analysis of these temporally diagnostic artifacts revealed an occupation period spanning about ca. 1820 to 1860. Historic documentation also indicated that the main historic occupation occurred from 1825 until 1873 when this site was a farmstead. The majority of the artifacts from the plowzone and sub-plowzone deposits, particularly in the central and eastern portions of the houselot, dated to the early to mid-nineteenth century. Later artifacts consisted primarily of machine-made bottle glass, thought to have resulted from roadside refuse disposal. In addition, the presence of a limestone foundation remnant suggested potential intact structural house remains.

Figure 4.9 Feature 3, Outer Farmlot (15On57)

Figure 4.10 Feature 4, Outer Farmlot (15On57)

As for the prehistoric artifacts recovered from the houselot, only a small assemblage was recovered from the surface collection. However, several flakes as well as an Adena projectile point from Feature 1 suggested the presence of a possible subplowzone stratum or midden and a pit (Feature 1) that dated to the Early/Middle Woodland period. This combined with the recovery of a limestone-tempered pottery sherd from Unit 1, suggested a possible small hamlet, of the type previously reported for Early/Middle Woodland sites (e.g. McBride 1994; Niquette and Boedy 1986). The deposits in this area were still not clearly defined, however, and would require further investigation.

Phase II investigations of the outer farmlot led to the interpretation that the site was the location of an outbuilding or some kind of non-domestic structure associated with the houselot to the south. Very few historic artifacts were recovered from this area inhibiting the determination of a construction date. A light scatter of prehistoric debitage was identified in this area but was determined insignificant by the Phase II investigation.

Archival research during the Phase II determined that the two areas were the same farmstead. As both areas were decidedly the same site and showed sufficient integrity, artifact density, and feature presence or potential to address numerous research topics on historic farmstead and Woodland sites as laid out in the Kentucky Comprehensive Plan, they were found to be eligible for listing on the National Register of Historic Places (Pollack 1990 and Lambert 1995). Additional work was then recommended for the site. The recommendations called for hand unit excavation of about 20 m^2 and some backhoe trenching to examine soil disturbances (i.e. Feature 1) identified in Phase II (McBride and Fenton 1995). Historic research was also recommended to verify the uses of the site during the nineteenth century.

Phase III Investigations of the Hardin Farmstead

The Phase III investigation was conducted by WSA from December 2, 1996 through February Figure 4.11 Phase III Map of Hardin Farmstead 14, 1997 (Figure 4.11). The two datums used for the Phase II investigation of both the houselot and the outer farmlot were reestablished and checked for accuracy with a laser transit. Unit and feature numbers were continued from the Phase II investigation. As archival information indicated that the two sites were part of a single farmstead, the Phase III treated them as the same site regarding STPs. However, feature numbers were kept separately.

Houselot (15On55)

Phase III investigations at the houselot consisted of STP and unit excavation, deep trenching, and surface scraping (Figure 4.12). In addition to the three features uncovered in the Phase II, three more features were discovered (Features 2B, 4, and 5) and a total of 6,012 artifacts (5,605 historic and 407 prehistoric) was recovered from STPs, units, trench, and plowzone removal (Tables 4.2 and 4.4).

Fourteen .5 m by .5 m STPs were excavated during Phase III and were judgmentally placed in areas that had been poorly sampled in the previous investigation with the idea of locating dense artifact areas, attaining a better understanding of the overall distribution of artifacts within the houselot, and to further investigate the linear alluvial deposits. The STPs were excavated stratigraphically, and screened through 1/4" mesh hardware cloth. Overall, the stratigraphy of the area was similar to the Phase II finding. Following the STPs, 20, 1 m x 1 m and five 1 m x .5 m test units were excavated where STPs uncovered a concentration of artifacts or where a feature had been identified in previous Phase II investigations. The goal with these units was to collect an adequate

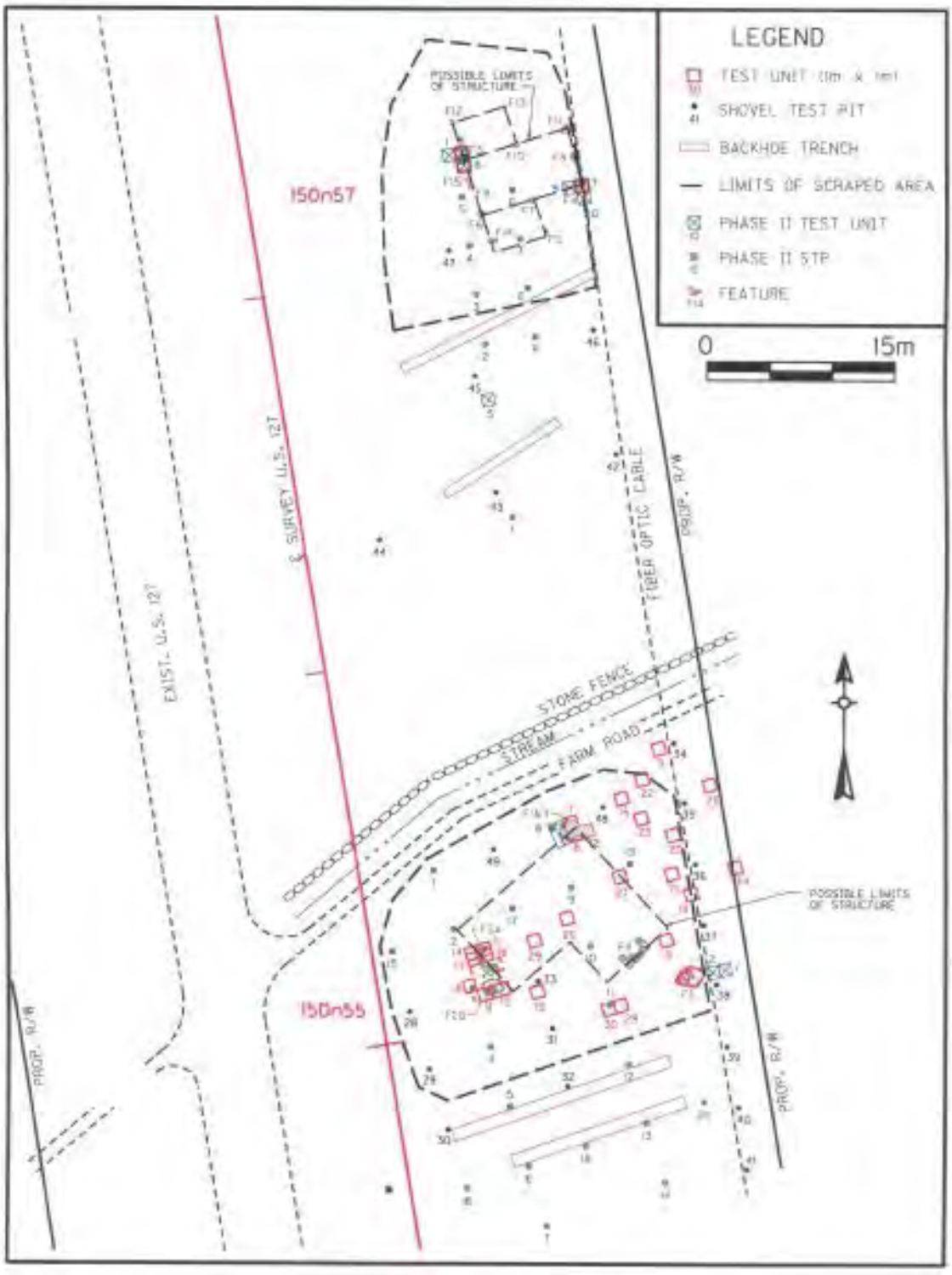

Figure 4.11 Phase III Map of the Hardin Farmstead

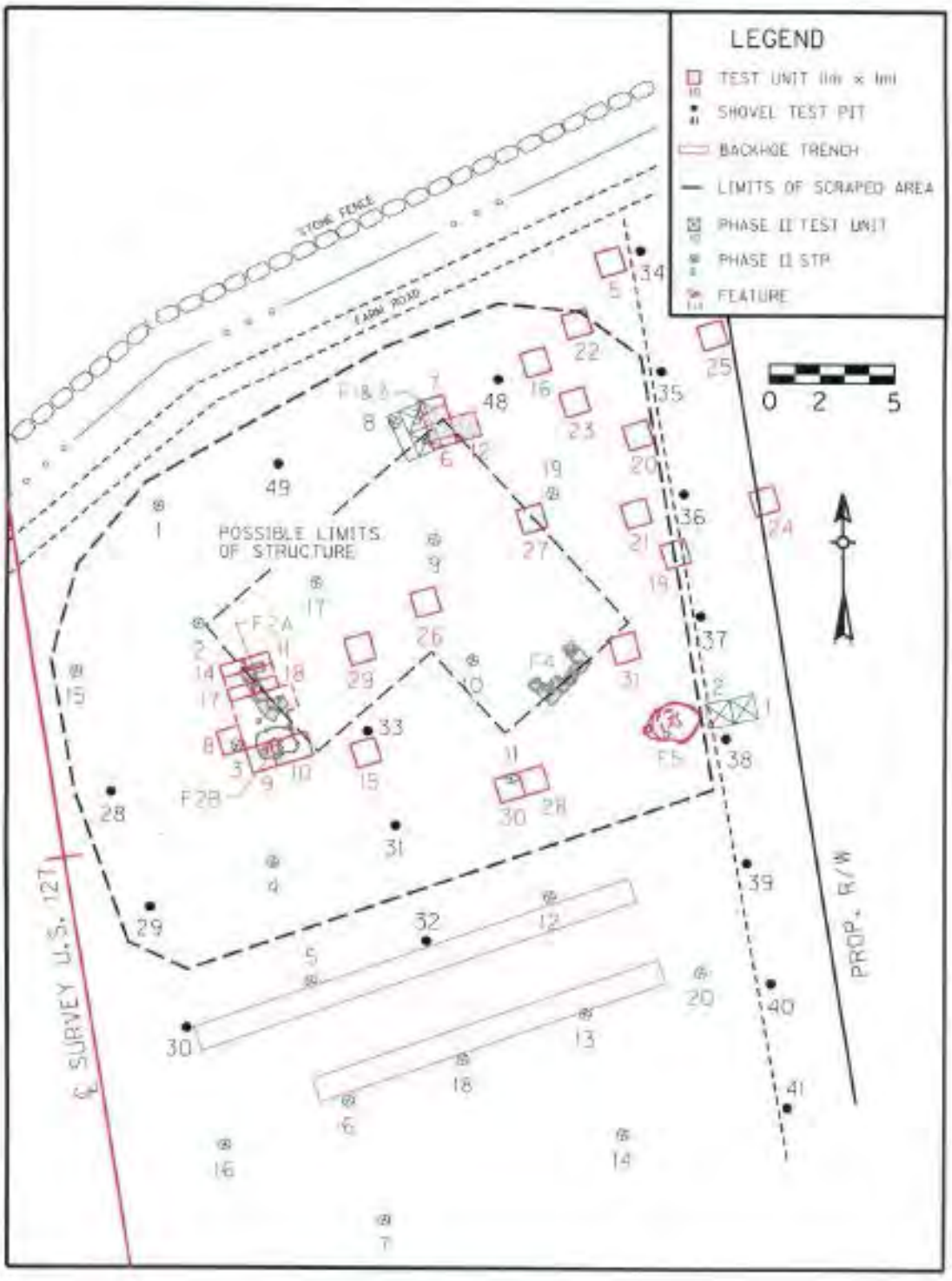

Figure 4.12 Phase III Map of the Houselot (15On55)

sample of the plowzone. Excavation of test units was then followed by mechanical stripping of the plowzone and deep trenching. Stripping was incomplete along the eastern edge of the site within the right of way, however. At the time of the mitigation a fiber optic line for South Central Bell Telephone Company was laid in mechanically at the eastern edge of the site along a north-south axis. This trench was about 7 m inside the right of way (Figures 4.11 and 4.12). The excavation of this trench was monitored by WSA archaeologists and no features were observed. Limitations were placed on the excavation in that no fieldwork could be conducted beyond the limits of the trench at the request of the Kentucky Transportation Cabinet.

FEATURE 3 (Channel/Drain)

The stratigraphy of the northeast area of the houselot was investigated further in order to interpret Feature 1 (possible prehistoric pit), the possible midden, and Feature 3 (historic intrusion), originally identified in Phase II unit excavation. After relocating the Phase II Trench 1 (.5 m x 2 m) and Units 3 and 4, a block area with three 1 m x 1 m units (Units 6, 7, and 12) was laid out adjacent and east of the previous excavation units. Units 6 and 7 were excavated first in 10 cm arbitrary levels within natural and/or cultural layers. The plowzone from Units 6 and 7 was removed first and Feature 3, the historic intrusion, was encountered underlying the plowzone (Figure 4.13). The feature continued eastward across the center of both units; therefore, Unit 12 was opened for expansion (Figure 4.12). This revealed that the feature continued southeastward and then beyond the south wall of Unit 12 (Figure 4.13). Extending 45 cm below surface, material recovered from Feature 3 included both prehistoric and historic refuse. Historic material from all three units included kitchen artifacts (four undecorated whiteware sherds, one stoneware sherd, two redware sherds, one table glass fragment, and four indeterminate bone fragments), architectural artifacts (one early cut nail fragment, four late cut nail fragments, one unspecified cut nail fragment, nine mortar fragments, and four window glass fragments), a shell button, a chimney lamp fragment, a piece of coal, and 27 prehistoric flakes. The 34 historic artifacts recovered with the presence of water worn gravel, indications are that an active stream was present during the historic period which resulted in some secondary deposition by erosional gully wash. Yet another possibility is that the feature's deposits resulted from demolition activities, as the nineteenth century dwelling was razed for cultivation. This might have occurred sometime during the late nineteenth century or shortly after the site was abandoned in 1873. A significant quantity of historic artifacts within the plowzone, particularly large amounts of architectural debris (i. e. mortar, window glass, and late cut nails), suggests this.

FEATURE 1 AND THE MIDDEN

As for Feature 1 and the midden, very few prehistoric artifacts were recovered in the Phase III investigation. Although a few historic artifacts were recovered (n=13) from both deposits, these artifacts may have been the result of bioturbation. At least two historic artifacts were recovered from rodent or root disturbances. Excavation of three new units (6, 7, and 12) to expose these features showed an irregular shape in plan view and profile (Figures 4.14 and 4.15). Excavation of another 1 m x 1 m unit (TU 23) placed 4 m to the east defined the deposit as trench or channel-like in plan view running southeasterly (Figure 4.16). Flotation samples from Feature 1 revealed similar results as the Phase II findings; that is, very little and poorly preserved floral and fauna specimens ground by erosional activities. Phase III sampling did recover some cultigens in the form of gourd rind (n=7) and one corn cupule. Whereas the gourd could be either Late Prehistoric and historic, the corn appears to be reminiscent of the Late Prehistoric period (Appendix A). Also recovered from Feature 1 were nine carbonized seed fragments of the weedy plant bayberry and fourteen minute, carbonized fragments of unidentified wood (Appendix A). In order to shed light on the nature and origin of the deposits, a professional geoarchaeologist and soil scientist (Sarah Sherwood) examined a profile of

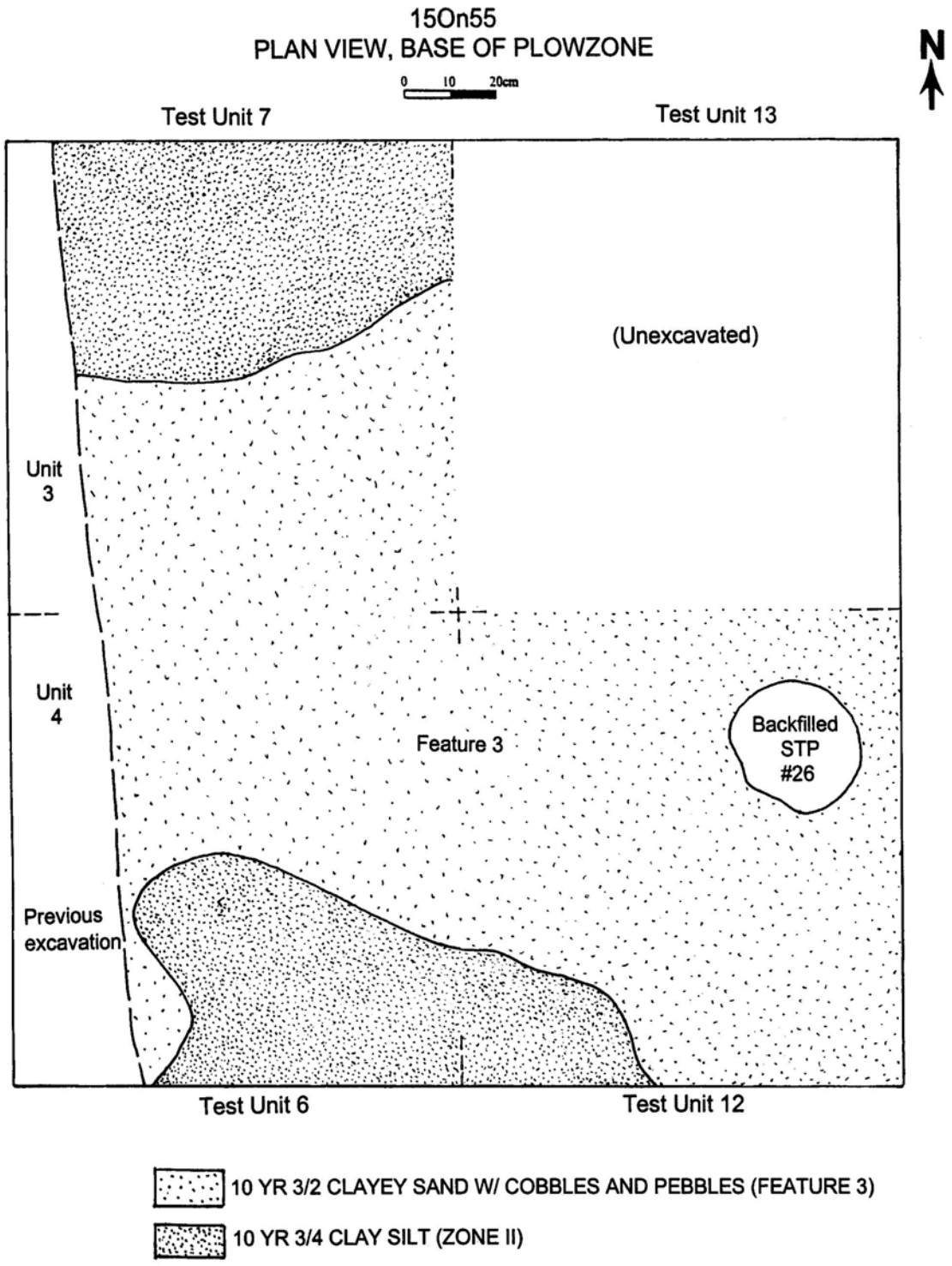

Figure 4.13 Plan View Feature 3

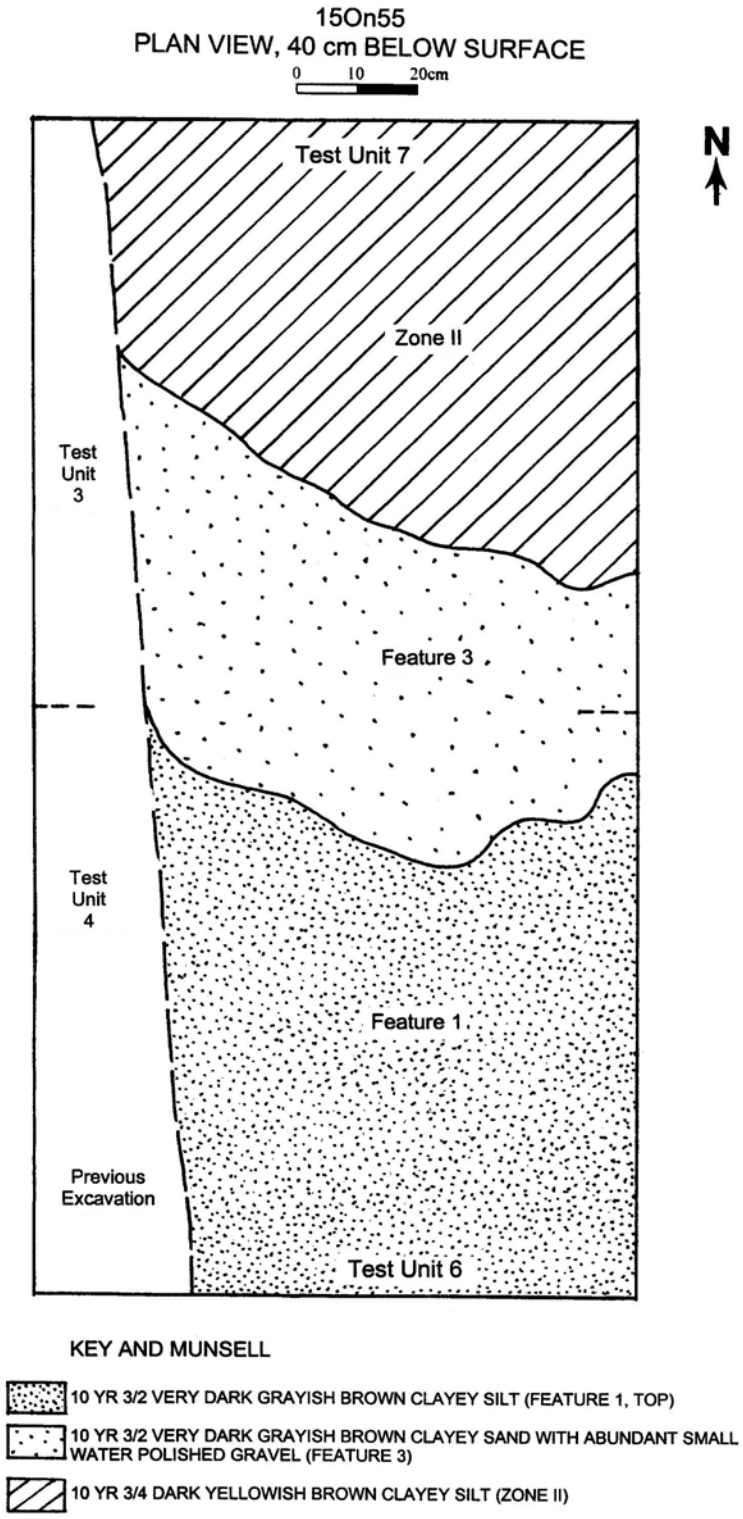

Figure 4.14 Plan View Features 1 and 3

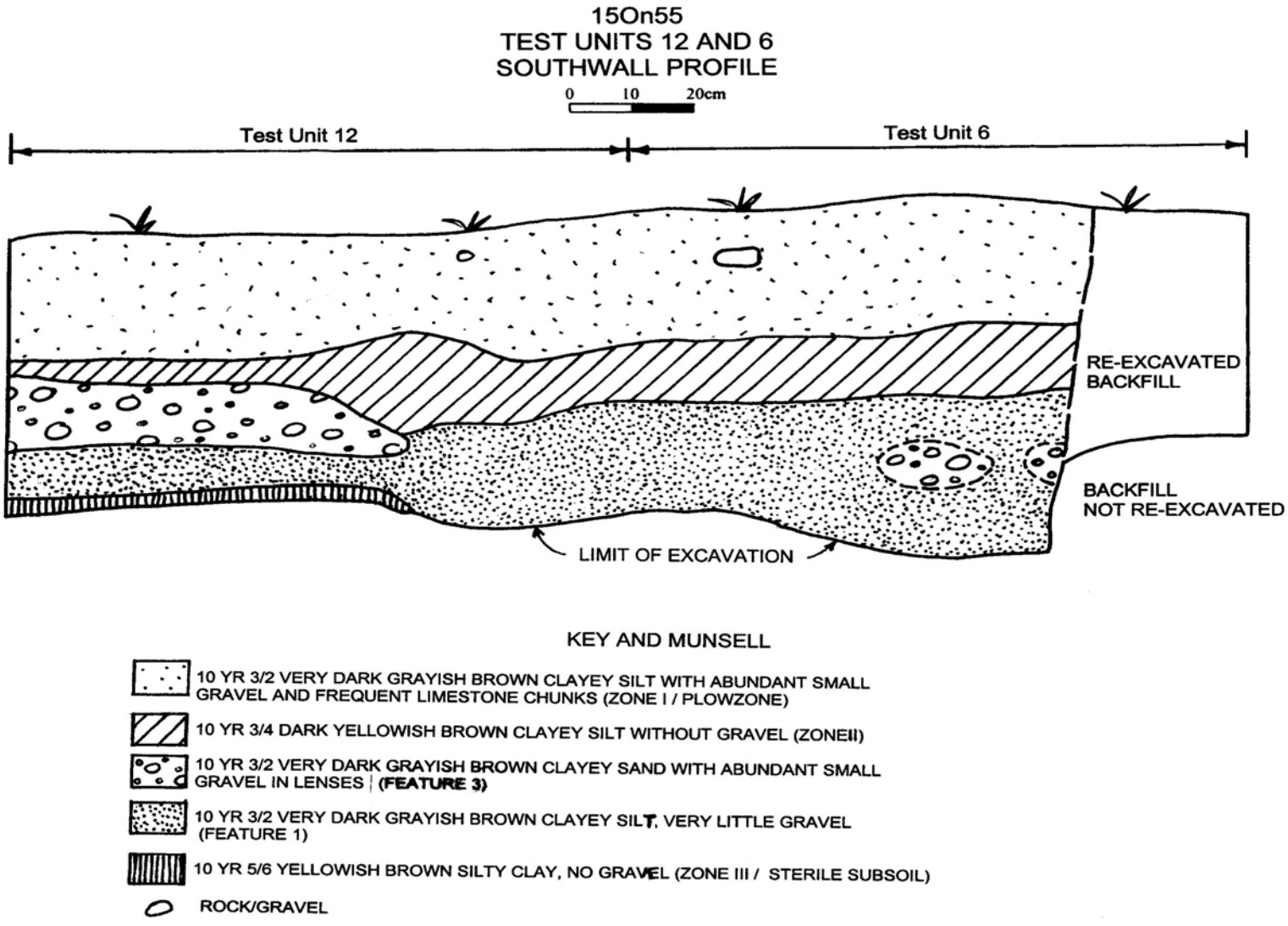

Figure 4.15 Test Units 12 and 6 South Wall Profile

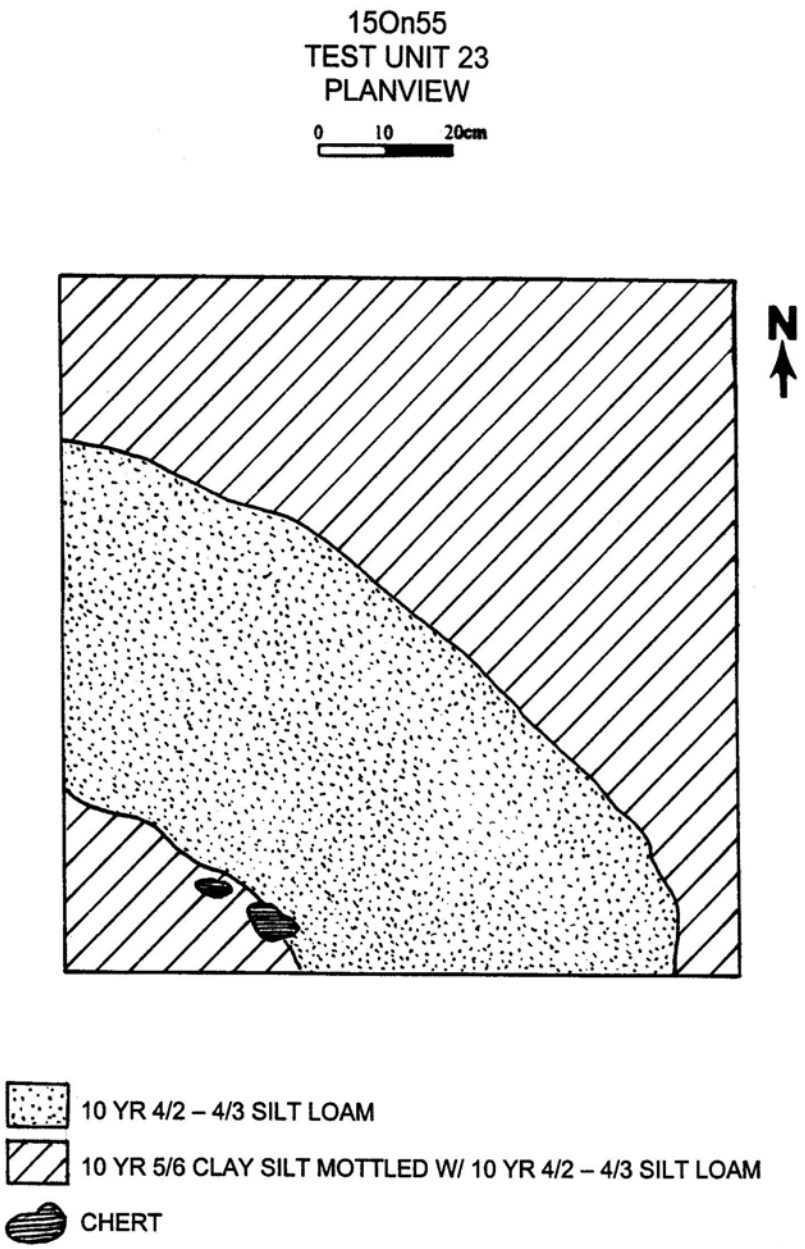

Figure 4.16 Test Unit 23 Plan View

this area with the aid of a deep backhoe trench. Sherwood's interpretation was that the deposits pre-dated any cultural activity. Two possibilities were given for the deposits: 1) abandoned and filled upland drainage's caused by changing erosion patterns and groundwater levels at the end of the Pleistocene resulting from lowering sea level and climatic oscillations; and 2) localized dissolution or chemical weathering of the underlying limestone resulting in the slumping of sediments into sink holes. For a more detailed description of the geomorphology of the site see Appendix B. Based on the above findings, the possibility that Feature 1 and the midden are intact cultural deposits seems highly unlikely. The suspected pit feature appears to have been a result of prehistoric flood deposited silt. Given the historic nature of Feature 3, which overlies both, it may be an indication that the upper portion of a drainage or slump was still active in historic times. If these deposits were a part of a series of intermittent drainages created by changing erosional patterns and groundwater levels, these drainage channels could have shifted over time, creating alternate deposits.

FEATURE 2A (Chimney Pad)

Further unit excavation was also conducted over the limestone foundation (Feature 2) previously identified in the Phase II investigation. A group block of several 1 m x 1 m and 1 m x 5 m units (Units 8, 9, 10, 11, 14, 17, and 18) was excavated over the area (Figure 4.12). As a result, a limestone chimney pad (Feature 2) and a cellar (Feature 2B) were identified. Feature 2, redesignated 2A, was oriented north - south with the hearth facing east measuring 2.2 m long (Figure 4.17). The limestone slabs were noticed immediately beneath the plowzone and were dry laid into the clay beneath it. Although a kettle fragment and a mollusk shell were recovered in the trowel scrapings atop the feature, significantly few kitchen artifacts were in this area.

FEATURE 2B (Pit Cellar)

Feature 2B is a roughly circular pit cellar located 25 cm south of Feature 2A, the chimney. Dimensions were 1.20 m north - south by 1.45 m east - west by 23 cm in depth. This feature had a relatively flat bottom with tapering sides and was also rock filled (Figures 4.17 and 4.19). Because of the large number of limestone rocks on its surface, Feature 2B was originally thought to be part of Feature 2A. Only one fill zone was present, a 10YR 4/2 dark grayish brown silt loam containing large limestone rock. The amount of rock fill may be the result of construction or demolition activities on the houselot. Other material recovered from the feature fill included early to mid-nineteenth century kitchen artifacts and some architectural material. Pearlware (n=15), undecorated whiteware (n=1), redware (n=8), domestic stoneware (n=2), and bone (n=5) made up the kitchen material while an unspecified cut nail (n=1), unidentifiable nail (n=1), window glass (n=1), and mortar (8) comprised the few architectural materials within the feature**.** Animal bone comprised one cow bone, and four indeterminate mammal bone fragments.

FEATURE 4 (Chimney Pad)

Although no other features were discovered by unit excavation, the mechanical removal of the plowzone did uncover another limestone chimney pad (Feature 4) and refuse pit (Feature 5) in the southern portion of the site (Figure 4.12). Feature 4, the chimney base (Figure 4.18) was very similar to Feature 2A. Both were box-shaped and made of dry laid limestone. Feature 4 also originated within and just below the plowzone. It measured 2.2 m long and was oriented east - west with the hearth facing north. The bases of both chimneys were one course high and no visible builder's trench was defined. Instead, they both appeared to have been laid into the subsoil. Artifacts recovered from the overlying plowzone included considerably more kitchen-related artifacts than Feature 2A. Whiteware and ironstone dominated the soil zones above the feature, suggesting a later fill date. However, the context is questionable as these artifacts were recovered from the

Figure 4.17 Photograph of Features 2A and 2B

Figure 4.18 Photograph of Feature 4

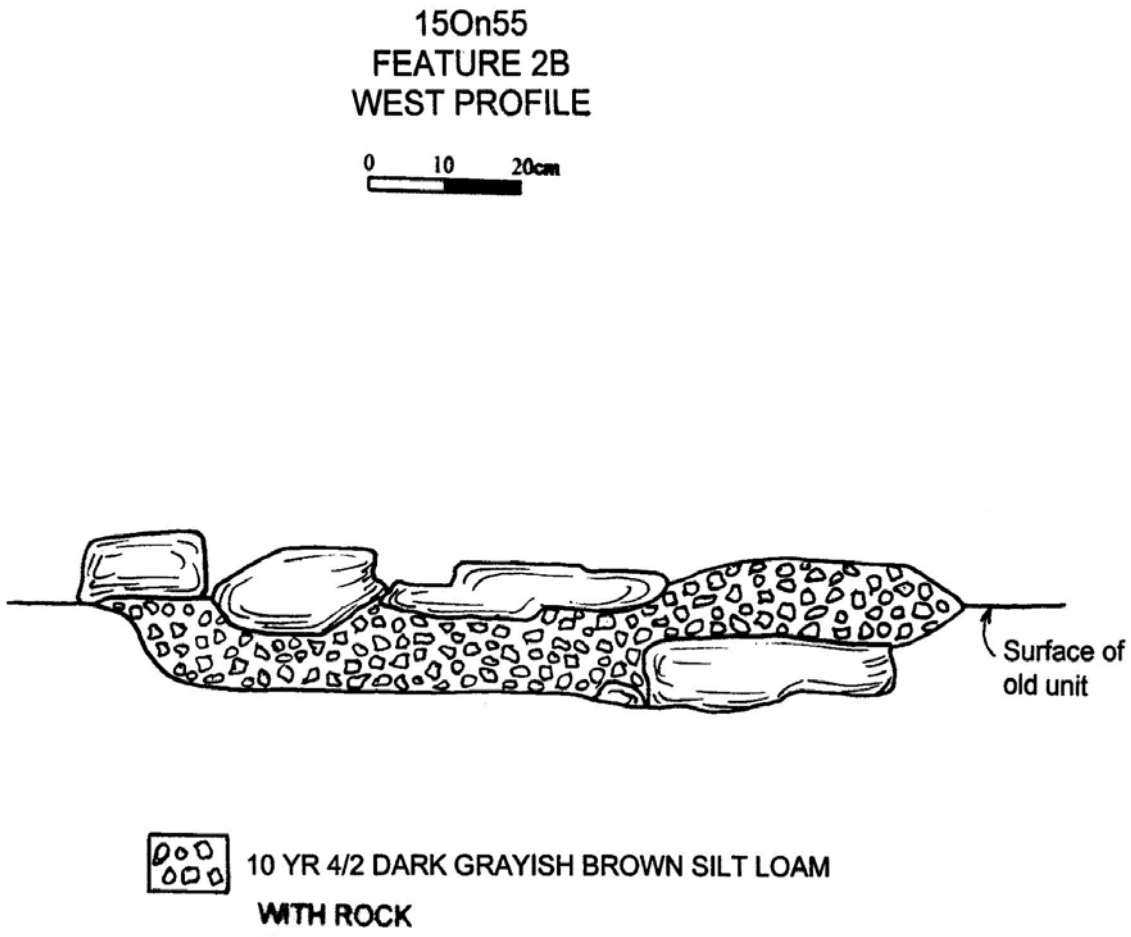

Figure 4.19 feature 2B West Profile

plowzone. Those artifacts recovered from trowel scraping atop the feature included bonechina (n=3), pearlware (n=4), whiteware (n=22), ironstone (n=1), yellow ware (n=2), redware (n=3), stoneware (n=2), bottle glass (n=2), and bone (n=23). A later fused bottle lip (post-1870) may be attributed to the plowzone above the feature. Of the bone, five were domestic pig and the other three indeterminate mammals (Appendix C). Architectural material overlying the feature included late cut nails (n=6), unspecified cut nail (n=1), metal wire (n=1), window glass (8), and mortar (n=2). Other material included a brass button and horseshoe. Animal bone comprised five pieces of pig bone, two indeterminate mammal and one indeterminate bird bone. Animal bone from flotation samples produced two rat, mice or vole bones, as well as small indeterminate mammal bones and unidentifiable mammal bones.

FEATURE 5 (Refuse Pit)

The refuse pit (Feature 5) was roughly circular and located 3 meters southeast of Feature 4 (Figure 4.12). Dimensions were 1.80 m east - west x 1.50 m north - south by 35 cm in depth (Figure 4.20). The feature had a basin-like shape in profile and was filled with limestone debris, again possibly the result of house or chimney construction or demolition (Figure 4.21). Three fill zones were present: a 10YR 3/3 dark brown silty loam with very little rock, 5 to 35 cm; a burned lens of 2.5 YR 4/8 brown silt loam, located in the western half of the feature from 0 to 5 cm; and a 10YR 3/3 dark brown silty loam with rubble from 0 to 30 cm below surface (Figure 4.21). Artifacts recovered from the feature fill include mostly early to mid-nineteenth century kitchen and architectural material. Kitchen material was represented by bone china (n=1), Chinese Export porcelain (n=2), pearlware (n=9), whiteware (n=6), redware (n=4), domestic stoneware (n=1), unidentifiable container glass (n=2), melted glass (n=1), bone (n=19), and a kitchen kettle fragment. Of the faunal material, pig and a mollusk shell were the only types identified (Appendix C). Architectural material was scant and included an early cut nail fragment (n=1), late cut nails (n=2), unspecified cut nails (n=2), window glass (n=2), a brick fragment (n=1), and daub (n=1). Animal bone comprised 17 indeterminate mammal bone and two pig bones.

CHRONOLOGY

In addition to the archaeological and archival investigation which generally dates the site occupation from 1825 to about 1873, two more specific analytical techniques were used to date features and midden. The first technique uses mean ceramic dates (South 1977). Mean ceramic dates were obtained on the pit cellar (Feature 2B) and refuse pit (Feature 5) within the houselot. Although few in number, it was hoped that these dates would provide information regarding construction periods of the house and possible changes in the site layout. Feature 2B, located on the western edge of the dwelling, contained only two pearlware sherds. Based on these sherds, a mean ceramic date for the backfilling of Feature 2B was 1810. It appears that this feature was used and filled during the early occupation of the site.

The mean ceramic date for Feature 5 was not as clearly defined. The ceramic contents of this refuse pit, located behind the house, were Chinese Export porcelain (n=1), shell edge decorated pearlware (n=3), and shell edge decorated whiteware (n=1). Both the pearlware and porcelain specimens date as late as ca. 1840, but the whiteware could date to the site occupation terminus. Whether the feature fill has been contaminated by the demolition activities of the dwelling is uncertain. Regardless, the cellar may have been backfilled between 1830 and 1840 or by 1873. The mean ceramic date for the feature is 1818 (+/- 10 years), but with the whiteware present, it more than likely post dates 1830. In both cases, the frequency of sherds within each feature is not enough to reach any meaningful conclusions.

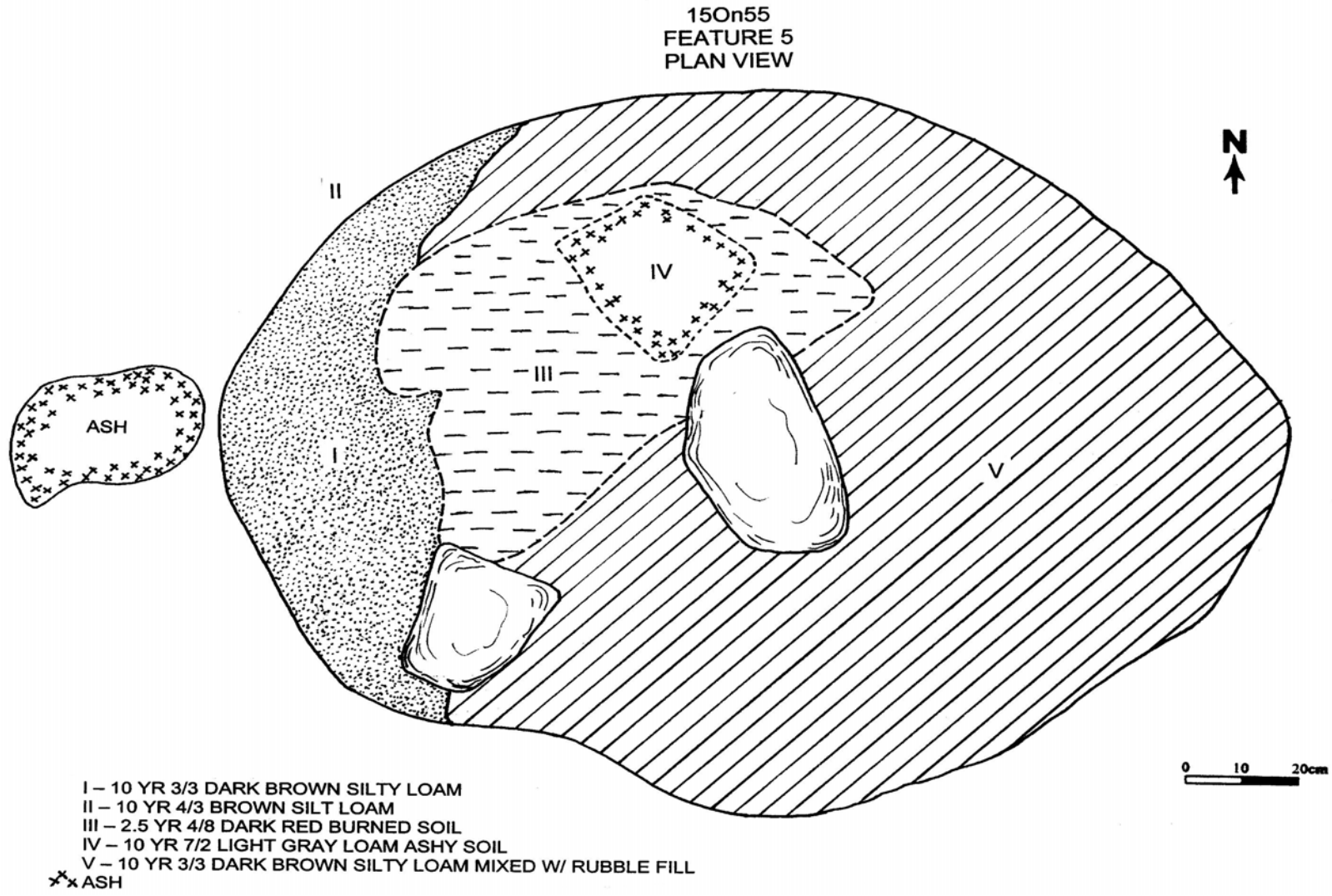

Figure 4.20 Feature 5 Plan View

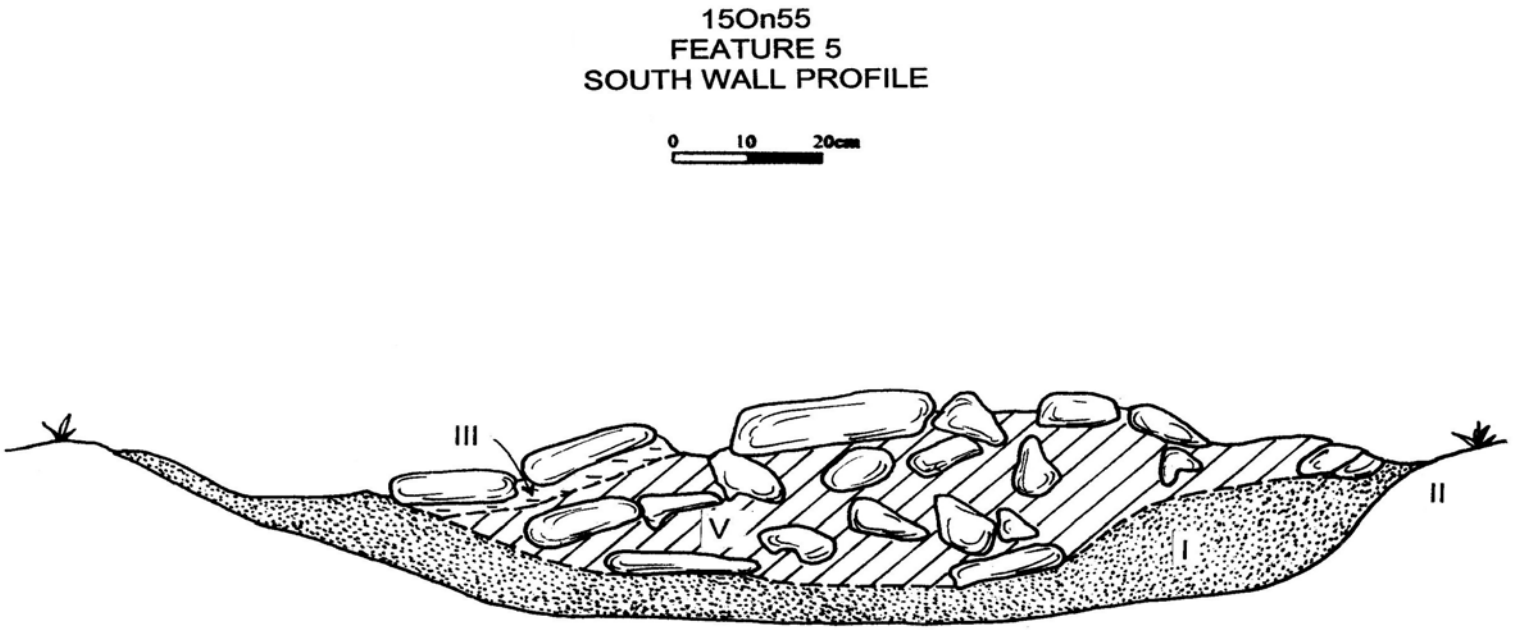

Figure 4.21 Feature 5 South Wall Profile

A second technique to determine mean occupation length and variation in building form and function is to calculate mean window glass thickness for different archaeological contexts (e.g. features, midden areas). The calculation of mean window class thickness has been shown to be a reasonable estimator of site occupation span, and can be used to assign a date range to a particular context. The method relies on the fact that manufacturing refinements over the eighteenth and nineteenth centuries resulted in the production of thinner glass sheets. Starting from this premise, Moir (1987) devised a regression formula that can be used to predict a site or context date when the thickness of window glass is known. Moir's formula has proven to be fairly accurate in Kentucky (Andrews 1997; Andrews and Stetar 1995; McBride and Fenton 1996; and McBride and Sharp 1991). An approximate date can be calculated by the following formula:

Context Date = (84.22 x mean window glass thickness in inches) + 1717.7

Architectural glass from the houselot, represented entirely by flat window pane glass, was mostly restricted to the plowzone, and made up 33.57% (n=904) of the architectural material and 11.43 % of the entire site assemblage. Only STPs and units with four or more specimens were used in the analysis. As a result, mean dates for the window glass ranged from 1831 to 1871 (Table 4.6). For the most part however, the mean dates ranged from the 1840s to the early 1860s. Mean dates from the glass recovered from the plowzone of STPs and test units around and within the dwelling area are also very similar and vary only slightly. These date from the 1840s and 1850s; a total mean date for all flat glass recovered from the plowzone of the STPs and units was 1853 (Table 4.6).

Flat glass from feature fill was scarce (Table 4.7). Moir's formula gives a mean window glass date for Feature 2B of 1858, Feature 3 dated to about 1824, and Feature 5 was dated to about 1852; however, sample size was one, four, and two fragments respectively. The inadequate sample size renders these dates questionable. Although not in direct association with intact cultural deposits, the window glass recovered from test units over Feature 4 within plowzone context had a mean date of 1848. Likewise, window glass from units placed over Feature 2A within a mixed context had a mean date of 1864. With the exception of the earlier date of Feature 3, all of the other dates from the features are somewhat similar and vary only within an 18 year time span. The mean window glass dates ranging from 1831 to 1871 nicely bracket the Hardin occupation and suggests that there were no later domestic structures at the site within the right of way.

Houselot (15On 55) Phase III Discussion

Based upon the findings discussed so far, the remains of a domestic dwelling were located in the central portion of the houselot and is demarcated by the two chimney bases (Features 2A and 4). No other architectural features were found in association with the structure. It is likely that piers were used for structural support and either removed, salvaged, or displaced by demolition activities or plowing. The location and orientation of both hearths as well as artifact function and distribution across the site allows for some reconstruction of how the house was situated and reveals one or more activity areas. Based on the location and orientation of both, the house faces either north or east and appears to be an ell-shaped structure, probably a dwelling with two pens (hall and parlor) with an ell addition. Both Features 2B (cellar) and 5 (refuse pit) are identified in association with the dwelling and at least one, Feature 5, may have been used throughout the occupation. The pit cellar, Feature 2B, produced few artifacts, but they suggest a use and abandonment of the feature during the earlier occupation (early to mid-nineteenth century) of the site.

In addition, artifact distribution is greater to the east and southeast, indicating the use of both a side and back yard for refuse disposal. Orientation of the dwelling might have then been north. More detailed discussion based on spatial analysis of the artifact distribution and how the domestic area compares to the Upland South model follows in the next chapter.

Table 4.6 Window Glass Dates (samples > 4 sherds), 15On55

STP/Unit	Average of Thick mm	#	Moir Date
Back Yard			
STP 31	1.52	4	1841
STP 37	1.68	8	1854
STP 38	1.86	4	1869
STP 39	1.48	5	1837
STP 40	1.82	4	1849
TU 1	1.72	13	1857
TU 2	1.59	22	1847
TU 15	1.76	8	1861
TU 28	1.83	10	1867
TU 30	1.76	11	1861
TU 31	1.60	27	1852
Eastern Side Yard			
STP 27	1.79	4	1863
STP 34	1.51	8	1840
STP 35	1.40	14	1831
STP 48	1.73	18	1858
Trench 1	1.88	23	1871
TU s 3 and 4	1.71	69	1857
TU 5	1.52	19	1841
TU 6	1.45	5	1835
TU 7	1.86	17	1869
TU 12	1.65	24	1852
TU 16	1.77	68	1862
TU 19	1.81	55	1862
TU 20	1.76	104	1861
TU 21	1.78	133	1863
TU 22	1.80	39	1864
TU 23	1.75	52	1860
TU 24	1.88	34	1853
TU 25	1.66	28	1853
TU 27	1.66	29	1853
Inside House Area			
TU 26	1.69	41	1855
TU 29	1.53	8	1842
TU 9	1.55	4	1843
TU 10	1.52	6	1841

Table 4.7 Mean Window Glass Dates From Features

Provenience	#	Mean Date
Units overlaying Feature 2A (plowzone context)	9	1864
Feature 2B	1	1858
Feature 3	4	1824
Units overlaying Feature 4 (plowzone context)	37	1848
Feature 4 Scrapings (plowzone context)	6	1846
Feature 5	2	1852

As for Feature 1 and the midden, Phase III investigation revealed both to be part of a natural drainage or erosional channel. Although the Phase II investigation had shown this area to be promising as an Early/Middle Woodland component, based on the recovery of an Adena projectile point, no information recovered during the Phase III indicated that there was an intact prehistoric deposit. A professional geomorphologist (Sarah Sherwood) was consulted and her findings concurred with the Phase III findings. The few prehistoric artifacts that were recovered within these natural deposits may have been washed down or redeposited from outside the right of way to the the midden and Feature 1 revealed very little information, and also may represent displaced remains. Feature 3 may have been part of this drainage during the nineteenth century.

Outer Farmlot (15On57)

Unlike the houselot, no units were excavated in the outer farmlot area (15On57) since very few artifacts were recovered from the plowzone during the Phase II investigation. Instead, the Phase III investigation consisted of STPs (n=6) to sample areas insufficiently tested in Phase II, two backhoe trenches, and mechanically removing the plowzone to look for features (Figure 4.22). Approximately 225 m^2 was stripped in all which produced a total of 341 artifacts in the Phase III investigation of the outer farmlot, most of which were historic (n = 294). Nineteenth century artifacts (n=12) were recovered from five of the six probes. These included kitchen items (edge decorated whiteware, undecorated whiteware, a hand formed lip/neck bottle fragment), architectural artifacts (three late cut nail fragments, two unspecified cut nail fragments, one unidentifiable nail, one flat glass fragment), and one horseshoe were recovered (Table 4.3). As mentioned previously, four features were found in the Phase II investigation, two of which (Features 1 and 2) were found to be naturally occurring while the remaining ones (Features 3 and 4) were both large post holes/molds. In Phase III an additional 11 features were uncovered following plowzone removal. These features consisted of six large post holes/molds (Features 6, 7, 8, 9, 10, 11) similar to Features 3 and 4, three. Smaller post holes/molds (Features 5, 12, 13), one small trash pit or post (Features 14) and one feature of unknown function (Feature 15).

BARN

The configuration of eight large posts (Features 3, 4, 6, 7, 8, 9, 10, 11) indicates that there was once a 8.5 x 6.0 m (28 x 20 ft) earthfast building that had three posts on each side (Figure 4.22). This building was most likely a barn or other large outbuilding associated with livestock and/or agricultural activities. Sparseness of kitchen material typically associated with a domestic area also suggests this interpretation. Three smaller post holes found in close proximity to the large posts were probably associated with a roof or shed addition to the main structure. Arrangement of the large post holes suggests that the main structure was a roughly rectangular building with the long axis oriented east - west. This type of structure, referred to as earthfast or a pole structure, is a simple form of construction where posts were excavated directly into holes in the ground. They were popular during the colonial period into the nineteenth century. One problem with this type of structure, however, is that posts would eventually deteriorate.

The large post holes/molds varied in size from 40 to 89 cm in length and from 40 to 70 cm in width (Table 4.8). Depth ranged from 24 to 59 cm with all tops originating at sub-plowzone. Of these, three were post holes with molds still present. The rest were holes with no discernable molds. Similar to Features 3 and 4, several large limestone slabs were vertically placed at the edges of several post holes/molds. Feature 6 (Figure 4.23) and several other features also contained limestone slabs or fragments probably for chinking or securing the post in the hole (Features 5, 7, 10, 11). Most of the post holes still contained wood remnants of pine beams or posts, with some evidence of maple and white oak use (see Rossen Appendix A.).

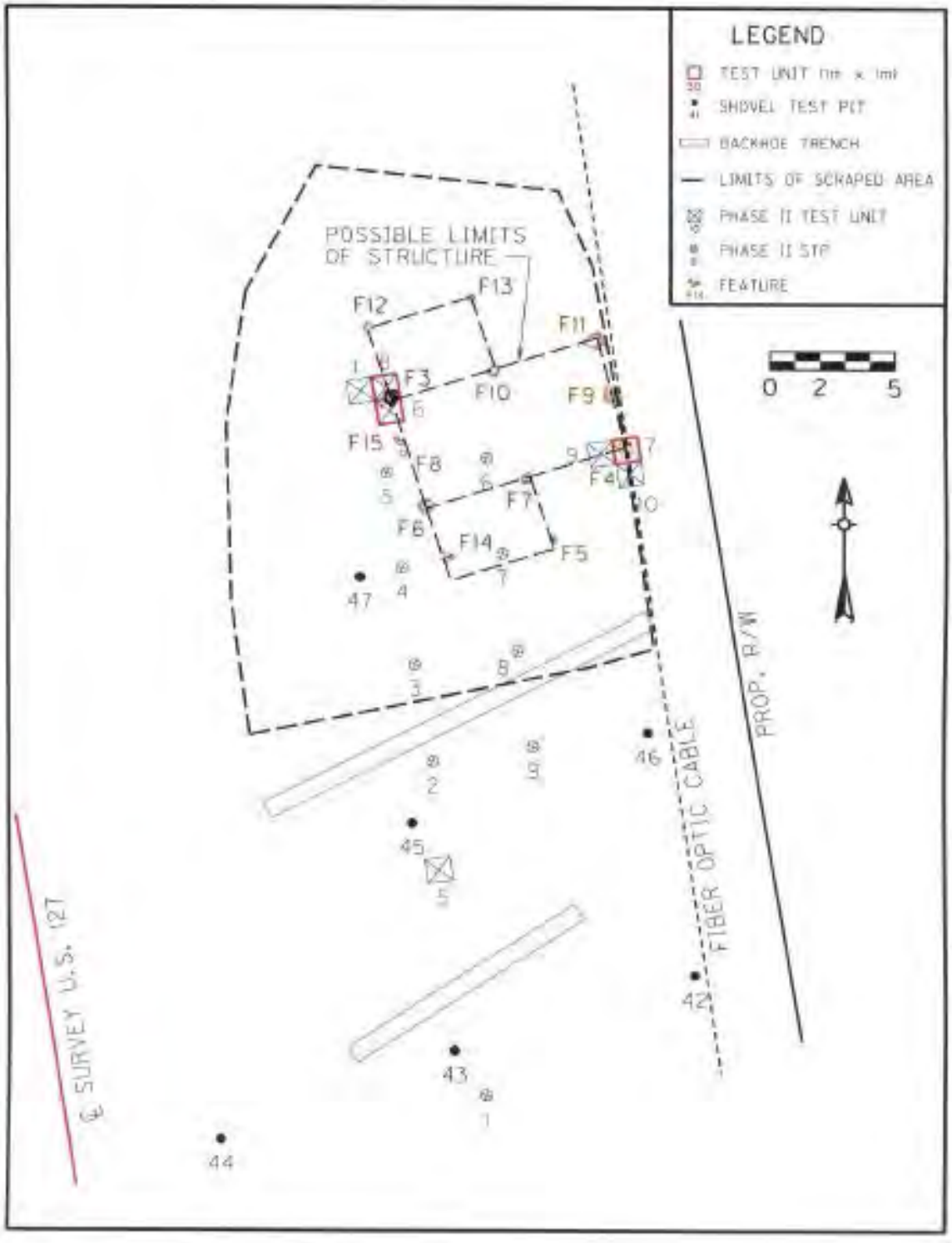

Figure 4.22 Phase III Map of the Outer Farmlot (15On57)

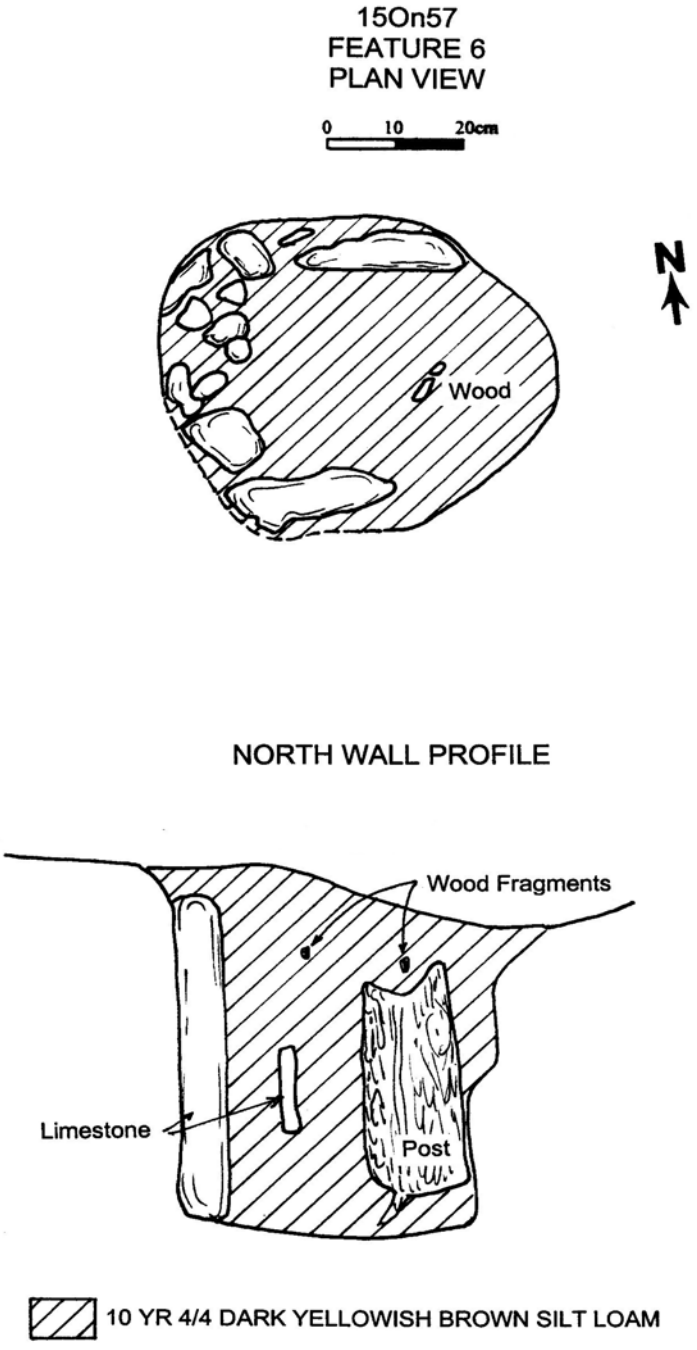

Figure 4.23 Feature 6 Plan View and North Profile

Table 4.8 Barn Structure Posthole/Molds

	Feature	Length (cm)	Width (cm)	Depth (cm)	Morphological Form
Main Struc.	3	60	59	37	oval, tapering walls, rounded base
	4	57	53	48	oval, straight walls, flat base
	6	58	50	59	circular, straight vert walls, flat base
	7	40	40	48	roughly circular, taper walls, flat base
	9	73	63	24	circ, straight/taper walls, flat base
	10	47	42	44	circular, straight wall, undulating base
	11	89	70	53	amor, straight walls, undulating base
Additions					
	5	29	22	34	circular, tapered walls, flat base
	8	26	25	27	circular, taper walls, rounded base
	12	41	32	14	oval, straight walls, flat base
	13	27	23	10	roughly circular, taper walls, flat base
	14	42	37	5	irregular oval, irregular basin

The smaller posts ranged in size from 26 cm to 41 cm in length and from 22 to 32 cm in length and from 22 to 32 cm in width and from 10 to 34 cm in depth. Most were circular with tapering walls and flat bases. Feature 8 is a considerably smaller post hole, but was found within the configuration of the other post holes that comprise the large structure. With the exception of Feature 8, the small post holes appear to be part of two extension/additions, perhaps sheds, on both the north and south sides of the building (Figure 4.22). Features 12 and 13 comprise the northern post holes of the north extension and Feature 5 and probably 14 comprise the southern post hole of the southern extension. Although Feature 14 (Figure 4.24) was defined as a shallow pit, it is located in the southwest corner and may be a post hole remnant. Dimensions of both extensions were very similar and measured approximately 4 m east-west x 3 m north-south (13 x 9 ft). These extensions were probably shed structures that served multiple purposes (i.e. storage for tools, equipment, transportation, livestock).

As for Feature 15, it consisted of two limestone fragments overlaying a large jaw bone of a cow and extended only a few cm in depth. No definitive outline was observed for the unusual feature as it was similar to the surrounding matrix. It is unknown what this feature might have been, but it may possibly be interpreted as the very base of a shallow refuse pit. Given the feature's location, in line with the western wall of the barn structure and very close to Feature 9, it may have been a post hole or pier hole remnant that was later used for refuse disposal.

Artifacts recovered from the postholes were few. This is no surprise, considering the features are architectural and the barn was probably quickly constructed. Although nearly all of the postholes contained some form of botanical remains and six contained faunal remains, only one actually contained artifacts. Feature 11 contained three bottle fragments, one unidentifiable nail, two lamp chimney fragments, and four small pig bone fragments. One of the bottle fragments was a fused and improved tooled finished lip/neck of a bottle. Fully fused lips occur after 1870 with improvements in glass furnace technology. This suggests that the post was replaced, which would not be uncommon, given that it was one of the few holes that contained a mold and preserved burned wood. The post-1870 date for the posthole suggests that the barn continued to be used after the Hardin's dwelling was abandoned.

The remaining five postholes with faunal material revealed some rodent disturbance at the site. Features 9 and 10 both contained remains of small field rodents (mice/rats/voles). Feature 14 contained large cow bone fragment; Feature 12 contained indeterminate bird/mammal, possibly

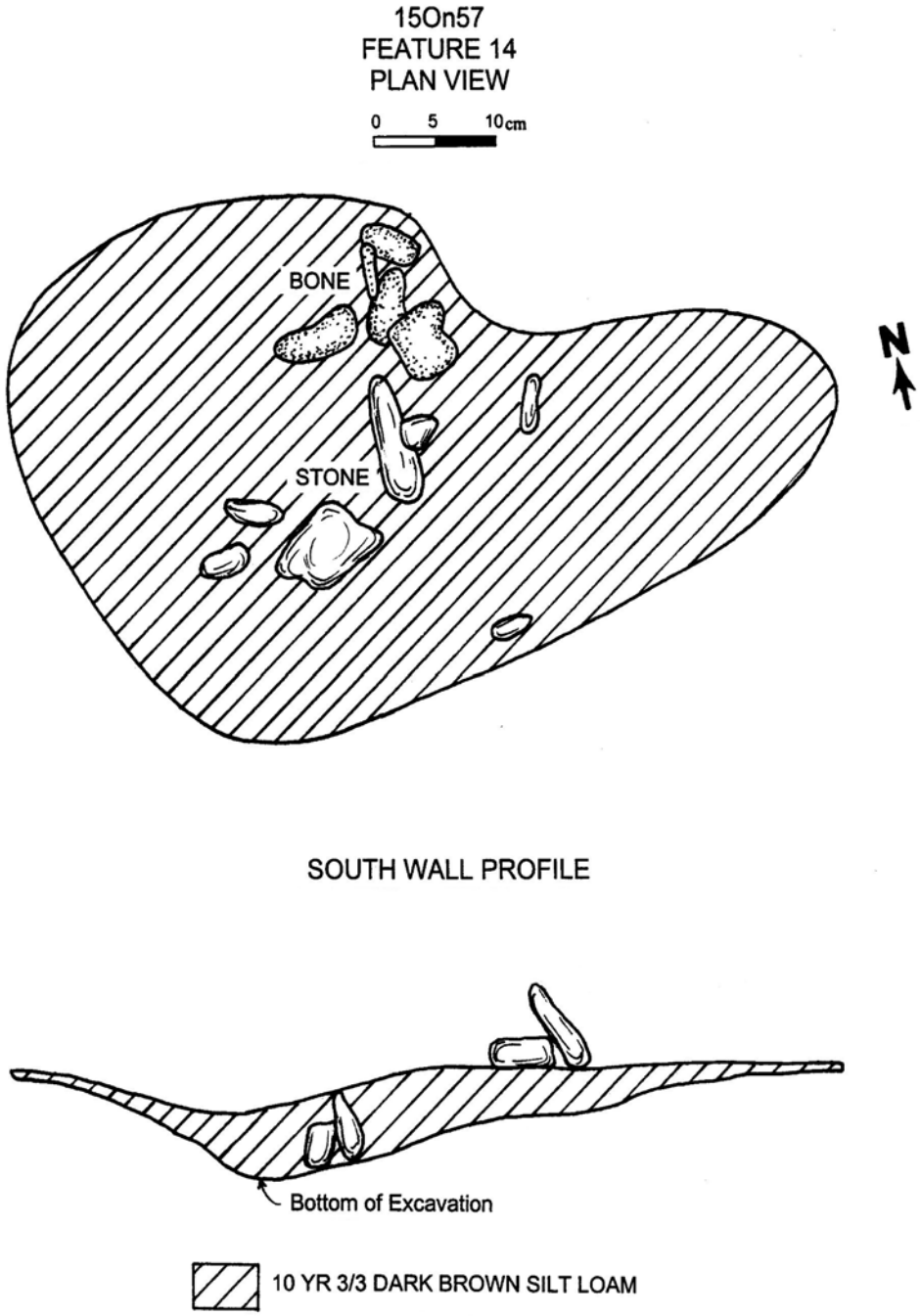

Figure 4.24 Feature 14 Plan View and South Profile

chicken (n=6); and Feature 7 contained a very small indeterminate mammal (Appendix C). Botanical remains consisted mostly of wood, both carbonized and desiccated, followed by seeds, cultigens, fungus, and nutshell (Appendix A).

Outer Farmlot (15On 57) Phase III Discussion

Based upon the findings discussed above, a barn or other outbuilding structure was located in the northern area of the Hardin farmstead and is demarcated by eight large postholes in a rectangular shape. The structure also had two shed additions on both sides. No other architectural features were found. Very few household related artifacts were recovered from excavations which implies that the structure was not associated with a domestic area, but rather associated with the outer farmlot.

Chapter Summary

Unit excavation and mechanical removal of plowzone at the Hardin farmstead revealed a domestic dwelling and an outbuilding. The houselot consisted of the remains of a dwelling in the form of two hearths (Features 2A and 4), a pit cellar (Feature 2B), a refuse pit (Feature 5), and an erosional feature (Feature 3). The dwelling was ell shaped with one pit cellar (Feature 2B) in the ell corner area south of a chimney hearth (Feature 2A), and one refuse pit (Feature 5) was located directly behind the second chimney hearth, Feature 4.

As for Feature 1 and the midden, further excavation revealed both to be part of a natural drainage or erosional channel. A professional geoarchaeologist (Sarah Sherwood) was consulted and her findings concurred with the Phase III findings. The few prehistoric artifacts that were recovered within these natural deposits may have been washed down or redeposited from outside the right of way to the west. The sparse amount of botanical specimens and poor preservation of those recovered from several flotation samples also confirmed the Phase III findings. Feature 3, located above these deposits, may have been part of this drainage during the nineteenth century as suggested by the artifacts.

Analysis of temporally diagnostic artifacts from the houselot revealed an occupation period spanning from about ca. 1820 to the 1870s. The majority of the artifacts from the plowzone and sub-plowzone deposits, particularly in the central and eastern portions of the houselot, dated from this period. Temporally sensitive ceramics recovered from feature fill, though few, indicated a continual use of at least one refuse pit (Feature 5) located behind the dwelling, and possibly an earlier use date for the cellar on the west side of the house, behind the ell corner (Feature 2A). Window glass mean dates ranged from 1831 to 1871 and consistent with the occupation range of the site.

Up to this point we have defined the houselot and yard areas by the presence of features. The domestic dwelling was located in the western portion of the site and the dwelling area probably extended eastward beyond the right of way. The barn to the north would have likely been an area for livestock or agricultural activities, the outer farmlot.

Chapter Five

SPATIAL AND ARCHITECTURAL LAYOUT OF THE HARDIN FARMSTEAD

Introduction

The investigation of houselot and farmyard spatial patterning, particularly the identification of specialized activity areas, swept areas, outbuildings, and refuse disposal areas is a primary topic of interest in historical archaeology. This approach embraces the idea of a cultural landscape, the modification of land according to a set of cultural plans, embodying often-inseparable technological, social, and ideological dimensions. People used these created landscapes in a planned and orderly manner for everything from food production to formal design to explicit statements about their position in the world. Archaeology has consistently underscored the highly specialized and intensively used nature of houselots and work yards---that area around, between, and beneath the work structures. The work yard, surrounding the outbuildings, was the scene of intense activities, including food preparation, cleaning, laundering, and livestock maintenance. The archaeological record reflects the butchering of pigs and cattle and the cleaning of fish for example. Informal hearths to heat water or cook have been encountered in work yards as well as sheet middens containing quantities of discarded animal bone fragments and other refuse. The work yard was often the locus of refuse disposal and has been documented in many studies focusing on different time periods within rural or urban contexts. Previous farmstead studies have had success in identifying activity areas, such as living areas, blacksmithing areas, and storage areas, as well. Outbuildings of various functions have also been identified (Moir and Jurney 1987; Price 1985). Archaeological evidence for the evolution of cultural landscapes or houselots may generally be divided into four categories: architecture, material culture, stratigraphy, and plant and animal remains. Of the former it is often the first and second that come most easily to mind but all contribute significant data essential to landscape/houselot studies. Identification of these activity areas and outbuildings is critical to understanding the extent of the farm operation, what functions were performed, how the farm may have been operated, and if the spatial patterning can shed light on outbuilding function or changing landscape and outbuilding functions over time.

The Upland South model hypothesizes that the layout and structures of a farmstead's cultural landscape are generally characterized by some of the following features: 1) house oriented toward a path of human approach; 2) somewhat or seemingly randomly clustered structures reflecting individualistic notions of convenience; 3) an array of functionally specific buildings; 4) a yard area comprised of the house and various outbuildings considered the female activity area; 5) male activity areas farther from the house and comprised of the barn, animal pens, forges, and tool sheds; 6) a technology heavily dependent on wood; and 7) an architecture generally dominated by log and frame construction.

McBride and McBride (1990:685) have identified farmstead orientation as a specific research issue within farmstead studies. Orientation is generally defined as the direction of the

house front and important in understanding the overall domestic layout (i.e. domestic associated features, side yards, and back yards). Approaching roads and natural features such as rivers or creeks or slope can have a significant influence on determining the orientation of the dwelling. Nineteenth century farmstead dwellings usually face the main approach or road. The front yard, visible from the road and to visitors, would have been kept clean. Consequently, few artifacts should be recovered in this area. Activities related to household chores or discard would have occurred in the side or rear yards of the dwelling. Previous research has shown that on eighteenth and nineteenth domestic sites in rural and urban contexts, the side yard or backyard is often used as the work yard (Andrews 1992a, 1992b; King 1990; Pogue 1988; Keeler 1978; Zierden 1996).

The size and construction techniques of the Hardin dwelling and barn are also important to understanding the workings of the farmstead and aid in discerning the organization of the inner (domestic) yard and the outer (agricultural) yard. Architectural features and artifacts, particularly nails and window glass will be used to postulate the size and construction of the Hardin dwelling. Location and morphology of outbuildings and features will provide important information on defining the types of activities occurring at the site and their relationship to the Upland South model ideal (Emerson and Rohrbaugh 1986; Jurney and Moir 1987; Moir and Jurney 1987; Smith et al. 1982).

HARDIN FARMSTEAD LAYOUT

Features

Introduction

Features recovered during archaeological excavations shed light on the placement of the domestic dwelling and location of the work yard. Other features may be associated with outbuildings and barns suggesting farm layout as well as domestic work yard layouts. As was discussed in the previous chapter (Chapter Four), four features were encountered and excavated during the Phase III investigation of the Hardin farmstead. Their placement and orientation are important in determining how the dwelling was situated and the houselot configuration.

The Hardin houselot is demarcated by two chimney bases (Features 2A and 4). The two chimney bases were dry laid limestone and measured 2.2 m long (7.2 ft). Feature 2A was located along the west wall of the structure and faced east and Feature 4, located on the south wall of the structure, faced north. No other architectural features were found in association with the structure. Piers that would have supported the house were probably robbed when the structure was dismantled. In addition, two features, Features 2B (cellar) and 5 (refuse pit) are identified in association with the dwelling. Feature 2B is a roughly circular pit cellar located 25 cm south of the west chimney (Feature 2A). Dimensions were 1.20 m north - south by 1.45 m east - west x 23 cm in depth. The refuse pit (Feature 5) was a circular, basin-like soil discoloration, located 3 meters southeast of the southern chimney (Feature 4). Dimensions were 1.80 m east - west x 1.50 m north - south by 35 cm in depth. Both, the cellar and refuse pits were rock filled.

Placement

The location and orientation of both hearths and pit features implies how the house was situated. The structure was ell-shaped, probably with two pens (hall and parlor) and an addition. This configuration suggests that the house faced either to the north or to the east. Evidence for the structure facing north includes distribution of artifacts which are greater in number in both the eastern and southeastern areas. This distribution pattern is a typical domestic refuse pattern which uses the side and back yard for refuse disposal. More detailed discussion based on spatial analysis of the artifact distribution and how the domestic area compares to the Upland South model follows later in this chapter.

Orientation of the dwelling might have been towards an access road. As has been documented on Upland South and other nineteenth century farmsteads, the dwelling will often face a path of human approach. If the current unimproved road north of the houselot was present during the occupation then it might have acted as an approach from the main highway to the west. The existing creek which parallels the road between the houselot and agricultural field may have played a part in determining the placement of the access road. This creek would have been a natural boundary between the gender-related inner and outer farm lot areas.

Archaeological research on Upland South farmsteads has shown that pit cellars may be located either under the dwelling or very close to the dwelling in the side yards and back yard (e.g. Rotenizer 1992, Wagner and McCorvie 1990). On the Hardin houselot, near the chimney, Feature 2B is located on the western edge of the dwelling and might have been attached to the dwelling on the west wall. Feature 5 is situated directly southeast of the dwelling, but seems to have been independent of the structure. Whether Feature 5 was under an outbuilding is not known. No evidence was recovered to suggest a structure was located in this area. The placement of these cellars/refuse pits combined with the location of the stream and access road all suggest that the Hardin's house faced north.

Construction

Numerous studies over the past several years have been used to determine the types of structures at archaeological sites using nail length and type and keying these to 19th century building manuals (see Lees 1986; McCorvie et al. 1989; Wagner and McCorvie et al. 1990; Young and Carr 1989). Nineteenth century building manuals provide corroboration of the archaeological findings (e.g. Anon 1855; Peddie 1833). A determination of log or frame structures has been noted by Lees (1986) based on nail size. This theory is that heavy framing nails such as 9 d. to 40 d. or pennyweight would most likely be used on a frame structure. A log structure would have little use for the large nails since it uses the logs themselves to frame the windows, doors, roof, and possibly a floor.

Similarly, Young and Carr, have defined two additional nail patterns for timber-frame structures and balloon frame structures (Young and Carr 1989). In timber-frame structures, large timbers were mortised and tenoned together forming the framework for the roof and weather boarding. Nails would be needed for weather boarding, roofing, windows, doors, interior woodwork, and floors. Such nails would vary in size from 4 d. to 10 d. Balloon frame structures became common after the mid-nineteenth century. Instead of the mortise and tenons which required no nails, the balloon frame used nails at the joints to form the frame. Larger heavyweight sized nails would therefore be essential for better holding and support. Unlike the log and timber frame structures, a large quantity of nails 10 d. and larger would be more common. However, the same amount of smaller nails would still be needed for weather boarding, roofing, windows, doors, interior woodwork, and floors (Young and Carr 1989). Table 5.1 is a compilation of archaeological findings of nail pattern usage on 19th century sites. Too few complete nails (n=46) at the Hardin site preclude a definitive assessment of nature of the building construction (i.e. log or frame). Of the 46 whole nails, most were late cut nails. Analysis of the late cut nails indicates that many (87%) were 8 d. or less (Table 5.2). The remaining 6 nails (13%) were 9 d., 10 d., and 12 d, all of which have multiple uses. The sample size of whole nails is too small to determine structure construction. The frequency of cut nails, in general, however, is indicative of a frame structure or log structure with frame addition with siding and wooden shingles. What also seems likely is that the dwelling was dismantled based on the number of pulled nails and all nails recovered in the eastern side yard and back yard. Although some pulled nails and unaltered nails occur around the structure and may be the result of construction, the sample size suggests complete dismantling at one time. Based on the archaeological and archival information, the dwelling may have been torn down sometime in the 1870s when the entire area was converted for cultivation.

Barn

Placement

Remains of a large post-in-ground structure were encountered during Phase II/III excavations. The configuration and spacing of the postholes, and scarcity of artifacts suggest a large agricultural building, likely a barn. Twelve postholes were documented. These measured from 40 cm to 70 cm in diameter and are spaced about 9 m (26 to 29 ft)(see Figure 4.22). Although not much can be said about roof type or floor plans some general statements are possible one about the size, type, and even construction of the barn. The most common agricultural outbuilding found on early Kentucky farms was the generic multi-purpose barn (Kennedy and Macintire 1999). These barns had numerous functions, from stables to equipment or crop storage. Since the remains of Hardin's barn consisted of a series of posts, we know that it was frame and built in bents, that is, cross-sectional trusses consisting of posts, connecting rails, and a rafter pair, which were assembled on the ground, then raised and connected in sequence. The number and configuration of posts on the Hardin barn indicate that it consisted of three bents with two bays and two shed additions with a likely entrance on the western gable. Frame barns were commonly expanded through the addition of sheds. Specific type of barn can only be speculated on, however.

Table 5.1 Nail Sizes and Use (Adapted from Wagner et al. 1992)

Nail Size	Use	Reference
2	Wall and ceiling lathing	Lees 1986
	Lathing	Young and Carr 1989
3	Shingling, ceiling lath, and thin tongue and groove paneling	Lees 1986
	Lathing	Young and Carr 1989
4	Shingling and slating	Fontana and Greenleaf 1962
	Wood shingling, cabinet work, moulding, and other finnish work	Walker 1971
	Clapboard siding and shingling	Lees 1986
	Shingle and shakes	Young and Carr 1989
5	Moulding, finish work, and ornamentation	Walker 1971
	Light framing (1-1 3/4" boards)	Lees 1986
	Shake and siding	Young and Carr 1989
6	Clapboarding and finnishing	Fontana and Greenleaf 1962
	Light framing, clapboarding, bevel siding, and wood grounds	Walker 1971
	Clapboard siding, exterior trim (1"), flooring (1")	Lees 1986
	Siding and ceiling	Young and Carr 1989
7	Siding and wallboarding	Young and Carr 1989
8	Finishing and flooring	Fontana and Greenleaf 1962
	Flooring, furring strips, wood grounds, and interior fittings	Walker 1971
	Flooring, sheathing, boarding, and exterior trim (1")	Lees 1986
	Flooring and siding	Young and Carr 1989
9	Flooring and boarding	Fontana and Greenleaf 1962
	Flooring and siding	Young and Carr 1989
10	Boarding	Fontana and Greenleaf 1962
	Furring strips, flooring, boarding and interior fittings	Walker 1971
	Sheathing and window trim (1")	Lees 1986
	Flooring and siding	Young and Carr 1989
10+	Flooring and siding	Young and Carr 1989
12	Wooden studding	Walker 1971
16	Studding rafters and heavy framing	Walker 1971
20	Heavy Framing	Walker 1971
40	Framing	Fontanna and Greenleaf 1962

Table 5.2 Nail Types and Sizes

Pennyweight (d)	Length (in)	Pulled	Unaltered	Total
12	3.25	1		1
10	3	2		2
9	2.75	3		3
8	2.5	6	1	7
7	2.25	6	1	7
6	2	2	5	7
5	1.75	4		4
4	1.5	6	3	9
3	1.25	1	3	4
2	1	2		2
Total	**33**		**13**	**46**

Three most common barn types in Kentucky are the English Barn, the Aisled Barn, and the Bank Barn (Kennedy and Macintire 1999). Of these types, no type seems to adequately describe the Hardin barn. The Hardin barn was not a bank barn, the terrain was a level floodplain, and no evidence of soil banking was encountered. On English barns, the doors open on the center of the long sides not on the gable ends. The shed additions on the long sides of the Hardin barn suggest that central doors on these sides were not possible. While the Aisled barn has entries on either gable end, these doors were usually large, even double doors. The presence of posts in the center of each gable end assures that double doors were not centrally located on these ends. It would seem that the archaeological remains of the Hardin barn resembles a type of barn illustrated for Iowa 1889 (Noble and Wilhelm 1995). From archaeology we can say that the Hardin barn was not a typical or common Kentucky barn, it is most likely that it functioned as a multipurpose facility with asymmetrically placed double doors.

Archaeological evidence for barn construction consisted primarily of nails and post (feature) placement. A total of 129 nail fragments were recovered. Of the identifiable ones, however, 40 were late cut nails, 43 unidentifiable cut nails, and 46 unidentifiable nails. While the nails are useful as chronological markers for the building of the barn and the shed additions, they give us little added detail as to construction. The posts are indicative of frame construction as are the nails.

THE HARDIN HOUSELOT and WORK YARD

Creating artifact density maps using data from systematic collection or excavation is a type of intrasite analysis to delineate activity areas, discard areas, and outbuilding placement on

plantations, farmsteads, and houselots. While a considerable amount of research has been conducted on houselots and plantations in the Tidewater area of Virginia and Maryland (Keeler 1978; King and Miller 1987; King 1988; Riordan 1988; Pogue 1988) considerable work has been instigated in the South (Neiman 1980; Wesler 1984; Roberts 1986; Zierdan and Calhoun 1986). Intrasite comparisons of artifact distributions have been conducted at sites within Kentucky by O'Malley (1987), Andrews (1998, see also Andrews and Stetar 1995), and McBride and Fenton (1996). These studies have demonstrated the informative potential of this approach to examining site function and building configuration.

Using the SURFER mapping program, artifact density maps were generated for the purpose of defining the site layout. The SURFER program plots overlapping concentrations of artifact types. Artifacts that were used to examine the farm layout where broken down by functionally related categories to define activity areas and by temporal range to date the deposits. For example, kitchen-related artifacts can be used to delineate a domestic dwelling or activity, and architectural-related debris indicates the location of structures or refuse disposal due to structural dismantling. Artifact distributions can be useful in delineating house orientation. An examination of the spatial distribution of temporally sensitive artifacts can aid in defining changes in the houselot over time. For example, finding a concentration of earlier refuse in one area of the site and later refuse in another suggests changes in the dwelling location, or an addition and/or alteration to the original dwelling.

The distribution maps were constructed from artifacts collected from the STPs and units, both separately and together. Only plowzone material from these STPs and units was utilized in the construction of these maps. STPs were placed systematically across the site. Test units on the other hand were placed judgmentally where STPs and the surface collection indicated dense artifact concentrations or unusual stratigraphy. A total of 1,071 artifacts was recovered from the STPs while a total of 5,990 artifacts was recovered from the test units. Artifacts include kitchen-related refuse (59.26%), architectural debris (35.87%), personal items (1.04%), furnishing items (0.6%), clothing items (0.56%), transportation items (0.29%), activity items (0.15%), arms-related refuse (0.06%), and miscellaneous artifacts including metal, coal, and cinders (2.06%). The material from the STPs and test units included temporally and functionally diagnostic artifacts like bone china, Chinese Export porcelain, creamware, pearlware, early decorated whiteware, empontiled bottle/jar bases, unfused bottle necks, coins, and cut nails. These artifacts suggest that the site was occupied from about the early to middle nineteenth century. The analysis of the collected material was then used to construct artifact frequency contour maps.

The STPs and test units were utilized instead of surface collected material for several reasons. First, surface piece plots were relatively few (n=243) and second, most of the artifacts collected were visible kitchen-related artifacts as opposed to architectural artifacts such as bricks and nails, creating a biased collection.

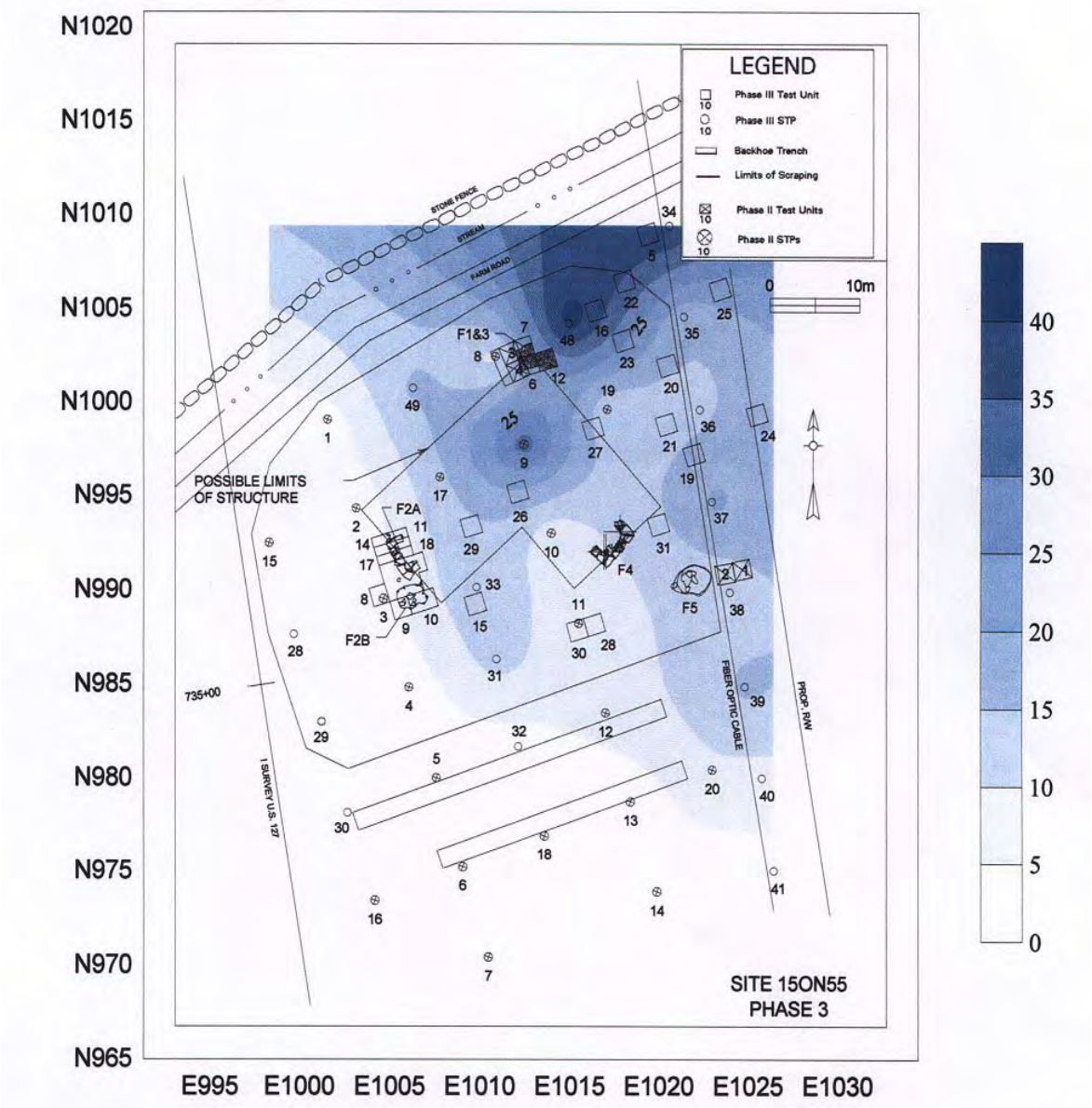

Figure 5.1 Distribution of Architectural Material from STPs

By looking at the architectural remains (Figure 5.1) an idea of the location of structure and/or possible refuse areas that result from the disposal of architectural debris after replacement and/or dismantling of structures at the site is possible. A total of 2,560 architectural artifacts was recovered from STPs and units. These include 33.55% flat glass (n=859), 24.57% late cut nails (n=629), 14.88% unspecified cut nails (n=381), 3.75% unidentifiable nails (n=96), 21.39% mortar (n=522), and 1.56% brick (n=40). Unfortunately, only 46 of the 625 cut nails were complete.

Nails recovered from the site were for the most part in poor condition and many were unidentifiable as to specific nail type. The greatest number of cut nails was recovered from STP 48 (n=17), located just east of the dwelling (Figure 5.2). Test Unit 31, located at the southeast corner of the dwelling, had the most cut nails of all the units, although other nearby units (TUs 19, 21, 23, and 27) in the eastern side yard also contained many specimens. STP 37, located near Unit 31, also contained a high frequency of nails (n=13). The heavier concentration of cut nails continues across the back yard immediately behind the dwelling and into the ell corner area. There were significantly fewer cut nails recovered from the STPs within the structure, and very few recovered from the western portion of the front yard and northern portion of the western side yard. What few cut nail fragments are present around the structure were probably lost during construction or maintenance. Oddly, although there were few cut nails recovered overall from within the structure area, there was a relatively high frequency recovered from the center of the structure. Test Unit 29, located just a few meters west of Unit 26, contained considerably fewer cut nails, relatively the same compared with STPs within the structure. Unfortunately, all of the nails recovered from Unit 26 are small fragments except one complete unaltered late cut nail. Perhaps this area received more house repair and maintenance or these nails were simply discarded. Stratigraphy of Unit 26 was no different from other surrounding units and STPs, suggesting that there was little probability of a storage/refuse pit or other subsurface feature located in this area.

A nail concentration was identified southeast of the building and suggests that either this is a structure location or discard (Figure 5.2). Of the 46 complete late cut nails identified, 33 were recovered in the eastern side yard and had been pulled. Pulled nails are usually found in moderation around a constructed building, a result of a mishammer or the result of dismantling. This information suggests that the dwelling was probably dismantled and most of the debris discarded in the eastern side yard and back yard. Nail distributions indicate that another structure was present just outside the right of way as well. Looking at the STP distribution map, there is a moderate concentration of cut nails that continues well into the back yard over 20 m south, beyond the edge of the right of way. This moderate concentration signals the location of an outbuilding, possibly a smokehouse associated with the dwelling and inner farm lot.

In the northeastern corner of the site there is another concentration of cut nails present. The concentration continued to the east and beyond the project right of way (Figure 5.2). This cluster of cut nails suggest discard or structure location. No structural features were recovered by mechanical removal of the plowzone up to the fiber optic line and within the right of way in this area. However, the small area between the fiber optic line and the edge of right of way was not examined due to

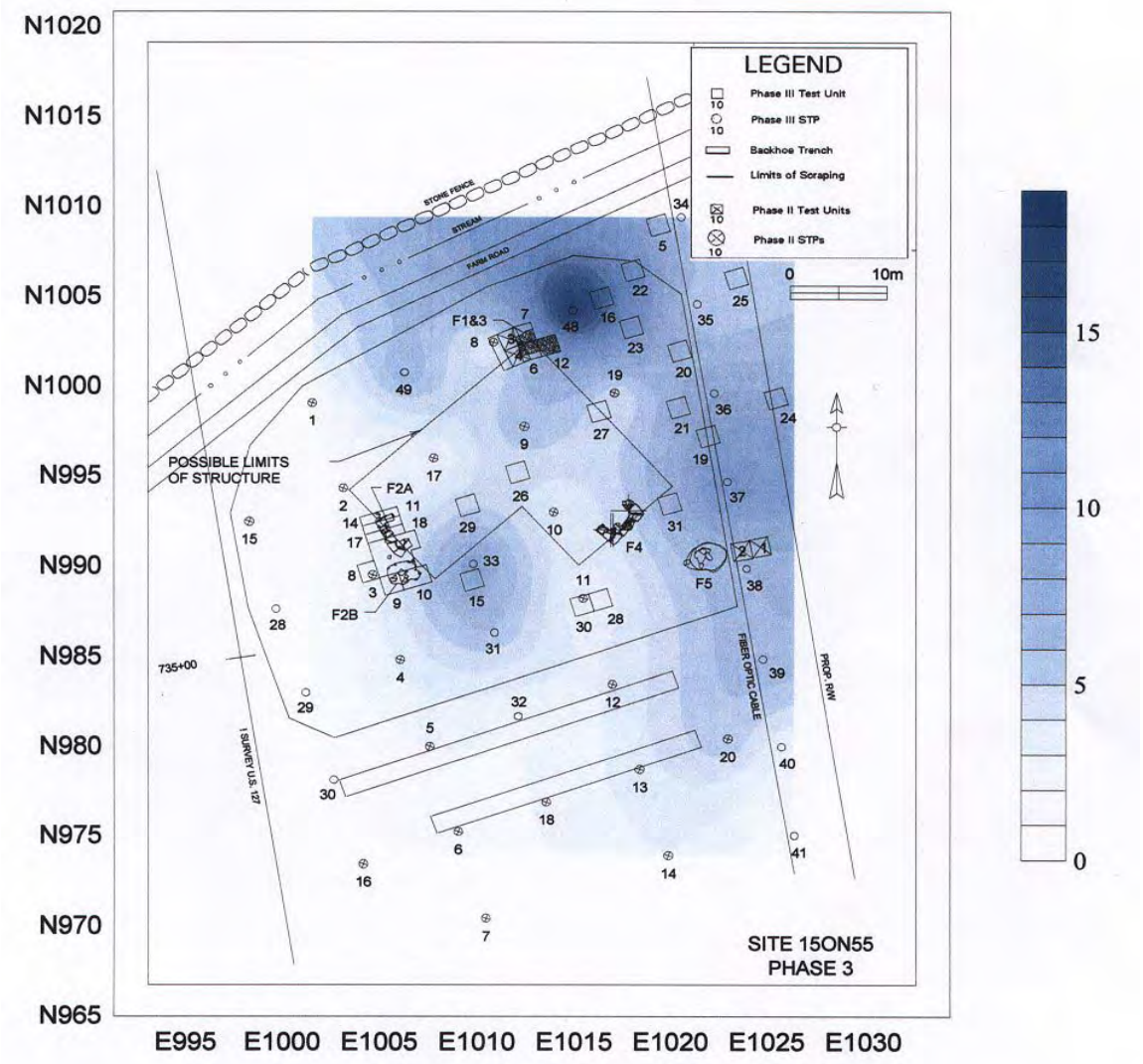

Figure 5.2 Distribution of Cut Nails from STPs

inaccessibility. It is more than likely that a structure was located just outside the right of way in this area since investigators did observe a considerable concentration of flaked limestone and artifacts on the other side of the right of way line.

Whereas cut nails reflect one pattern, the map for the distribution of flat glass reveals something slightly different (Figure 5.3). Like the cut nails, flat glass occurs across the site and is heaviest within the back yard and eastern side yard, and the northeastern side yard. Looking closely at the dwelling area, very little glass occurs within the structure. There is, however, a notable increase around the structure walls. This shadow probably represents fragments of broken windows and sheds light on the house dimensions. Based on this information and the alignment of the chimneys the house would have measured approximately 11 m x 11 m or 36 by 36 feet. However, Test Unit 26 presented a slight deviation from the pattern since it contained more glass fragments (n=41) than the surrounding STPs. Interestingly, Unit 29, located only a few meters to the west of Unit 26, had fewer cut nails and also fewer window glass sherds (n=8). Although an explanation for the amount of cut nails in Unit 26 was given as a possible area of heavy maintenance and repair, it does not explain the window glass. If the building was on piers, it would have been raised with a crawl space under it. Given this, there may have been an area under the house where old replaced boards or broken window sections were discarded. The window glass specimens are very small and fragmented so it is difficult to say if there was a complete window, but it is unlikely. Nor does artifact distribution or the existing chimney bases suggest that there were two separate sections of the dwelling, as in a detached kitchen. What seems most likely is that these materials may have been tossed or swept under the house.

Although few brick fragments were found across the site, they were concentrated in the eastern side yard. Mortar was concentrated within the northeastern portion of the dwelling and the northeastern side yard where it continued beyond the right of way (Figure 5.4). The continuation of the mortar beyond the study limits, suggests, much like the distribution of nails in the same area, that a structure, associated with the Hardin farmstead was located just outside the right of way.

Kitchen artifacts from STPs and units numbered 4,229, the most frequently encountered artifacts from the site. Ceramics made up the largest portion of this group at 72.62% (n=3,071). Ceramics, in particular refined ceramics, are one of the most important chronologically diagnostic artifact categories on an archaeological site. In addition, these materials offer important clues to functional and social status variation between sites and cultural or ethnic components. A more detailed discussion will address refined ceramics as a social status indicator in the next chapter. Typically, ceramics are divided into two major groups: refined and unrefined earthenware. Refined earthenwares were primarily used as tea and tableware, but were also used as toiletry items. Refined wares treated here include pearlware, whiteware, and ironstone. Porcelain was also included in the refined ceramics. Unrefined earthenware or coarsewares were used for food preparation and storage, mixing bowls, churns, milk pans, etc. Unrefined wares treated here include redware, stoneware, and yellow ware.

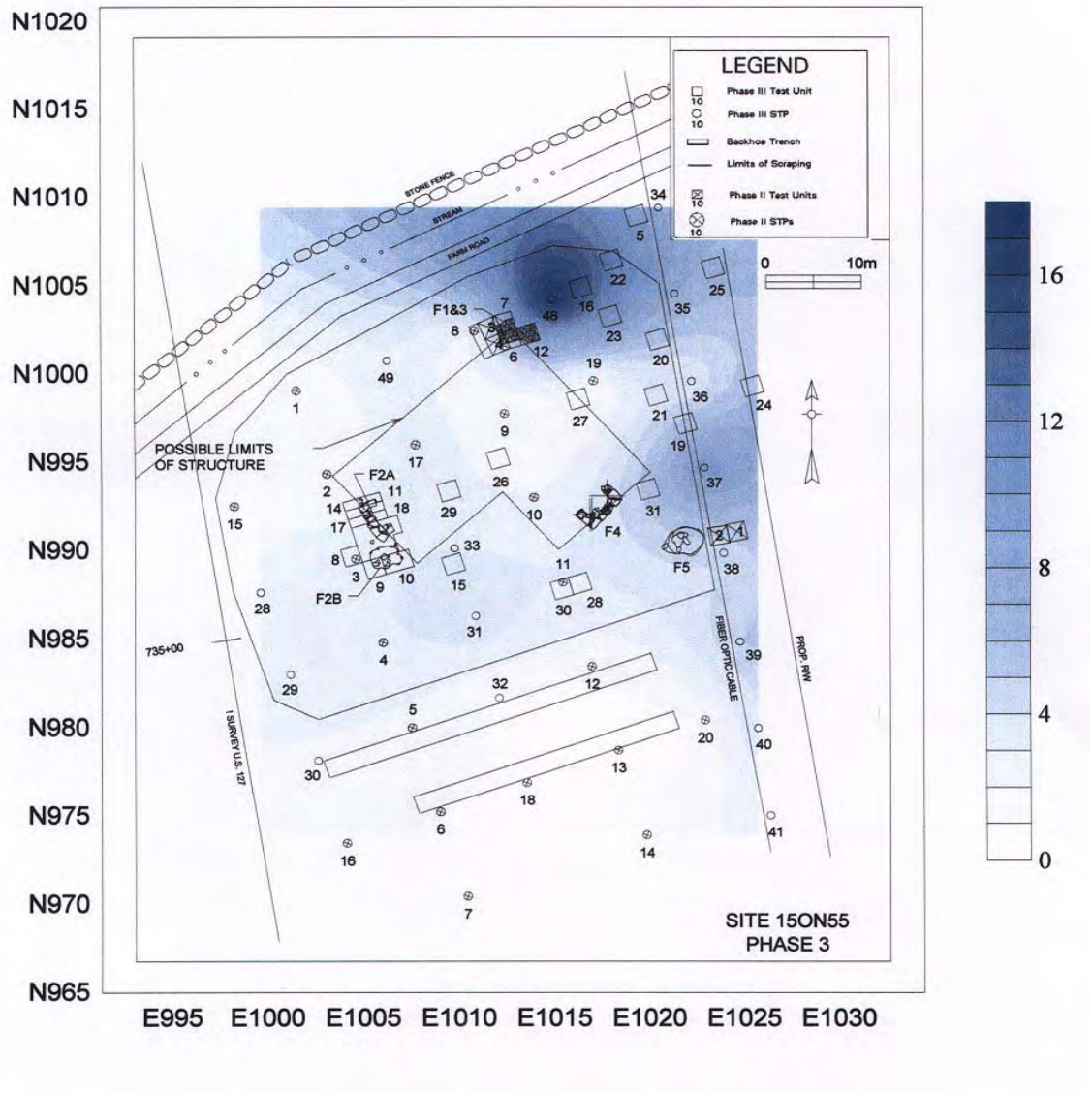

Figure 5.3 Distribution of Flat Glass from STPs

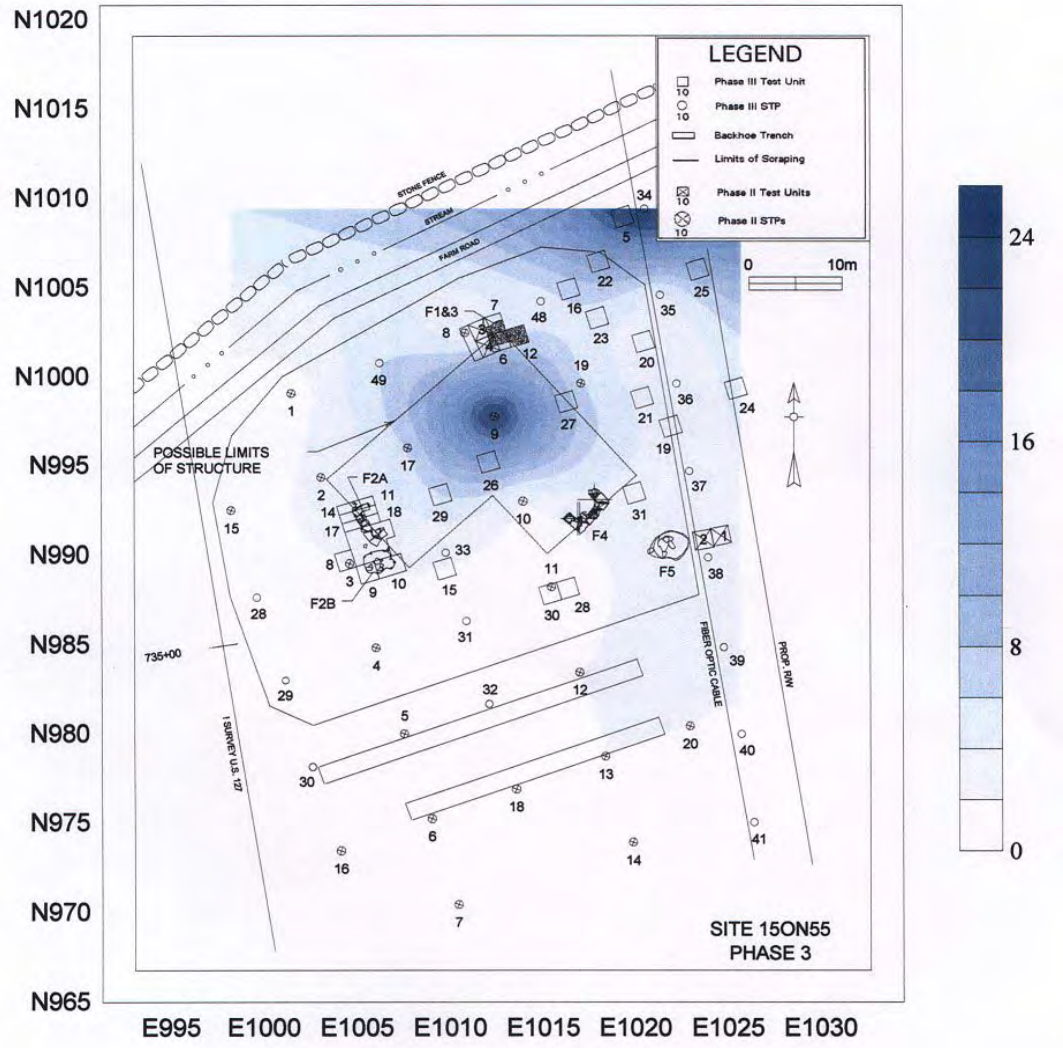

Figure 5.4 Distribution of Mortar Fragments from STPs

Early nineteenth century ceramics recovered from the site included 13.29% redware, 8.4% pearlware, and 3.74% bone china. Creamware was also present, but less than 1%. Middle nineteenth century wares recovered included 59.33% whiteware and smaller quantities of stoneware (4.27%), ironstone (3.78%), and yellow ware (1.79%). Ceramics used in construction distribution maps include pearlware, whiteware, redware, stoneware, and ironstone. Pearlware, whiteware, and ironstone were used to show discard or activity areas across the site and any pattern associated with temporal variability. The distributions of redware and stoneware were plotted to show specific utilitarian-oriented activity areas, discard areas, and relative temporal variability of the discard areas. A general map of the kitchen-related artifacts was also used to document dumping patterns and to investigate discard patterns in the back and side yard. Looking at the STP map in Figure 5.5 three main concentrations of kitchen material are present. These three areas are located in the ell corner area of the house, the eastern side yard and back yard, and the northern part of the eastern side yard. The latter two concentrations continued beyond the right of way. Relatively few artifacts were distributed across the front yard and the western side yard.

The 258 pearlware sherds recovered (Figure 5.6) from STPs and units are distributed rather evenly across the eastern site area. The only real concentration occurred in the eastern side yard and back yard and continued into the eastern portion of the dwelling. Very little pearlware was recovered from the western side yard and the majority of the site STPs contained little to no pearlware. Looking at the pearlware distribution within the units (Figure 5.7) clearly reveals the east side yard concentration and concentrations above Features 2B and 5, both of which contained pearlware.

Whiteware (n=1,822) was distributed across the site and was the most frequently encountered artifact (Figure 5.8). Many decorated types were present and included polychrome hand painted, edge decorated, transfer printed, molded, and sponge decorated. These whiteware types predate 1870. Although whiteware occurs frequently across the site, the whiteware recovered from STPs revealed three major concentrations. These areas are located in the northeast corner of the yard, the eastern side yard and back yard, and the ell corner area of the dwelling. Unlike pearlware, the relative distribution of whiteware in the eastern side yard does not continue into the eastern part of the dwelling, but is present in moderation within the northern half of the dwelling.

When decorated datable whiteware is examined (Figure 5.9) tentative concentrations in the northeastern side yard, the ell corner and adjacent back yard, and in the extreme southeastern area of the site are indicated. In comparison, decorated whiteware is very sparse in the eastern side yard; while, undecorated whiteware is concentrated there. Interestingly, decorated sherds recovered from units revealed a concentration in the immediate eastern side yard along the side of the dwelling also. As for temporal patterns across the site, it appears that all main discard areas were used throughout the occupation.

Ironstone (n=116) distributions from units failed to identify a change in refuse distribution patterns over time at the Hardin farmstead (Figure 5.10). Ironstone does not appear on American

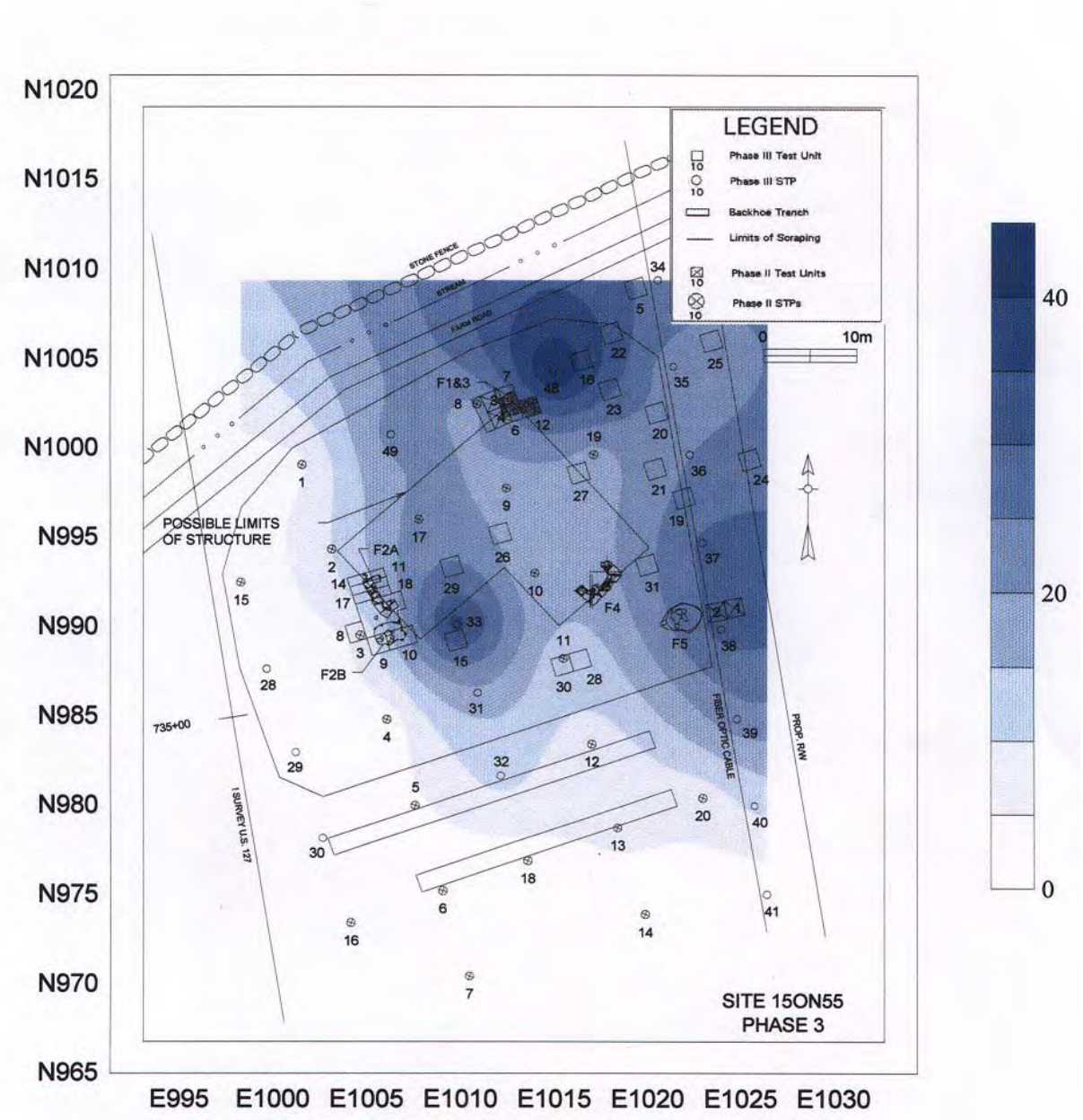

Figure 5.5 Distribution of Kitchen Artifacts from STPs

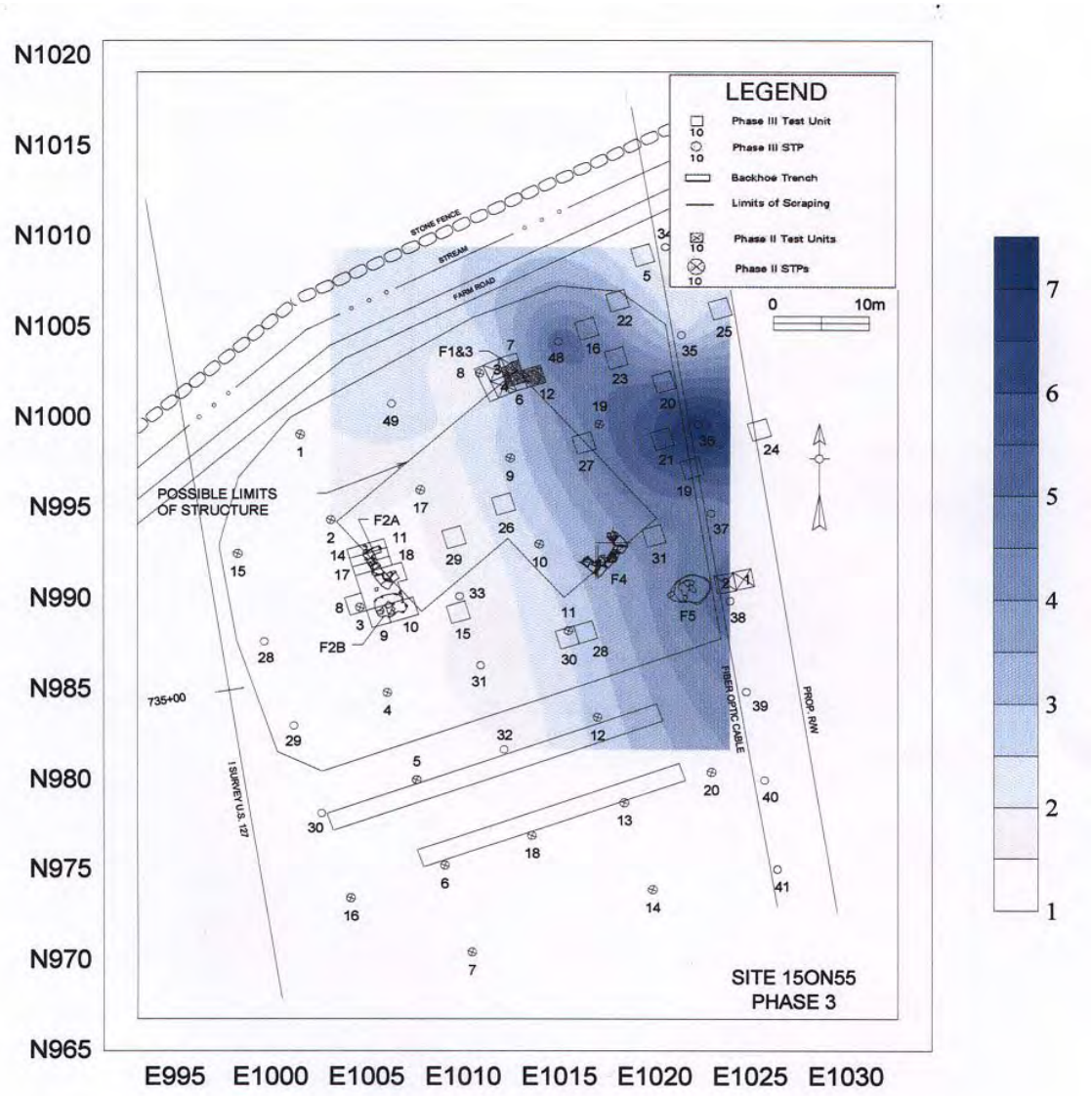

Figure 5.6 Distribution of Pearlware from STPs

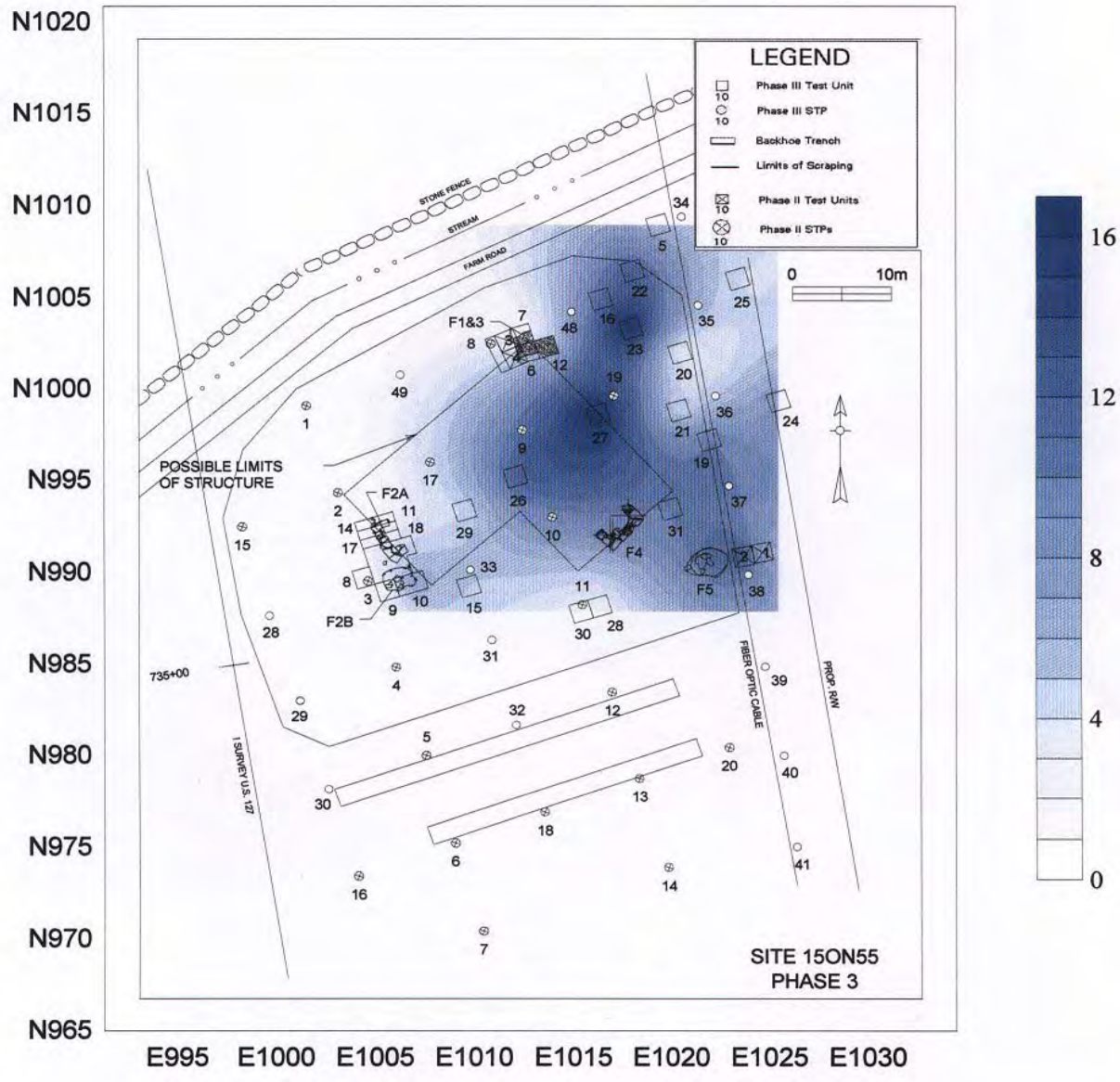

Figure 5.7 Distribution of Pearlware from Units

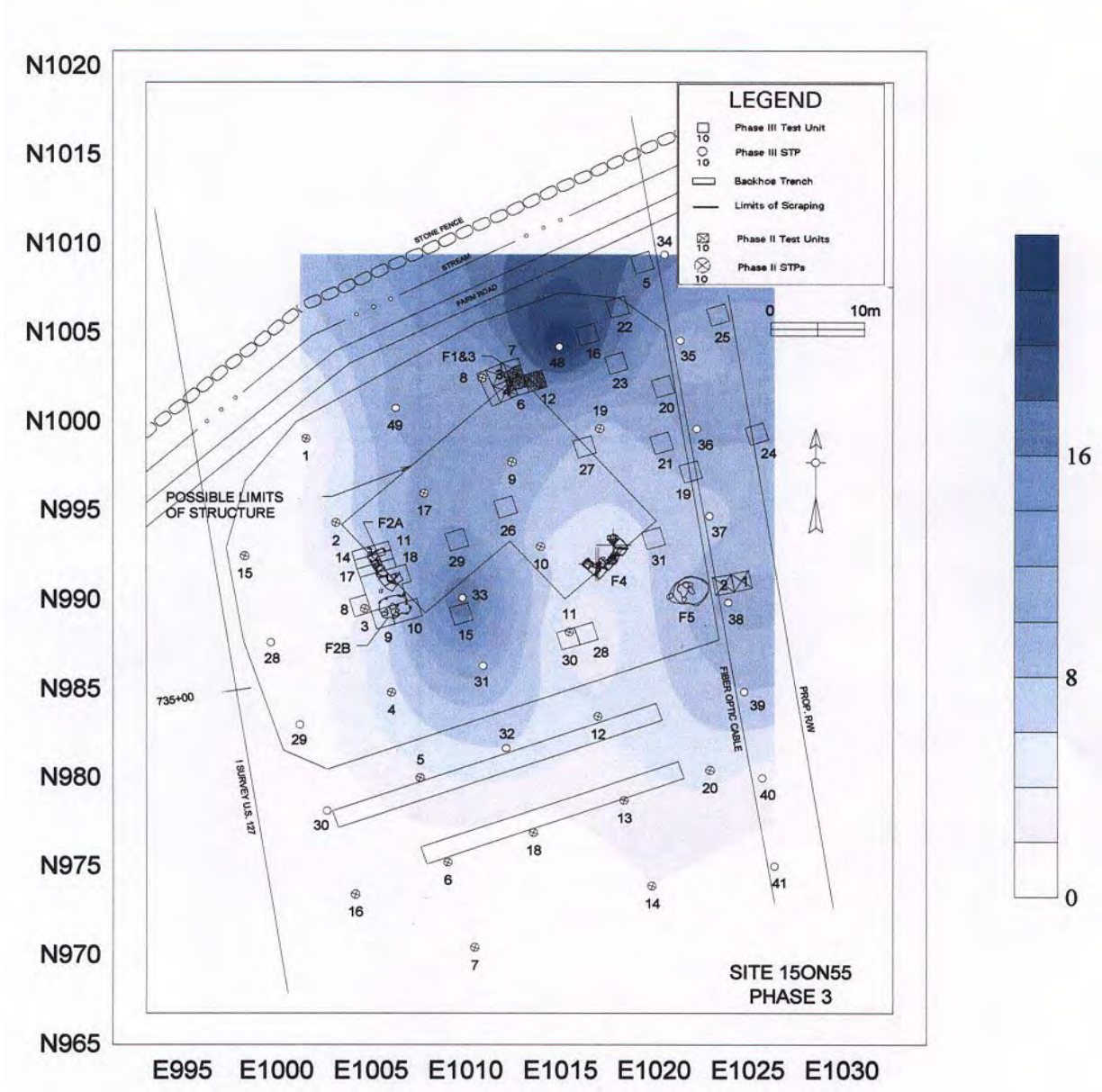

Figure 5.8 Distribution of Whiteware from STPs

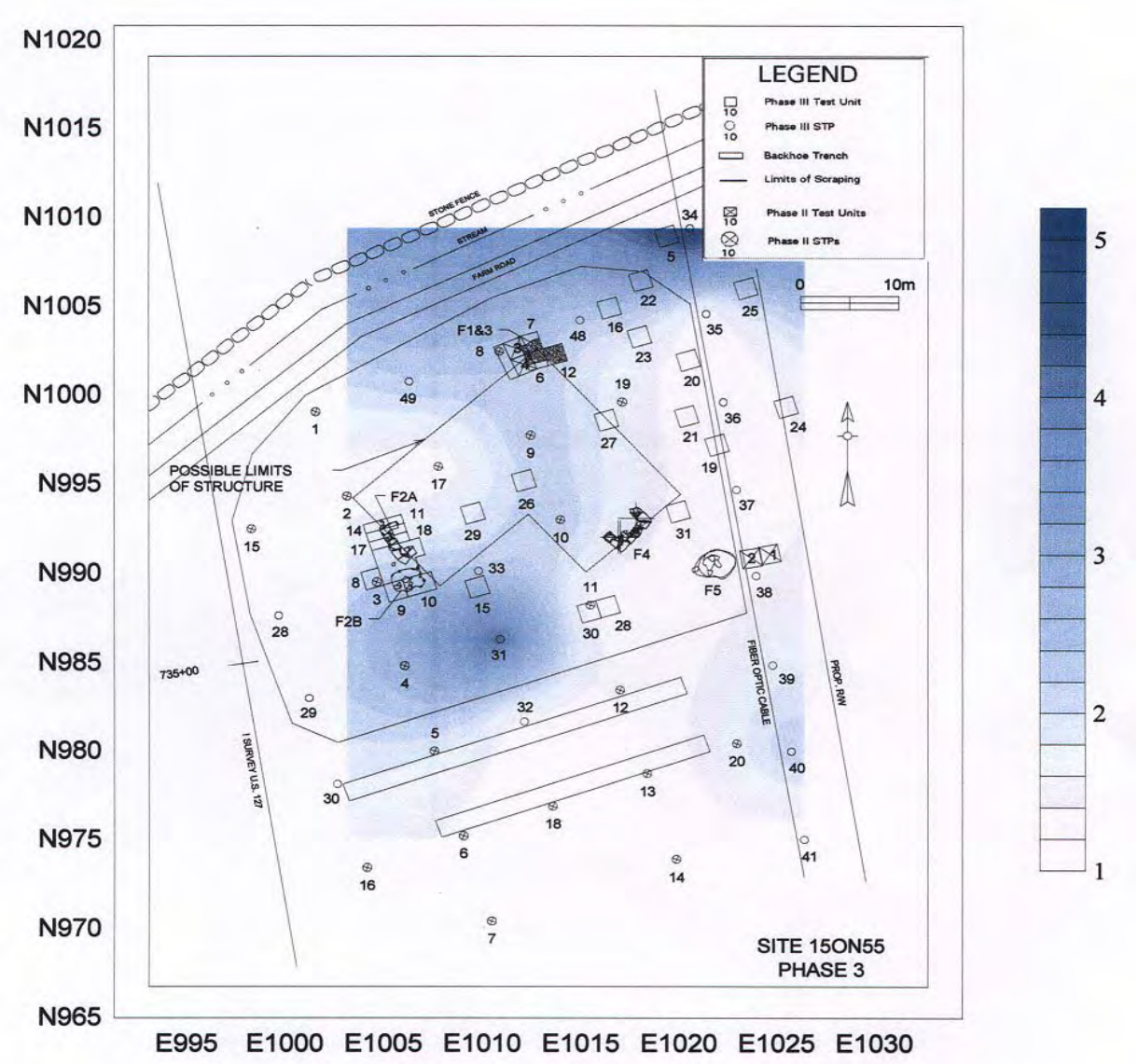

Figure 5.9 Distribution of Decorated Whiteware from STPs

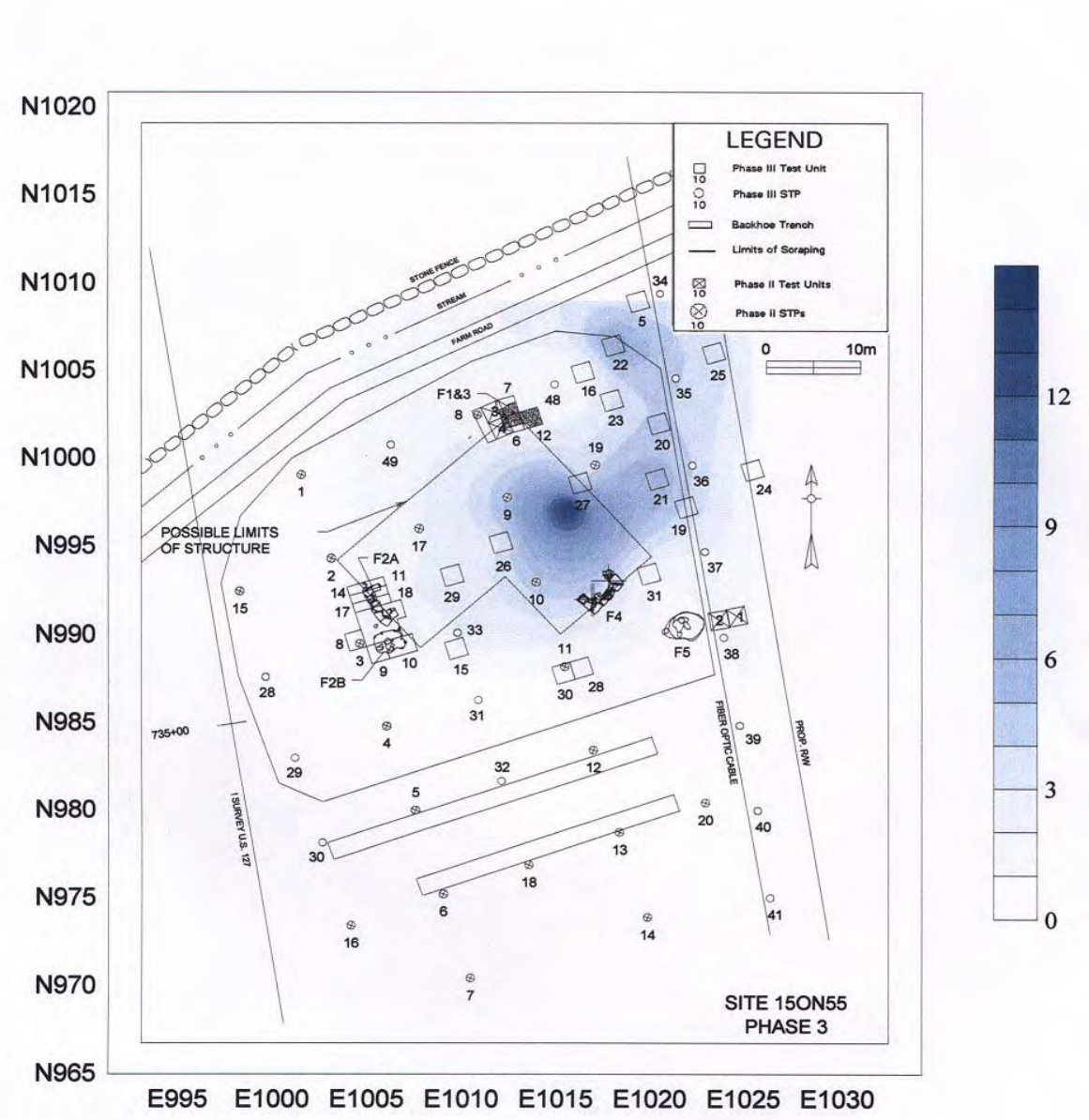

Figure 5.10 Distribution of Ironstone from Units

sites until the 1840s and really did not become popular until the 1850s (Miller 1991). Most of the ironstone recovered from this site dates from the 1850s to 1870. Although sparse, ironstone was distributed across the dwelling area and into the eastern side yard and northeastern side yard, and continued beyond the right of way. This would seem to indicate little to no change in the refuse disposal pattern over time and that the orientation and room functions of the dwelling structure likewise changed very little during the occupation.

Redware (n=408) and stoneware (n=131) distributions were generated, using unit data, to discern activity areas within the houselot area. As Figures 5.11 and 5.12 show, the redware and stoneware distributions are similar. Both ware occur predominantly within the dwelling and continue beyond the limits of the back and side yards. More redware was present in Unit 29 and more stoneware present within Unit 26, although, both units are located only a few meters apart. Both ceramic types are distributed throughout the southern area of the dwelling, possibly close to a kitchen or scullery area. Identified utilitarian vessels such as bowls, jars, and crocks were likely used in food processing activities that would associate with a kitchen. Although no churns were identified (due to sherd size), they were more than likely present at the site. According to the 1850 agricultural census, Hardin produced 250 pounds of butter and would have needed one or even several churns.

While most of the kitchen glass recovered from STPs and units was unidentifiable container glass (n=447), there were 280 specimens of bottle glass. A bottle glass distribution was generated using unit data because, like ceramics, these artifacts convey significant chronological, functional, and social information. There were several identifiable types recovered that were used for consumption (alcohol, bitters, condiments, and preserved goods), personal use (perfume and ink), and pharmaceutical. Some of the container glass was unidentifiable as to manufacture (n=41) and most were undetermined mold blown specimens (n=132). However, several methods of manufacturing were also present and included dip mold (n=1), two piece mold (n=8), multipart mold with a separate base (n=1), and undetermined mold with pontil scar (n=3). Dip molds and two-piece molds date to around 1860 while the multipart mold dates from 1850 (Jones and Sullivan 1985) and continues until the middle 1920s, although in this case probably until the end of the site occupation (1873). Other nineteenth century bottle glass included embossed (n=12), embossed with recessed panels (n=7), fire polished lips (n=1), unfused finished lips (n=9), fused finished lips (3), and hand formed (n=3). Except for some machine manufactured sherds (n=9), most of these dated from the early to middle nineteenth century or until the end of occupation at the site.

For the most part, bottle glass (Figure 5.13) was widely distributed across the site, but concentrated in the eastern side yard and moderately within the back yard. This confirms that the preferred area of activities and refuse disposal at the site was the eastern side yard. Interestingly, there is a second concentration at the northeastern corner of the house which extends into the eastern part of the front yard. Although other artifacts such as ceramics were present in large amounts in this area also, distribution tended to extend beyond the right of way. Bottle glass, however, is an isolated discrete concentration. Different functional types of bottles such as

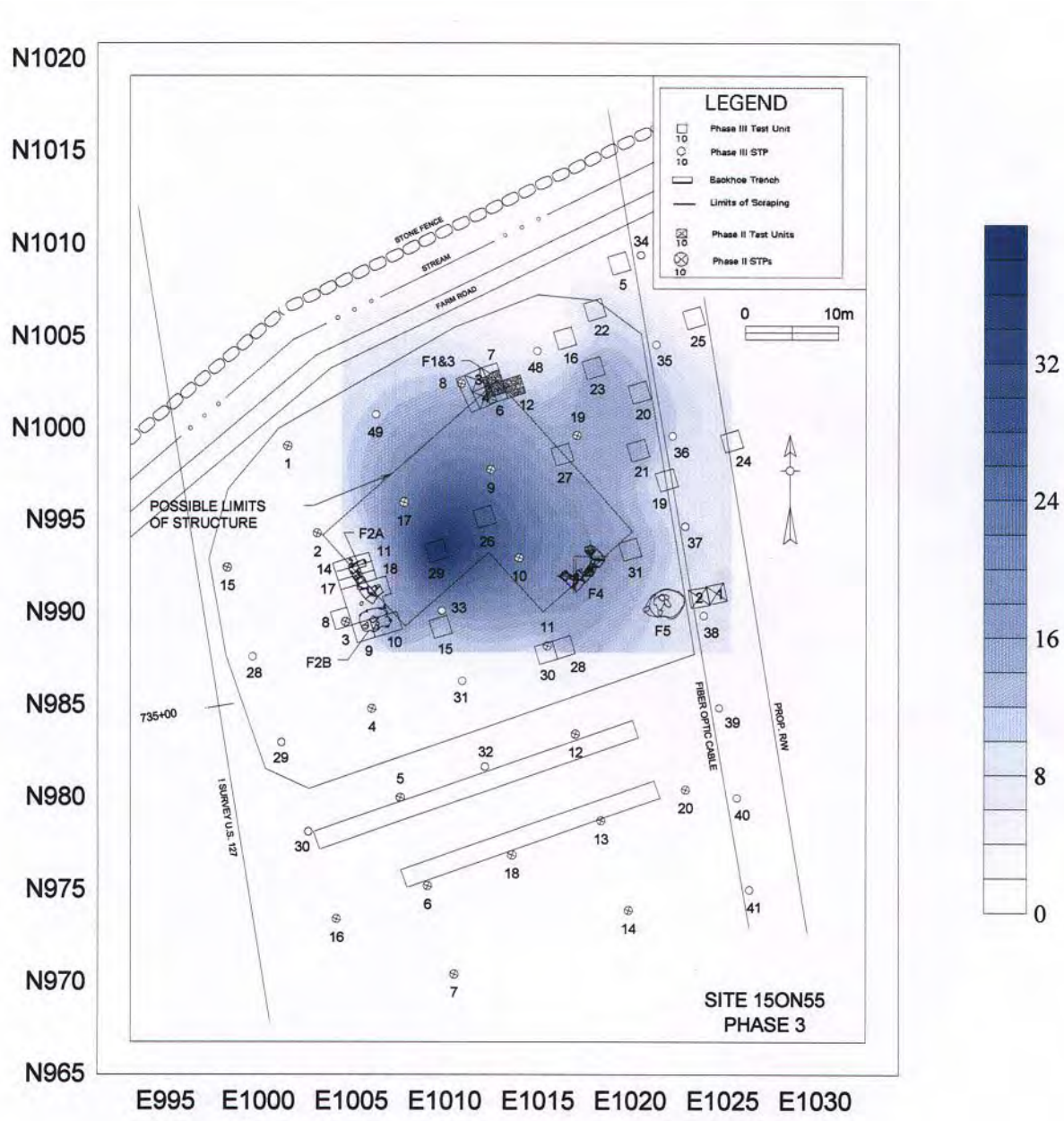

Figure 5.11 Distribution of Redware from Units

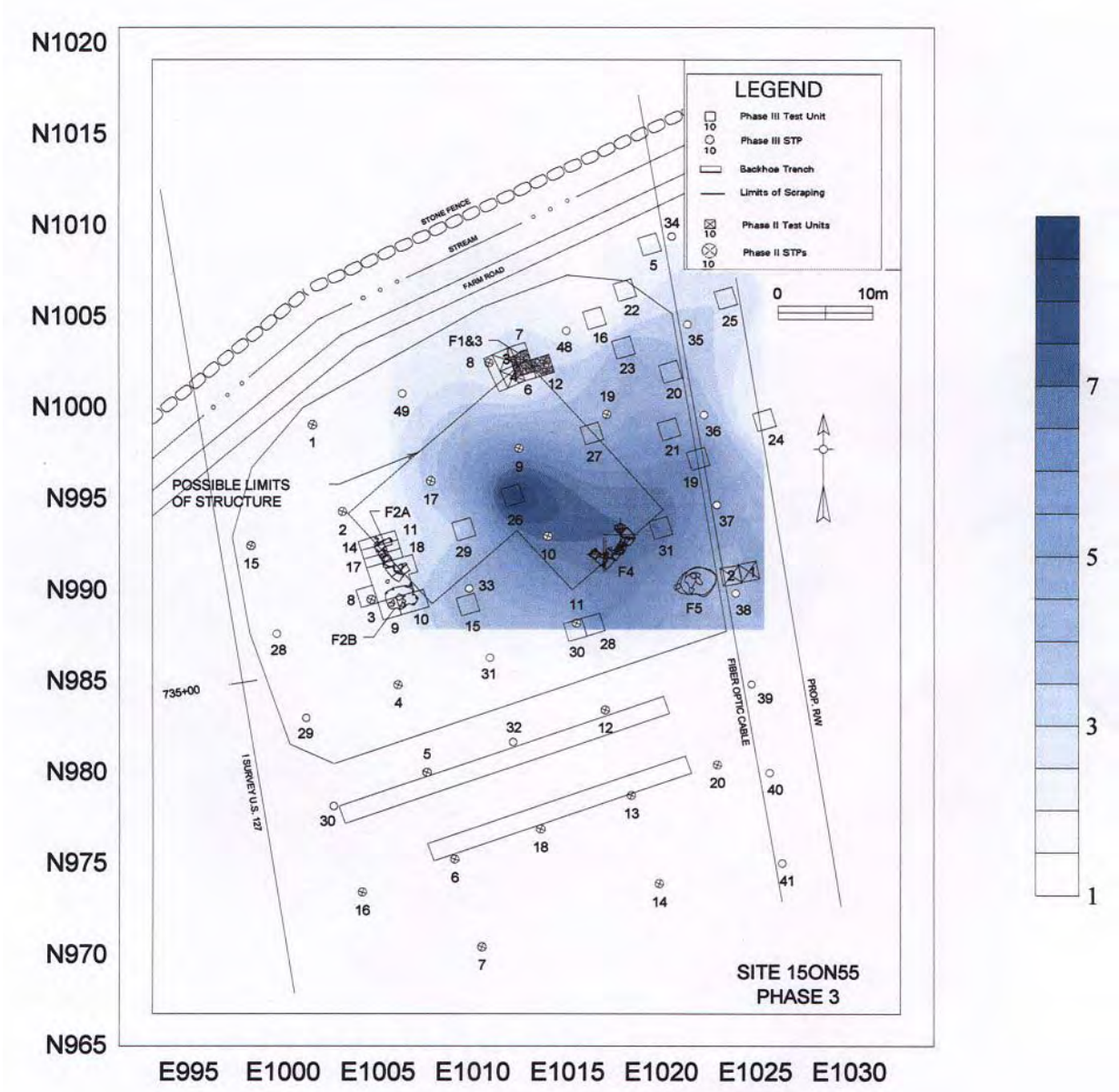

Figure 5.12 Distribution of Stoneware from Units

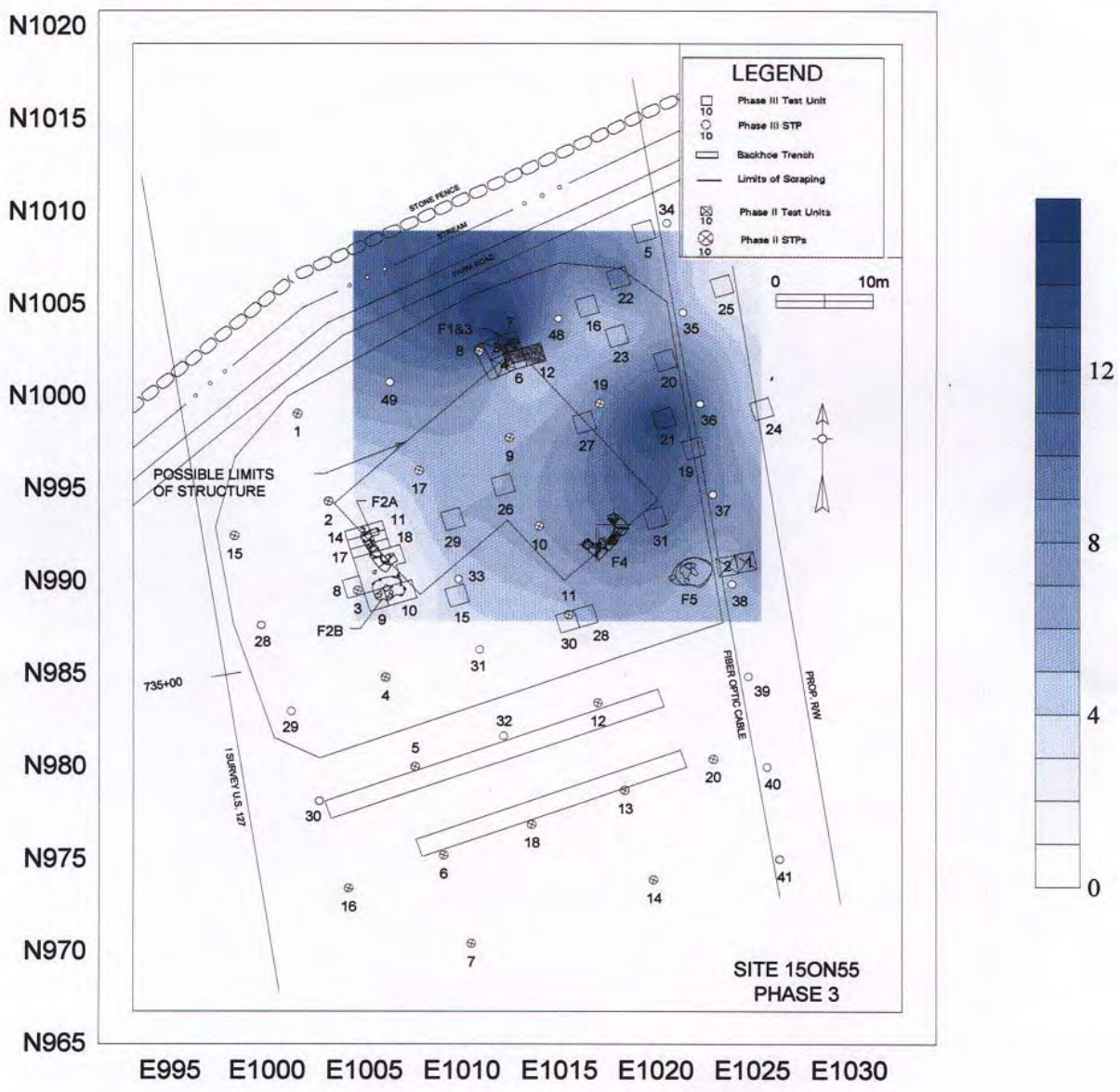

Figure 5.13 Distribution of Bottle Glass from Units

pharmaceutical, condiment and alcohol and alcohol were recovered from this area. The cause for this discrete dumping area can only be speculated on. One possibility might be that it was an opportunistic disposal area for those who were on their way to the northern fields. If there was an active drainage here as Feature 3 might indicate, a channel or gully would be ideal for dumping. Another possibility is that there may have been a front porch on the house and bottles were simply tossed or swept under it.

Table glass (Figure 5.14) is a useful tool for conveying functional and social information rather than chronological information since processes used to make tableware were used over long periods of time. Relative dating was possible for many tableware sherds, however. Those sherds that had been manufactured through press molding and contained lead most likely date before 1870 (McKearin and McKearin 1948). Stylistic motifs on table glass can also be used as a relative dating tool. Most of the press molded designs were those most popular during the nineteenth century. Tableware (n=127) was distributed like most of the kitchen material in the eastern side yard and back yard and continued into the eastern area of the dwelling. The artifact distribution in the eastern side yard extended into the northeastern side yard also. Unlike the bottle glass, there were few table glass sherds in the eastern front yard area, similar to the distribution pattern of the other kitchen material.

A distribution map of the faunal remains (n=220) was generated to discern activity areas and refuse disposal patterns within the houselot area (Figure 5.15). Faunal material was comprised mostly of hog, followed by cow and sheep/goat. These latter elements are probably sheep since, according to the 1850 agricultural census, Hardin was known to have as many as eight sheep. Bone was distributed across the dwelling area and the front yard, but concentrated in the eastern side yard and back yard and continued beyond the right of way southeast of the dwelling. Such a larger concentration southeast of the dwelling suggests that most of the bones were discarded in this area after consumption. Also, much of the butchering and meat preparation took place in the area between the dwelling and possible smokehouse or other outbuildings southeast of the dwelling. This was clearly the main activity or work yard documented on other sites of the same time period.

Artifacts from other functional categories, in addition to kitchen and architecture-related material were used to generate distribution maps. Although sparse, further information on disposal patterns and activity areas was gained by using furnishings, clothing, and personal related artifacts. What few furnishing artifacts were recovered from STPs and units revealed a similar pattern to the architectural and kitchen material distribution. Lamp glass (n=35) comprised the majority (81.4%) of furnishing artifacts and was distributed mostly in the eastern side yard, back yard and within the eastern portion of dwelling. It also continued moderately into the northeastern corner of the side yard (Figure 5.16). Clothing related artifacts (n=40) from STPs and units consisting of buttons and fasteners were distributed sparsely in the western edge of the dwelling and concentrated in the eastern side yard (Figure 5.17). Most of these artifacts are attributed to loss while working in the main activity area. Finally, personal artifacts (n=74) from STPs and units were distributed across the dwelling area and into the eastern side yard and back yards, then were observed in exposed

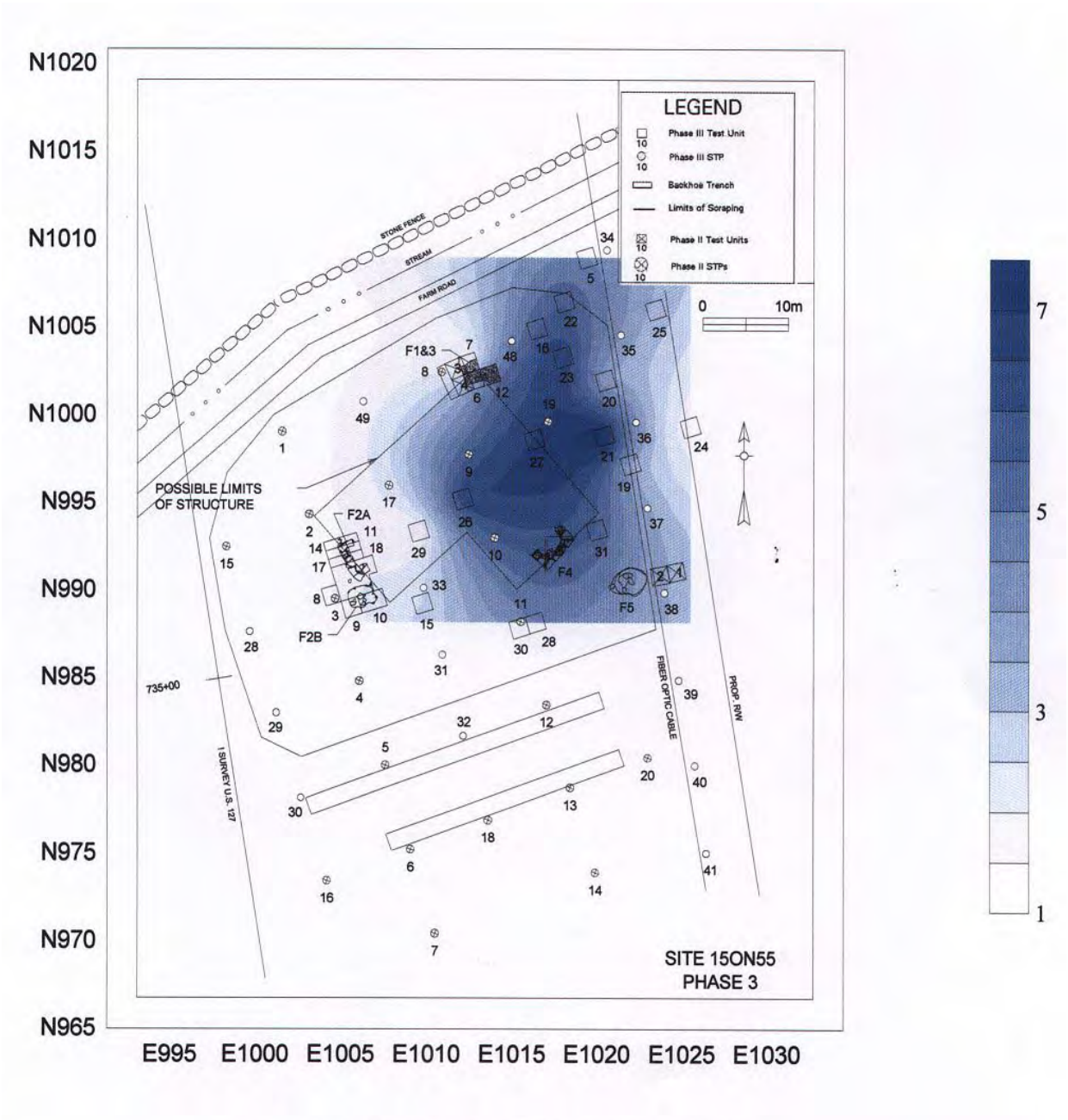

Figure 5.14 Distribution of Table Glass from Units

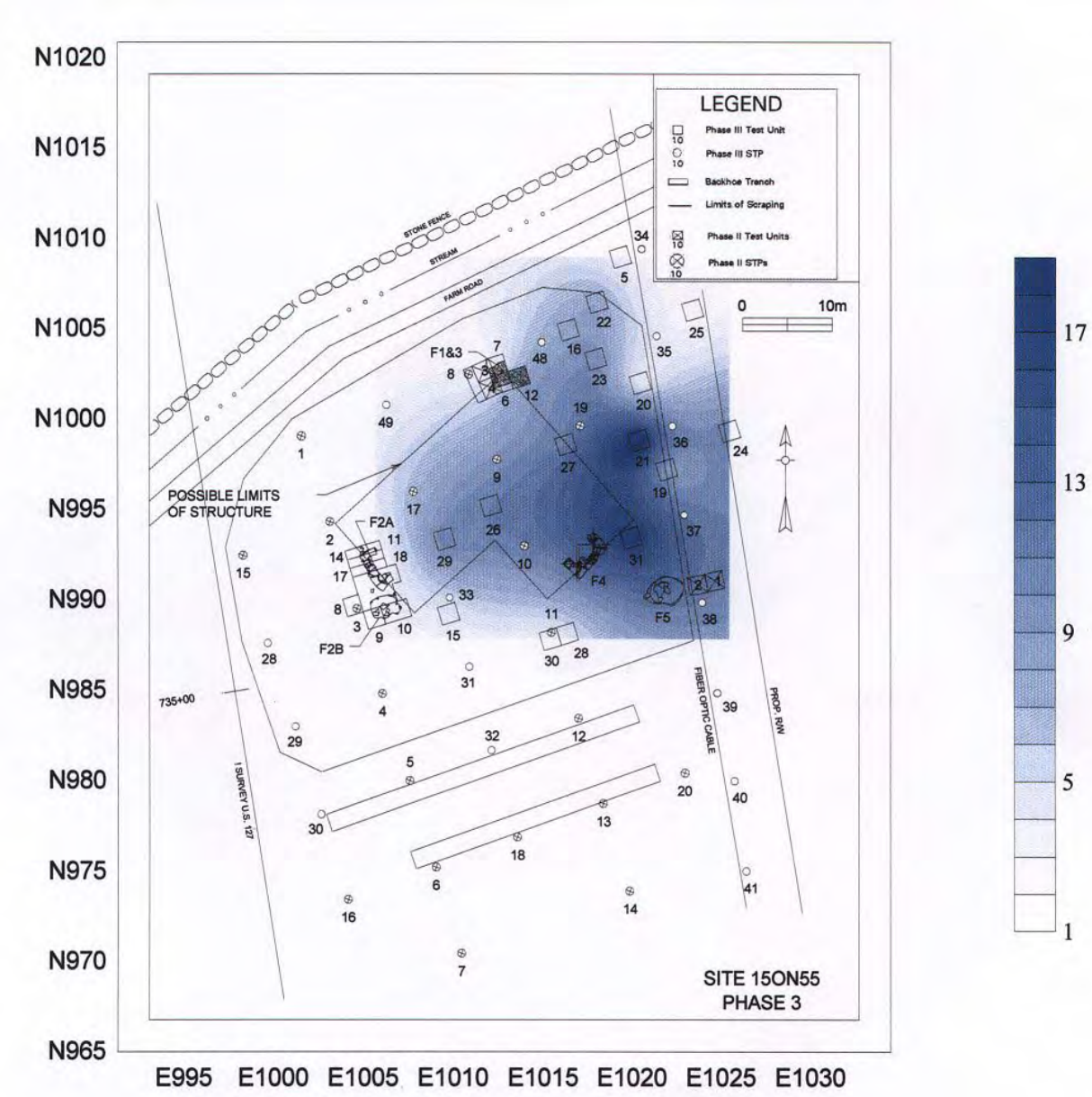

Figure 5.15 Distribution of Faunal Remains from Units

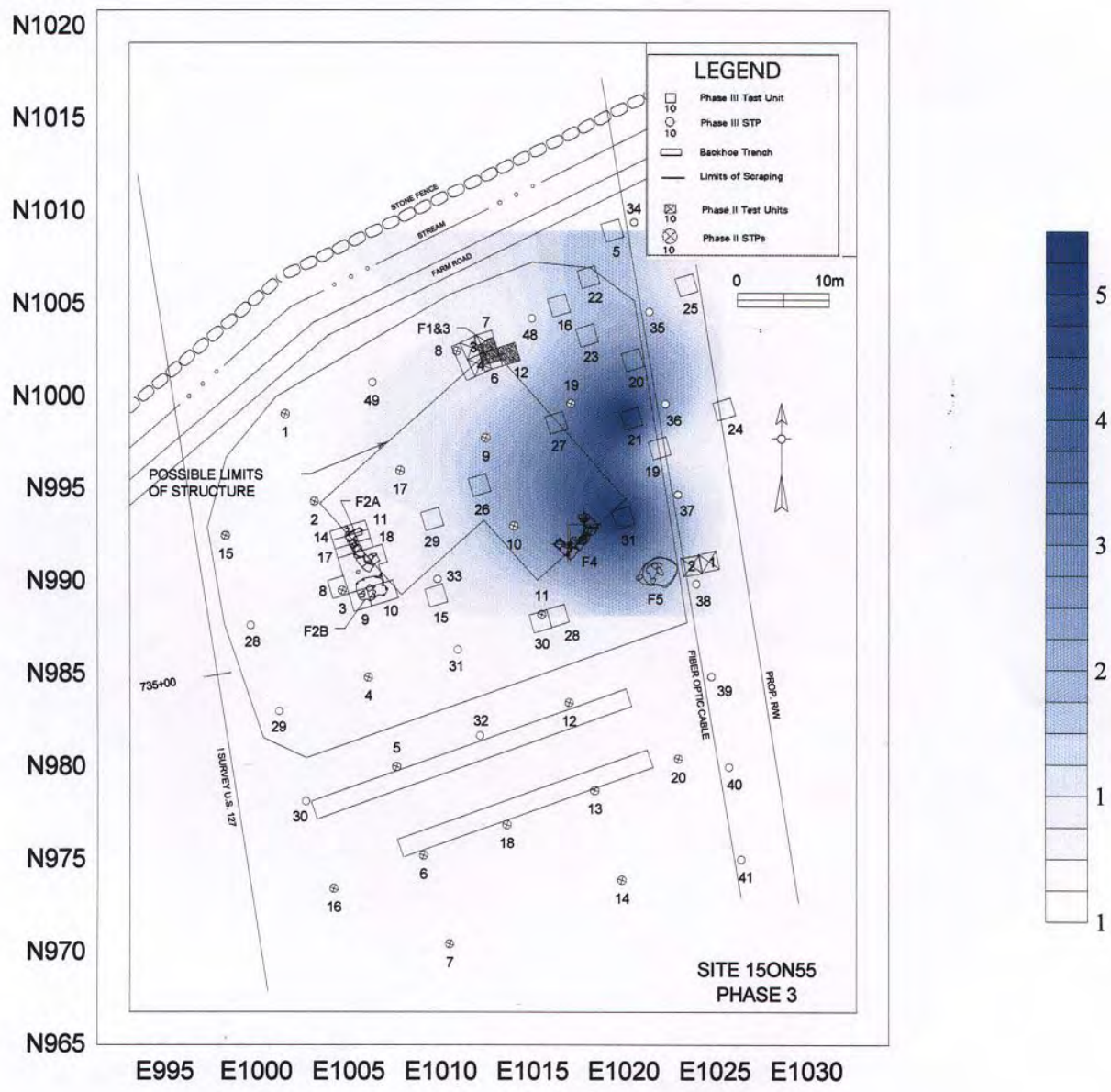

Figure 5.16 Distribution of Chimney Lamp Glass from Units

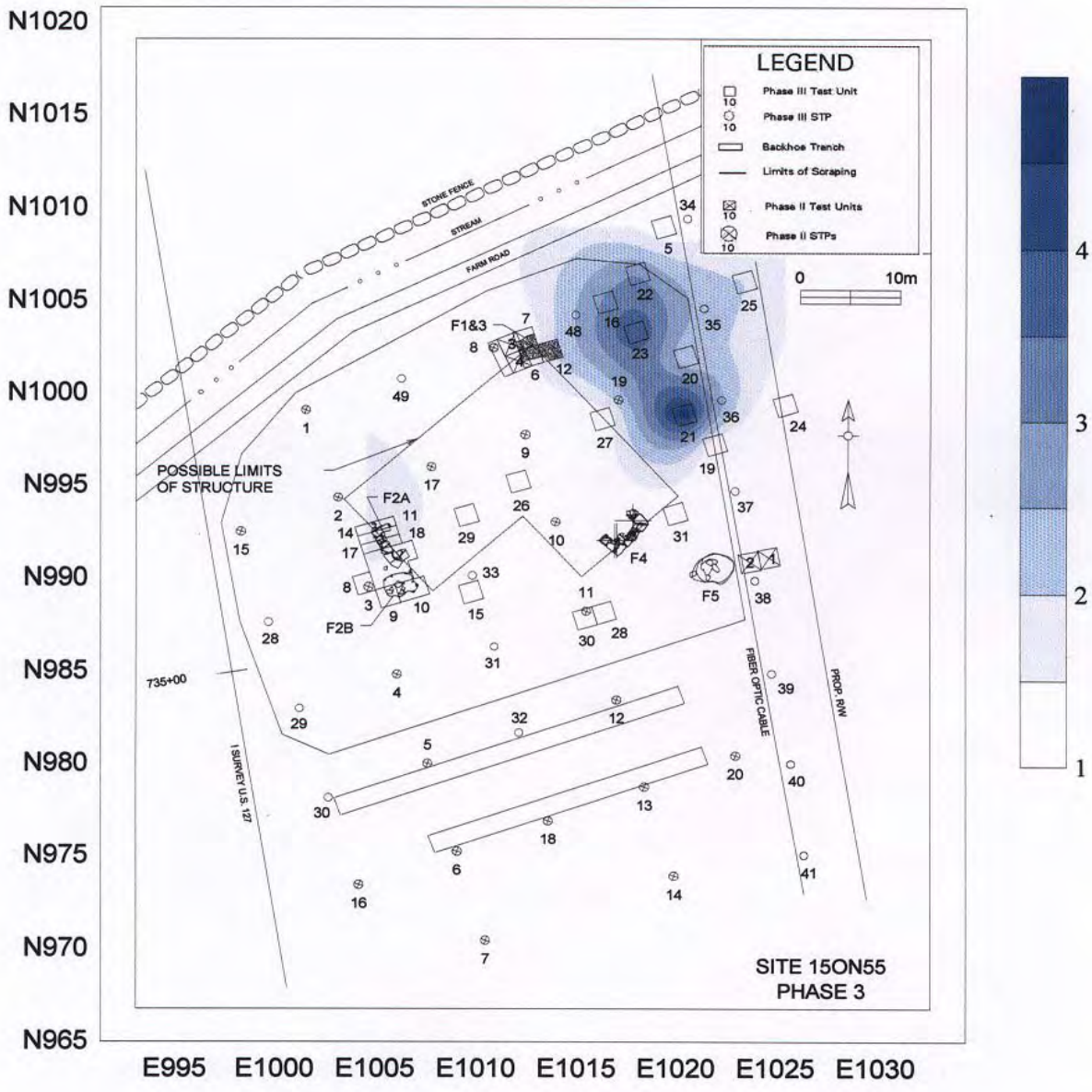

Figure 5.17 Distribution of Clothing Artifacts from Units

ground surfaces beyond the right of way. Personal artifacts (Figure 5.18) consisted of marbles (n=4), smoking pipes (n=11), pocket knives (n=2), writing slate fragments (n=45), slate pencils (n=5), and one of each of the following: mirror, rubber comb, unidentified key or pin, and a jewelry piece. In addition, three coins were recovered from the plowzone of test units, an 1833 one cent coin from TU 5, an 1857 half dime from TU 19, and an 1858 Flying Eagle one cent coin from TU 28. Most of these artifacts were probably lost rather than discarded.

Discussion

Using STPs for the distribution map of architectural material, three main concentrations appear in the area of the domestic dwelling. These include one concentration in the northern area of the eastern side yard, a small concentration in the ell corner of the domestic dwelling, and one larger concentration southeast of the dwelling in the back yard and side yard. Both the northeastern and the southeastern concentrations continue beyond the right of way and represent discard or structural remains beyond the right of way. Outbuildings, such as a smokehouse, meat house, servant quarter or other domestic related structure, might have been located southeast of the dwelling. Other eighteenth and nineteenth century farmstead layouts often show a smokehouse very near the back of a main house, as well as other structures involved in farm-related activities. Locations of outbuildings were based on convenience to the main house. Artifacts recovered from this area include a heavy concentration of both kitchen and architectural material. Of the kitchen refuse, faunal material is higher in this area than anywhere else on the site, which suggests bone refuse after consumption and/or refuse after food processing. The presence and quantity of cut nails in the area suggest that the structure was frame or possibly log construction with frame ell and siding and shingles.

In the northeastern side yard is another heavy concentration of kitchen and architectural material suggest that another dwelling or outbuilding was possibly located northeast of the main house. According to archival research, Hardin had as many as 12 enslaved African Americans at one time so the hypothetical structure may have functioned as slave quarters. Based on the layout of other slaveholding sites, such as Locust Grove, a plantation located near Louisville, Kentucky and Brabson Ferry, a plantation in Tennessee, houses for enslaved laborers were located near the main dwelling (Andrews and Young 1992:1-12). Other similar configurations of houselots have been documented for sites in the Chesapeake (King 1990; Pogue 1988).

From the temporal range and frequency of ceramics recovered from these areas, the large concentration in the back yard and side yard of the dwelling was the preferred area for domestic activities and refuse disposal during most of the occupation. This area extended beyond the right of way and was probably the central activity area or work yard located between the domestic dwelling, slave quarter(s), and associated domestic outbuildings such as a smokehouse and privy. Domestic activities such as food storage, preparation and cooking would have been major activities in this area. The concentration in the northeastern yard might be representative of refuse disposal and domestic activities associated with the hypothesized structure beyond the right of way. As for the

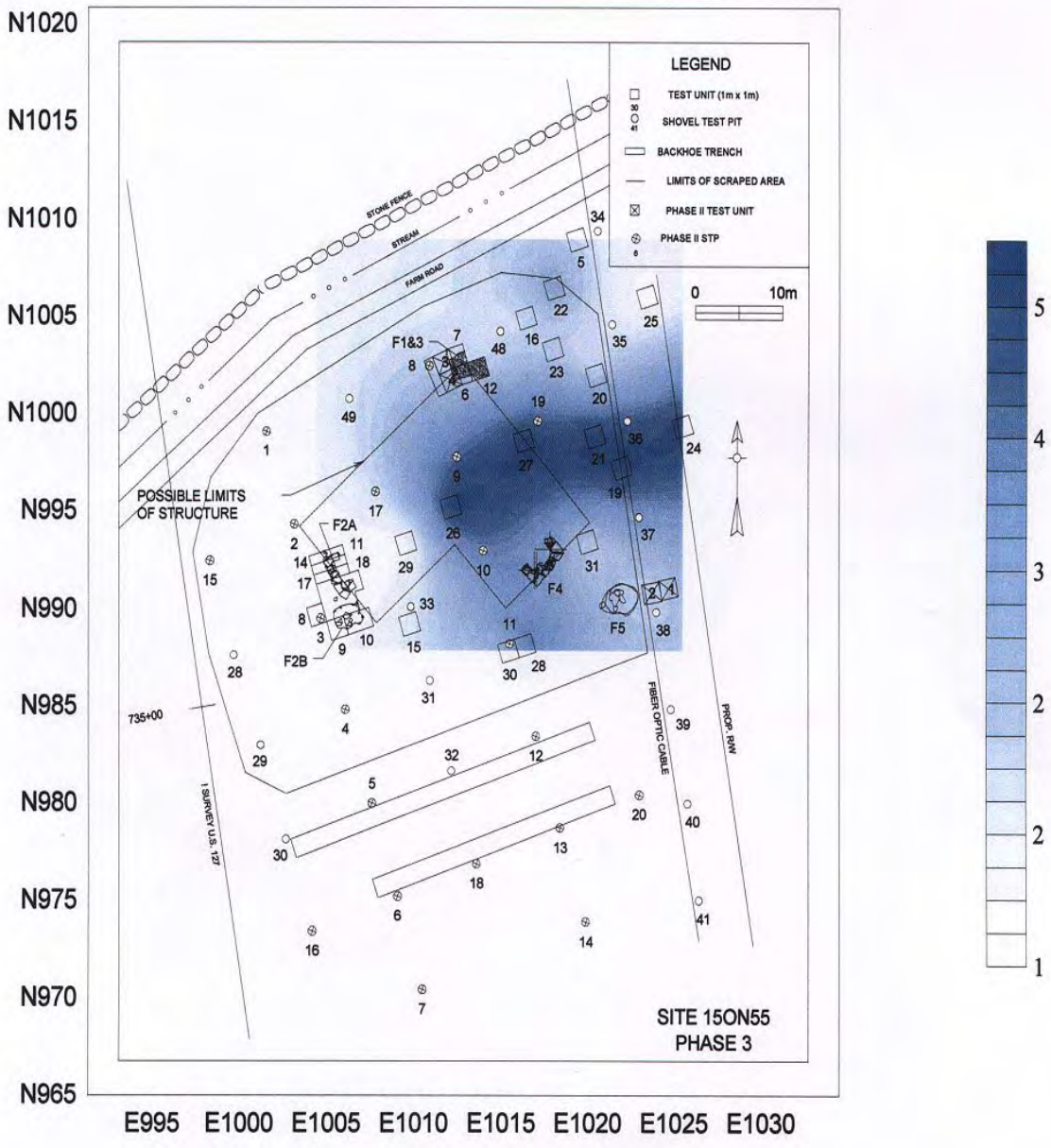

Figure 5.18 Distribution of Personal Artifacts from Units

concentration in the ell corner of the dwelling, this appears to have been a limited activity or discard area. Although kitchen artifacts were the dominant material in this area, there was considerably less here than the other two areas. This likely became a more formal side yard by 1850 since it faced the Frankfort Cedar Creek Turnpike traffic, now U.S. 127.

DISCUSSION

Domestic Area

The features and artifact distribution during the Phase III suggest that the Hardin dwelling was oriented northward (i.e. the front faced to the north). A number of factors have helped to determine this. The first factor is the alignment of the two chimney hearths (Features 2A and 4) in an ell formation. Another factor in determining the orientation of the dwelling was the location of the one cellar (Feature 2) and one refuse pit (Feature 5). Archaeology in Virginia, Tennessee, and Kentucky have found that cellars are located under the dwelling or adjacent to or very close to the dwelling in the side yards and back yards. In the Hardin houselot, Feature 2B located on the western side of the dwelling might have been attached to the dwelling on the west wall. Feature 5, situated directly behind the dwelling in the back yard, seems to have been separate from the structure. There is no evidence for any structure over either one of these features, however, as very little architectural material was recovered from the plowzone overlaying Feature 2B or Feature 5.

Spatial patterning from artifact distribution maps has provided information by defining the activity areas associated with the domestic dwelling. The eastern side yard and a portion of the southern back yard were the main areas for refuse disposal and domestic activities associated with the Hardin farmstead, particularly the main house. Such domestic activities would entail food processing, such as butchering and curing of Hardin's numerous hogs, as many as 30 in 1850. Like most farms, a smokehouse was essential to curing, processing and storage of meat at the Hardin farmstead. Corn shucking and grain storage also occurred since Hardin was growing a substantial amount, as much as 2,500 bushels in 1850. Corn produce was probably sold and used for his own household consumption in many forms. Corn could be ground for meal or processed into whiskey. The cobs and shucks also provided excellent fodder for livestock. Production of butter would have been another activity of the household since Hardin produced 250 pounds of butter in 1850 according to census records. Food preparation in the form of cooking and baking might also have occurred near the dwelling. Other activities associated with cleaning, laundry and soap making might have occurred near the house or in the nearby creek. Maintenance of structures, hearths and tools were also important and contributed to the archaeological record of the houselot (Gibb and King 1991).

Food preservation and storage also occurred as evidenced by the cellar and numerous stoneware and redware vessels (Feature 2B). The cellar might have stored consumer products such as milk, potatoes, canned goods, meat, other root crops and fruit (Adams n.d.; Faulkner 1986). Vegetables, like potatoes, carrots, squash, or turnips would have come from a kitchen garden.

Gardens were common and a necessity on nineteenth century farmsteads and provided the household with a variety of nutritious vegetables, whether they were pickled, preserved or stored, for household consumption. For convenience, gardens were usually found close to the dwelling on farmsteads. At the Hardin farmstead, one may have been located either in the western side yard or western back yard where very little artifacts were found or perhaps outside the right of way. Production of 300 pounds of honey by Hardin in 1850 may suggest the presence of an orchard also. Although Hardin did not list any fruit produce on the agricultural census, he may have had a few fruit bearing trees for his own consumption purposes and in order to maintain a bee colony. Fruits, like apples and pears could easily have been stored whole or preserved and stored in the cellar.

Although only the domestic dwelling was defined within the right of way at 15On55 and a barn at 15On57, there must have been other associated structures nearby. Based on the artifact distribution, two or more hypothetical structures near or just outside the right of way were defined. In the northeast corner of the eastern side yard, there is a significant concentration of architectural and kitchen material that continues beyond the edge of the right of way. A second concentration occurs southeast of the dwelling and continues beyond the right of way. These two concentrations may represent discard areas associated with the main dwelling or other structures outside the right of way. Architectural debris suggests that these outbuildings were frame structures. Tax records indicate that Hardin's property included 12 slaves and that he retained this number of slave workers for nearly 20 years (see Chapter Three). It is possible that the hypothetical structure to the northeast (outside the right of way) served as quarters for slaves. Slave quarters were sometimes located close to the main house. For example, both Locust Grove, a diversified plantation located outside Louisville, Kentucky and Brabson Ferry, another diversified plantation located in East Tennessee, reflect this pattern (Andrews and Young 1992:1-12). Cabins on plantations were very simple and generally housed more than one family. A description of slave cabins was recorded by a former slave named Jacob Stroyer, who lived on a plantation near Columbia, South Carolina from 1849 until his freedom (Stroyer 1898):

> *"Most of the cabins in the time of slavery were built so as to contain two families; some had partitions, while others had none. When there were no partitions each family would fit up its own part as it could; sometimes they got old boards and nailed them up, stuffing the cracks with rags; when they could not get boards they hung up old clothes. When the family increased the children all slept together, both boys and girls, until one got married; then a part of another cabin was assigned to that one, but the rest would have to remain with their mother and father, as in childhood, unless they could get with some of their relatives or friends who had small families, or unless they were sold; but of course the rules of modesty were held in some degrees by the slaves, while it could not be expected that they could entertain the highest degree of it, on account of their condition.."*

The second hypothetical structure located outside the right of way and southeast of the dwelling might have served as a smokehouse or other outbuilding. As mentioned earlier, both

architectural and kitchen-related material continued beyond the right of way here. Faunal distribution was concentrated in the eastern side yard and back yard and continued beyond the right of way into this area, indicating either refuse and/or food preparation. The Hardin household would have depended on home killed meats for part of their sustenance. We know that Hardin raised many hogs and the faunal recovery from the site reflects this. Like other southern farms, hog was an important and inexpensive part of the diet. Smokehouses are typically located near the dwelling, sometimes directly behind or in the back side yard on nineteenth century Upland South farmsteads (McCorvie et al. 1987 and 1989; Stewart-Abernathy 1986; and Wagner et al. 1992). Smokehouses played an important role on diversified agricultural farmsteads during the nineteenth century.

Other hypothetical structures that might have been located outside the right of way are privies, chicken coop, cisterns, wells, other cellars, and simple storage pits or refuse pits. Privies may or may not have been present on the Hardin farmstead since it was a common practice to go off into the bushes or use the chicken house as a sort of privy. On other nineteenth century Upland South farmsteads such as Fair View Farm and the Moser Farmstead it was not unheard of to use a chicken coop situated near the dwelling as a functioning privy (McCorvie et al. 1989 and Stewart-Abernathy 1986). This consisted of a simple frame chicken coop with an attached frame hole so that any waste was deposited within the coop itself and was consumed by the chickens. Hardin, being a successful farmer and having a large household with enslaved African Americans, may have had one or more privies for the household members as well as a chicken coop/privy and an open air situation for the slaves. With evidence of chamber pots recovered from the eastern side yard, Hardin and his family certainly used these inside the house.

Although no cisterns or wells were found near the dwelling, some may have been located outside the right of way. Not only would these have served for drinking water, but either type of feature might have served as cool storage. Nearby Cedar Creek or the small stream just to the north may have served as a source of drinking water, laundry water, and possibly cool storage, although no archaeological remains were recovered to support this. Cedar Creek today dries up, but damming on the creek in the 19th century may have provided a water source.

Barn Area

To the north of the access road and stream that divided the houselot area from the outer farm lot, archaeological remains of a barn were documented during Phase II and mitigation. The barn, comprised of post holes/molds, may have acted as storage for crops such as hay or tobacco or housed livestock. In 1850, Hardin had as many as four milch cows, eight sheep, nine working oxen, 18 horses, and 30 swine. With so much livestock there was more than likely other barns nearby.

Very little refuse was found between the house and barn which suggests that area north of the road was either under cultivation and/or a livestock area. It also suggests that the road and/or fence line were present during the Hardin tenure. As the domestic dwelling appear to front to the north, the access road may have acted as a divisional line or boundary. Other nineteenth century

sites such as the Fair View Farm in southern Illinois and the Moser Farmstead in northwestern Arkansas have recorded divisional roads between the domestic dwelling area (female) and the agricultural barn area (male) (McCorvie et al. 1987; Stewart-Abernathy 1986). A fence might have been present also which would have acted as protection for the crops from wild scavengers like deer or foraging hogs. It is also possible that a gate for access between the domestic area and the outer farmlot was located in the fence line. When the stone fence was constructed remains uncertain, however.

At the Fair View Farm site nearly 30 m separated the domestic area from the outbuildings. At the Moser farmstead 25 m separated the barn from the dwelling. Although the Moser dwelling did not face the barn, the Fair View Farm dwelling, occupied as early as 1853, did. At the Hardin farmstead 58 m separated the main dwelling and the barn. Other functionally specific barns may have existed at the Hardin farmstead, but these were located outside the right of way or left no discernable archaeological remains.

SUMMARY

In comparing the Hardin farmstead layout with the Upland South model we can see several similarities. According to the Upland South model, the dwelling should face a path of approach. We now know, based on feature layout and artifact distribution, that the Hardin dwelling faced northward toward a divisional road between the domestic area and the agricultural/livestock area.

Although only the domestic dwelling was identified at the houselot, we can now hypothesize, based on architectural and kitchen material distributions, that associated structures existed near the dwelling. Generally on Upland South farmsteads there are randomly clustered functionally specific structures that are located near the dwelling. Convenience and topography play an important role in determining outbuilding placement. Based on artifact distributions, the location of these structures were convenient to the main dwelling, the access road, and potable water. At the Hardin farmstead there may have been two or more ancillary structures outside the project right of way, as artifact distributions of kitchen and architectural material suggest. Both materials are good indicators of refuse disposal areas, activity areas, or dwelling(s) placement. As to the functions of these structures, they were likely involved in household production or farm maintenance activities. Hardin's possession of 12 enslaved African Americans over a twenty year period would have necessitated one or more dwellings.

Much of what we can define of the Hardin farmstead so far mirrors the Upland South farmstead model which can be summarized into several elements including the orientation of the dwelling toward the path of human approach; a probable array of functionally specific outbuildings arranged by convenience; recognition of a yard area comprised of the house and various outbuildings considered the female activity area; and a yard area farther from the house where male

(and in this case slaves of both sexes) oriented activities occurred comprised of the barn and animal pens. Although the Hardin farmstead was not entirely contained within the right of way, there is enough information to define much of the site layout and activity organization.

At the Hardin farmstead the houselot and yard areas are physiographically defined by the presence of features and the frequencies of functional artifacts. The domestic dwelling was located in the western portion of the site, which extended eastward beyond the right of way. The house faced an approaching road that also served as a division between the domestic and agricultural/livestock area to the north. A natural division in the form of an intermittent stream, much like the one present today, may have originally defined the physiography of the site. Two or more hypothetical structures may have been located outside the right of way and were most likely support structures for the main house. These structures most likely included slave quarters and possibly a smokehouse and/or other outbuilding. The eastern side yard and southeastern back yard appeared to have been the main area for domestic activities and discard. Some of the discard results from dismantling the dwelling and other structures, however. This main activity area would have been centrally located within the inner yard area with surrounding support structures and the house. Female oriented activities dominated by food preparation and storage activities would have taken place within this inner yard.

The barn to the north would have likely been an area for livestock or agricultural activities. Although this outer yard area would have generally been considered the male activity area, slaves including females, more than likely were working here either alongside other household members of the Hardins or under supervision by them. The barn may have served multiple purposes as a shelter for livestock (milch cows, horses, oxen, and sheep) or as storage for part of the year for crops such as hay, oats, and probably tobacco that Hardin was producing. Other outbuildings and features probably existed outside the right of way which would have been located in or near this area. These might have included corn cribs, other livestock barns, and possibly a cistern for the livestock, unless they drank from the nearby intermittent stream or Cedar Creek.

Despite the Hardin farmstead's seeming adherence to the Upland South model, Enos Hardin operated a commercial enterprise. He managed several enslaved laborers and many acres to produce goods for sale in Monterey and down the Kentucky River to larger cities. Hardin's enterprise went well beyond neighborhood self-sufficiency or household production, yet the spatial organization of the houselot and a portion of the outer farmlot fit the Upland South model as it has been defined in the literature. This suggests that some characteristics touted as Upland South are not confined to one model but may be typical of many eighteenth and nineteenth century farmsteads throughout the South and Midsouth. Instead of placing farmsteads into such a broad model, terms like agrarian capitalism, commercial farming, self-sufficiency, and household production need to be understood in historical and chronological context to avoid biases generated by romantic and largely mythic assumptions about the sturdy, frugal yeoman farmer.

Although only a portion of the site was within the right of way, archaeological excavations and historic research have determined that the Enos Hardin farmstead was occupied from 1825 to 1870 or 1873. Excavations and spatial analysis have further determined the location and orientation of the domestic dwelling located at the farmstead, as well as activity areas and refuse disposal areas associated with it, and one or more possible associated structures located outside the right of way. An outer farmlot containing a large structure, possibly a barn, was also identified and found to be spatially and physically separate from the houselot area containing the main house and ancillary outbuildings.

Chapter Six

PRODUCTION FOR THE HOUSEHOLD AND THE MARKET

Introduction

Many early settlers to Kentucky came because of the need for new, fertile land. Chesapeake soils had been depleted, exhausted by tobacco, and became difficult and expensive to buy and successfully farm. Today, historians continue to debate whether farmers of the early republic were actively engaged in capitalism and raising surplus for sale at local and national markets or whether they were engaged in household production and self-sufficiency (Appleby 1982:833-849; Clark 1979:169-189; Faragher 1985:233-258; Friend 1999; Kulikoff 1993; Lemon 1972; Shammas 1982:247-272; Weiman 1987:627-647). Self-sufficiency is where the members of the household produced much of what they consumed and wore. Historians, however, are limited in that they use incomplete, biased, and often inaccurate documents to address these debates. Archaeology provides a more fruitful inquiry -- material culture. Our contextual approach juxtaposes various types of material culture and documentary data through time and across space, to provide a much richer picture of human behavior in the nineteenth century. In order to understand the archaeology of the Hardin Farmstead, it is necessary to examine and describe the early nineteenth century world of which it was part. In this chapter we develop this context, identify the motivation, activities, and measures of success that characterize the period from 1800 to the 1870s. In this way, Hardin's ambitions and choices of material culture can be seen for what they represent - efforts by an illiterate farmer to improve his social standing by converting his farm produce to consumer wealth on the national and international markets. He worked his farm to obtain expensive luxuries. In this chapter, we will place the Hardin household and farmstead within the context of nineteenth century Kentucky and compare his acreage of improved land, his commercial and household production efforts, livestock, and enslaved labor force as assessments with temporally similar farmers in Owen County to determine if Enos Hardin was a successful farmer engaged in commercial production or a marginalized self-sufficient farmer. Comparisons will also be made with Upland South plantations in Kentucky and Tennessee, two non-slaveholding farmers in Illinois, and two slave-holding farmers in Arkansas.

Early Farming in Kentucky

In a recent article, Friend (1999) outlines the arguments of two schools of thought; one group contends that early American farms were subsistence oriented and isolated from market networks of the eighteenth and early nineteenth centuries until a market revolution upset these agrarian patterns in the early antebellum years. This interpretation promotes the farm as a bulwark of household economy where the ideals of yeoman farming held sway, including notions of independence, local self-sufficiency or household production, accumulation of land to support future generations, and attention to debt and credit relations (Friend 1999:127). The second school maintains that early American farms assumed the role of leadership in the economic formation of a capitalistic nation

and that "farmers actively pursued profit as budding capitalists" (Friend 1999:127). According to Winters (1994), "Virtually all farmers participated at some level in the pursuit of profitable ventures. They understood that to realize their ambition to improve their own material well being and that of their offspring required involvement in a commercial world beyond the farm. Though their success varied widely, they shared a commitment to the business of farming." In fact, most farmers simultaneously produced for the family and for the market (Bushman 1998).

These arguments coupled with the political and economic climate of Kentucky in the early nineteenth century are important in establishing a context within which to discuss questions concerning Hardin's wealth and social class. Stine (1990), reports the "creation of a rigid, hierarchical order of social stratification called the agricultural ladder." In Trans-Appalachian lands like Kentucky, fewer than half of all landholders owned thirty acres of land by 1800 (Friend 1999:128). For many emigrants, the ownership of enough land to accommodate a family gave economic freedom and autonomy. Newly arrived settlers hindered by youth, poverty or both were often unable to find the capital necessary to purchase land. Thousands of pioneers migrated to Kentucky in search of cheap land in the 1790s and early 1800s only to lose their dreams in land disputes. By 1800, only 49.2 percent of Kentucky heads of household owned land (Friend 1999:129). Not only was land very expensive but the land distribution was the least egalitarian of the western settlements and "ranked with the more stratified societies" in the east (Friend 1999:129). Land was bought and farmed by wealthy, older, more established residents, while many emigrants were forced to become tenants or laborers. These tenants and laborers were seen as lazy and indolent by many landowners, attitudes that continued to shadow tenants into the twentieth century. Often emigrants would move, leaving their place of tenancy, if an opportunity of land ownership presented itself. Farm ownership represented upward mobility, and was equated with profits, good management, security, and autonomy from creditors (Stine 1990). Farmers who owned their property, no matter how small the acreage, had higher social status than those farmers who were mortgaged or tenant farmers. This agrarian ladder appears to have roots in the early nineteenth century as this study of the Hardin farmstead indicates.

In addition to the economic factors shaping land ownership, cultural behavior influenced farming. Although land had a monetary association as speculators used land as a commodity exchange, it also held a premarket value in that familial and communal obligations required older residents to pass property onto the next generation (Friend 1999). In short, the need for capital to purchase land and create a viable farm militated against attempts by settlers to live solely on household production. Many items that farms could not produce had to be bought or traded. Although tenancy could operate as a bridge to ownership, they were seen as undesirable, unreliable and were encouraged to migrate to cheaper lands in the southwest. Consequently, cash was needed to buy and secure title to the land, as well as to clear forests, construct farm buildings, and the dwelling and to buy livestock. This need for cash hastened the capitalist bent of the agrarian economy of early Kentucky.

According to Friend (1999:138) the production of corn strongly influenced the pursuit of profit. Its production dominated rudimentary commercial or marketing activity in Kentucky and became imbedded in the state's economy. Although Kentuckians consumed much of their corn crop, money could be made from raising and either bartering or selling corn, grinding corn, marketing cornmeal, and distilling whiskey (Friend 1999; Otto 1989). Although the success of corn cultivation raised expectations of profit among farmers, household production (self-sufficiency) was important to the total success of the farm. Corn was unequaled in household consumption, appearing in some form or another at every meal on most nineteenth century dinner tables. Johnny cake, dodgers, pone, hoecake, ashcake, fritters, hominy, spoonbread, Indian pudding, and hasty pudding are some of the many ways it was consumed as food. Early nutritionists even believed corn to be of higher nutritional value than wheat (Hardemen 1981). Besides household consumption, corn was important to livestock feed. In an endless cycle, horses, mules, and oxen produced corn and corn in turn produced horses, mules, and oxen. Nearly half of the nutritional value of the corn plant was in the plant itself (leaves, stalks, husks, and cobs). Fodder was heavily relied upon to feed livestock (Hardemen 1981; Otto 1989).

Together with land acquisition and crop production, livestock was important to the diversified farmer. Livestock held premarket and market value. Not only were livestock important for profit on the open market, but also served as sustenance to the family and labor. Always, attention to household production and the pursuit of profit went hand in hand in the Bluegrass.

The flexibility of mixed or diversified farming enabled farmers to vary the mix of crops in response to price changes and to protect themselves from sudden drops in the price of commodities. Market crops were only a part of this farming system that included other grains, grasses, fruits, vegetables, livestock, and animal products that provided for the household, supported the livestock, paid for local services (i.e., grist milling) and labor, and provided income from sales in local markets (Schlotterbeck 1982). It was not uncommon for local merchants to purchase produce from farmers to sell in their stores and for farmers to sell their produce through the merchant's general store. Such products included apple cider, butter, candles, cloth, honey, distilled whiskey, maple sugar, salted or smoked pork, and tobacco (Winters 1994). Local processors also bought produce from farmers. Sheep wool was sold to a clothing tailor, hemp sold to a rope maker, grain sold to gristmills or breweries, and livestock sold to packing houses and various other processors. Farmers even took advantage of selling produce to people passing through. Drovers herding their livestock to market would have needed feed and pasture (Winters 1994).

Kentucky farmers recognized the profits to be made by participating in these local, regional, national, and European markets. In the early nineteenth century, Kentucky merchants sent foodstuffs, livestock, hemp, tobacco, and cotton on flat boats and later steam boats down river to New Orleans to be sold. Kentucky and other trans-Appalachian states also supplied commodities to both American and European markets. Despite the poor transportation between these states and the eastern coastal states, southern commodities reached the Atlantic states and Western Europe. Tobacco and cotton were popular in the European markets during the early nineteenth century and,

except for an oversaturation in the markets twice in the early nineteenth century, they thrived within the foreign market (Otto 1989). Improvements in transportation such as the railroad made trading easier and more profitable. To imply, as some scholars have, that farmers participated in the market only to relieve themselves of surplus products is to disdain the time, effort, and expertise necessary for successful farming (Friend 1999). These surpluses (i.e. whiskey, beeswax, flour, salt, butter, lard, cloth and firewood) were intentionally produced and used as barter or sold for profit, and supported a growing social economy, a dense network of trade and exchange within the local community.

Preference for a mixed or diversified farming in Kentucky also mitigated against the use of slave labor. The demands of the cultivation cycle under mixed farming required a versatile labor force and skill in farm management if surplus was to be produced for the market. Crop diversity, lack of a single staple crop that monopolized labor, and small labor forces limited specialization of tasks (Schlotterbeck 1982). Consequently, the duties of an individual slave would vary with the growing cycle of many different crops as well as farm maintenance and household production tasks. The mixed farming system was complex and required an efficient use of slave labor to ensure economic success. Those farmers in Kentucky that did own enslaved African Americans were committed to participation in the market. They needed the market to supply and maintain a labor force needed to produce profitable crops for sale in the market (Friend 1999:138). A successful farm was a complex enterprise using laborers in scheduled activities.

Slavery in Kentucky and the Upland South

The early settlers to Kentucky came not only for the need of fertile land, but also to flee the destruction and economic crises caused by British depravations in the American Revolutionary War. Discipline on plantations was compromised when a division between master and slave, fueled by British seeking slaves out as allies, triggered some slaves to rise up against their masters. The British encouraged slaves by declaring they would free any slave who would support the British side. As a result, many slaveholders across the South began to panic (Kolchin 1993).

In the Chesapeake region the reaction of many slaveholders was to flee to the security of the backcountry of Kentucky and Tennessee. The tobacco industry in the Chesapeake region was also severely affected by the war and, as a result, a surplus of slaves emerged since the need for labor was no longer as high. Consequences included a significant increase of "private manumissions to the cessation of African imports" and also a decline in the severe discipline in management of slaves (Kolchin 1993). With fewer slaves in the Chesapeake region and the migratory backcountry of Kentucky, a new role for the slave was defined. With multiple tasks now performed by one to only a few slaves, seeing only one slave working in a field was not uncommon. This was not so in the Lower South, however, where post war conditions resulted in a demand for more slaves for rebuilding. Slaves were more isolated and discipline extreme. Such differences between the Upper South and Lower South carried over into the nineteenth century (Kolchin 1993).

Kolchin describes antebellum slavery as a heterogeneous institution with a wide diversity of conditions for the slaves. Slaveholdings varied in several ways depending on location and size, types of crops grown, and how the slaves were managed. According to Kolchin (1993):

> *"Life on a large cotton plantation in Mississippi, where slaves worked in gangs under the watchful eyes of an overseer and drivers, was very different from that on a small hemp-producing farm in Kentucky, where the master personally directed and toiled alongside his hands, and both were far removed from the slavery experienced by blacks in Baltimore or New Orleans. If anything, the range of variations increased over time, with territorial expansion, the emergence of new crops, increased socioeconomic stratification among the Southern whites, and the growth of a significant (although still small by Northern standards) urban population."* (Kolchin 1993)

An escaped slave, Charles Ball, spent 40 years working on tobacco plantations in Maryland, as well as rice and cotton plantations in South Carolina and Georgia. In his autobiography (1858) he describes and compares conditions in both the Upper and Lower South during the antebellum period. Ball's description of these varying conditions reflects Kolchin's description:

> *"If the proprietors of the soil in Maryland and Virginia, were skillful cultivators--had their lands in good condition--and kept no more slaves on each estate, than would be sufficient to work the soil in a proper manner, and kept up the repairs of the placement-the condition of the coloured people would not be, by any means, a comparatively unhappy one. I am convinced, that in nine cases in ten, the hardships and suffering of the coloured population of lower Virginia, are attributable to the poverty and distress of its owners. In many instances, an estate scarcely yields enough to feed and clothe the slaves in a comfortable manner, without allowing any thing for the support of the master and family; but it is obvious, that the family must first be supported, and the slaves must be content with the surplus--and this, on a poor, old, worn out tobacco plantation, is often very small, and wholly inadequate to the comfortable sustenance of the hands, and [as]they are called.*
>
> *In tobacco fields of Maryland and Virginia, great cruelties are practiced--not so frequently by the owners, as by the overseers of the slaves; but yet, the tasks are not so excessive as in the cotton region, nor is the press of labour so incessant throughout the year."* (Ball 1858)

Because of the differences in the number of slaves between the Upper and Lower South, the role of the master and his slave also varied. On large plantations that relied on monocrop production gang labor was required, the master was seen less by slaves with overseers or slave drivers. Slaves were more likely to have specialized roles on a larger plantation. Three quarters of the slaves might

work in the fields, but the other quarter worked elsewhere (i.e., house servants, grooms, coachmen, carpenter, blacksmith, gardener, and nurse). Women often performed more specific chores then men, usually working in the house as a cook, house cleaner, or seamstress. However, it was not unusual for a woman to work in the fields during peak periods. On small plantations and farmsteads with fewer than 30 slaves, masters took on a more active role in management by personally supervising the slaves. Knowing the slaves and their individual abilities made for a less formal atmosphere and often less regimented labor. With farmsteads that had less than 10 slaves, masters actually participated in the work, which allowed for even more interaction between the master and the slave. On these smaller plantations and farmsteads, there were not enough slaves to spare for specialized roles. Instead, most slaves had to be able to perform multiple jobs (Kolchin 1993; Lucas 1992). Diversified farming in Kentucky worked against the need for a large number of slaves whose duties could vary according to crop production, farm maintenance, and household jobs. It took great skill on the part of the owner/manager for successful, and profitable farm-making when enslaved labor was involved.

Although the South was a slaveholding society, we know that most southerners owned few to no slaves. The few slaveholding as well as non-slaveholding whites lived mostly in rural areas of the South, including Kentucky. In the South as a whole slaves made up about one third of the population. Where the slave population comprised nearly half the population of the Deep South, the slave population only comprised one fifth to one third of the population of the Upper South. In Owen County, between 1820 and 1860, the slave population never rose above 15.5% of the county population. In fact, most of the county farmers and town-dwellers owned no slaves. Instead, farmers worked the land with the help of their family or an occasional hired laborer. There were many free laborers in Owen County, some Irish immigrants, some farmers' sons, and some heads of household (Houchens 1977).

Owen County underwent a rapid growth in population during the first half of the nineteenth century, but by 1850 this increase slowed as did the population of enslaved people (Table 3.1). For the 1,514 enslaved laborers in Owen County, there were 360 slaveholders, most of whom were men, although some women and minors were listed as owners. An example of the ratio between slaveholders and slaves in 1850 follows (Houchens 1977):

107	slaveholders had 1 slave	24	slaveholders had 11 to 15 slaves
159	slaveholders had 2 to 5 slaves	3	slaveholders had 16 to 18 slaves
64	slaveholders had 6 to 10 slaves	3	slaveholders had 21 to 24 slaves

Ultimately, slave ownership was desired by southerners for two reasons, material and social gains (Winter 1994). With slave labor, farmers were able to produce a greater amount of labor intensive crops rather than with just family labor and, with the exception of continued sustenance cost for enslaved labor, there was very little added expense. Also, use of enslaved labor was permanent and therefore dependable. Although a sizable cost was initially invested in enslaved

laborers, they were a sure way to enhance a farmer's income. Besides using slaves for farm work, they could be loaned out for work on neighboring farms or factory work. The slaveholder would profit from the wages, although he might allow a portion to go to the enslaved worker. A farmer with a sizable amount of acreage would have enjoyed a higher level of income than non-slaveholders. Increasing ones wealth ultimately led to another desired goal, that is a higher social status and recognition in the local community. A successful farmer with enslaved African Americans in the Upper South meant both success and recognition in the community (Winter 1994). Not surprisingly, non-slaveholders desired to become slaveholders, but it was a risky venture to undertake. A farmer would have to have sufficient land and capital to put his laborers to effective use. But if he was successful, he would enjoy a level of privilege few of his neighbors would have.

Production on the Hardin Farmstead

How does the above discussion aid us in understanding the Hardin household as a producer and slaveholder? Enos Hardin was a successful farmer who owned many improved acres with high yields of commodities. Commerce, agriculture, and slave labor helped to define his farming activity. Hardin's success with production was due largely to ownership and use of enslaved labor that doubled his wealth in property and production.

Enos Hardin started with very little and went quickly from zero acres in 1819 to 550 acres in 1825. In addition, his total value, according to the tax assessment, escalated seven times from $300 in 1820 to $2,300 in 1825. Interestingly, Hardin was listed as having land in three counties during 1821, 1822, and 1823. These lands were located in Owen County (234 acres) Henry County (600 acres), and Franklin County (144 acres). Hardin may have inherited the tracts, inherited the money to purchase the tracts, or acquired a loan. Enos Hardin sold his property in Henry and Franklin counties a few years after acquiring them, allowing him to expand his acreage and wealth in Owen County.

In 1850, according to the agricultural census, Hardin had 200 acres of improved land and 200 acres of unimproved land. On the improved land, an abundant amount of corn (2,500 bushels), oats (300 bushels) and hay (24 tons) was being cultivated. On the unimproved land, 30 pigs, 18 horses, nine working oxen, four milk cows, one other cattle, and eight sheep were grazing. In addition to the above, he was also producing 250 pounds of butter, 40 pounds of wool, and 300 pounds of beeswax/honey for his own households consumption, for bartering and/or for sale on the market. By 1860, Hardin was an older man of 63 and widowed with only his younger sons George and Enos, Jr. residing with him as well as an older farmer by the name of S. W. House (relationship unknown). Hardin still retained a substantial amount of land, 240 acres improved and 148 unimproved, a total of 388 acres in all. Little produce and livestock are documented on the farmstead at this time, but the assessed value was still high at $6,208. Hardin also retained a large number of enslaved African Americans (n=12). We also know that his youngest son, Enos, Jr., was producing tobacco on the farm. Other sons before him may have grown tobacco as well.

In 1850, most of Enos Hardin's neighbors had considerably less land and produce (Table 6.1). Most of Hardin's immediate neighbors had between 83 and 180 acres of land with 30 to 50 acres of it improved. There were only a few others living in the Monterey district who were also prospering as much or more than Hardin. One of these few owned 1,015 acres, 200 of which were improved. Hardin was producing nearly fives times the corn that his neighbors were producing. Wheat, oats, and hay are also significantly high in comparison. Hardin's holdings of pigs (n=30) are similar to a few neighbors and nearly twice the number of other neighbors. His amount of horses (n=18) in comparison to neighbors (1 to 2) is significantly greater. Interestingly, a few of the neighbors were relying more on wool as a cash produce since they had more sheep (40 to 100) than Hardin. Overall, Hardin was producing more than most of his neighbors and much of the county.

Enos Hardin maintained his large farmstead with between 10 and 12 enslaved African Americans from 1845 until his death in 1863. As for the rest of the Owen County residents, according to Houchens (1977) and the U.S. Slave Census Schedule (1850):

> *"The three largest slaveholders in the county were Benjamin Ford, who had 24 slaves, James Herndon and Richard Yancey, each of who has 21. Then came John B. English, with 18 bondsmen, John L. McDowell and Erastus Bainbridge, with 16 each. All six men were of mature years. None of them would have been considered a large slaveholder in a county where slaves were the principal element in the labor force.*
>
> *Five of the six were farmers. The exception was English, whom the census taker listed as a speculator. Similarly classified was his neighbor, James W. English, six years his junior and presumably his brother. The younger English had 15 slaves."* (Houchens 1977)

In comparison with other slaveholders of the county, Hardin ranked in the upper 10%. In her history of Owen County, Houchens (1977) described all six of these slaveholders in 1850 as men mature in years. Hardin would have been 53 years old at that time. Like Hardin, five of these six slaveholders were occupied in farming, but the sixth was occupied in speculating. Enos Hardin falls just behind these slaveholders with 12 slaves. As for Hardin's immediate neighbors at the time, most had zero to two slaves. However, there were a few others in the Monterey District, Hardin's district, who had as many or nearly as many slaves as he did.

This description of Hardin and his neighbors in terms of land and enslaved workers is based on archival research alone since complimentary archaeological data on Hardin's neighbors is not available. However, research has identified six archaeological sites that date to approximately this same period as Hardin and can provide archaeological assemblages with which comparisons can be made. At this point, we can compare Hardin's material culture with others to show similarities between the Hardin farm assemblages and other archaeological examples.

Comparisons of Hardin with other farmers in Kentucky, Tennessee, Illinois, and Alabama, also revealed information (Table 6.2). The Drake farmstead, located in Illinois, was the first non-slaveholding farmstead used for comparison. The site was occupied as early as 1838 by Chauncy Stebbins and his wife Roxanna. When Stebbins died in 1857 he left behind 558 acres of land, and livestock including 15 horses, 17 pigs, 115 sheep, and 57 head of cattle. Stebbins also owned a house in a nearby town and rented out three other properties. With the landholding and livestock along with household belongings and farm equipment, his total assessed value at the time of his death was $2,127.50. Although Hardin had less acreage than Stebbins, his land was valued considerably higher. A possible explanation for this might be that Hardin had more improved acreage than Stebbins, which allowed for more crop production, specifically corn. Hardin has a comparable amount of horses and pigs, but far from the number of sheep and cattle that Stebbins had. Stebbins would have needed more unimproved land for his large amount of grazing livestock. One clear difference between Stebbins and Hardin also is enslaved African Americans. Stebbins, originating from New York and later living in northern Illinois, did not own slaves. Hardin, on the other hand, was born in Kentucky and owned 12 enslaved African Americans in 1858 valued at $6,000. The remaining portion of Hardin's estate was valued at $6,835, making a grand total of $12,835.

In examining the earlier occupation of the Fair View farmstead (Table 6.2) in southern Illinois, other revelations were made. William Colbert owned the farm from 1853 until 1896 and gradually over a long period sold his sizeable acreage of land. In 1860, Colbert owned 60 acres of improved land and 266 acres of unimproved land for a total of 326 acres. Although Colbert owned no slaves, he did employ at least two farm laborers and possibly three domestic servants later in the nineteenth century. He also had eight children, most born after 1860, making their participation during the early occupation of the farm unlikely. Hardin had only slightly more land than Colbert, but again he had more improved land for crops. Interestingly, by 1860, Hardin had reduced his sizable livestock and produce, perhaps an indication of his declining age and fewer children in the household. He was still producing more than Colbert in 1860, however. Where Colbert was producing 150 bushels of Indian corn, Hardin produced 500 bushels. In addition, Hardin was growing 100 bushels of both wheat and rye. Although the quantity of Hardin's livestock dropped, he still had six horses to Colbert's one and his value of livestock was $500 and value of slaughtered livestock $60. Enos Hardin was considerably wealthier than Colbert and Stebbins.

Yell County is divided by uplands and valleys in the southern portion and broad valleys of the Arkansas River and its tributaries in the northern portion. The uplands were first settled in the 1830s by frontier farmers who practiced mostly herding, hunting, and gardening. Normal practice for these settlers was to clear a small field and allow the livestock to graze upon the remaining unimproved acreage. In the early days of settling, land and livestock were higher in value than slaves. Later, as cotton became a more popular cash crop, the demand for slaves increased slightly. In addition to livestock and cotton, farmers were growing just enough corn, sweet potatoes, and

Table 6.1 Production of Hardin and Neighbors
Dates range from 1849 until 1860, but mostly from 1850 (Archival Data)

	Land (acres)		Produce (Bushels)			Produce (#)				Enslaved AfricanCash		
Owner	Imp	Unim	Corn	Oats	Wheat	Hog	Horse	Cattle	Sheep	Americans	Crop	Total
1850												
Hardin	200	200	2500	300		30	18	14	8	12	grains/ tobacco	$6500
Ballard	40	60	200	10		40	1	7		2		$1200
Sanders	50	130								1		$2400
Karsner	60	41	1250	150	25		1	3	43	1		$1400
Smith										1		
1860												
Hardin	240	148	500		100		6	6		12	grains/ tobacco	$6208
Ballard	50	60	500	30		40	2	34		2	tobacco	$1200
Karsner										1		
Smith	160	240	1000	25	150	80	4	22		4	tobacco	$3600
Spires	350	150	2000			30	7	9		8		$9000

Table 6.2 Production of Hardin and Others in Arkansas, Illinois, and Tennessee
Dates range from 1849 until 1860, but mostly from 1850

Owner	Land (acres) Imp	Unim		(Bushels) Corn	Oats	Produce (#) Hog	Horse	Cattle	Sheep	Enslaved AfricanAmericans	Cash Crop	Total
Hardin 200	200		2500	300	30	18	14	8		12	grains/ tobacco	$6500
C. Stebbins[1]						17	15	57	115	0		$2127
W. Colbert[2]	60	266		150						0		
J. Howell[3]	150	500		2000		150		40		40	cotton	$3000
T. Waters[4]	250	500		2000		50		30		36	cotton	$8000
Croghans[5]										41		
J. Brabson[6]	200	800		1500	200	80	9	13	29	49	grains	$10,000

[1] Drake Site (Phillippe 1990)
[2] Fair View Farm (McCorvie et al. 1989)
[3] Yell County, Arkansas (Otto 1980b)
[4] Yell County, Arkansas (Otto 1980b)
[5] Locust Grove (Andrews and Young 1992; Young, Andrews and Carr 1995)
[6] Brabson Ferry (Andrews 1988; Andrews and Young 1992)

legumes to sustain themselves and livestock and, if they had any, their few slaves. Bartering was common and most popular items for this trading process included pelts, hides, honey, and beeswax (Otto 1980b).

In Otto's study (1980b) of several Upland South rural antebellum farmsteads in Yell County, Arkansas, residents were mostly subsistence farmers, growing enough food and forage to sustain themselves and only a few acres of cotton. As a result, enslaved labor was not as important and usually families played the crucial roles needed in running a successful farm. Unlike Kentucky, farmers of Yell County did not produce tobacco or hemp, but relied on cotton as a cash crop, at least after 1840.

In 1850, 60% of the cotton grown within the county was produced by nonslaveholding farmers. However, the top four cotton producers in the county that year were slaveholders. One Yell County farmer was Thomas Waters, a Maryland native. Waters grew the most cotton in the county and owned the second largest number of enslaved African Americans (n=36) (Table 6.2). He owned $8,000 worth of land with 250 acres improved and 500 acres unimproved. Similar to Hardin, he produced 2,000 bushels of corn. On Waters' uncleared land, 50 hogs and 30 cattle grazed. Again the amounts of hogs are similar, if only slightly more than Hardin's 30 hogs. However, his cattle outnumbered Hardin's cattle (n=14) two to one.

The largest slaveholder in Yell County, John Howell, owned 40 slaves and was the fourth highest producer of cotton in the county (Table 6.2). Howell possessed $3,000 worth of land with 150 acres improved and 500 acres unimproved. Corn production was identical to Waters' 2,000 bushels, but his number of hogs were significantly higher with 150. Cattle numbered 40. Enos Hardin, in comparison to the residents of Yell County, certainly ranks among the most successful farmers. His amount of acreage is very similar as is his crop production. There are really two clear differences between Hardin and both Waters and Howell. One difference is a reliance upon beef. Both Waters and Howell have slightly more unimproved acreage and considerably more cattle. Secondly, they both owned more slaves than Hardin did, but only slightly more than the highest slaveowners of Owen County.

Interestingly, Otto (1980b) also found that in 1850 half of Yell County's enslaved African American population was under the age of 14. The population of enslaved African Americans in Owen County in 1850 has a similar age profile. By this time Enos Hardin's twelve slaves included two grown women in their thirties, four between the ages of 14 and 19, and six between the ages of six months and 14 years of age. By 1860, at least four of the previous slaves from 1850 are unaccounted for. These four would have been adults by 1860 suggesting that one or more may have been sold, died, or left the household with one of Hardin's departing children. Also by 1860, Hardin has three new enslaved children. A common practice of the Upper South was the purposeful reproduction of enslaved people for sale, historically called "slave breeding." These enslaved African Americans were produced only to be sold to the larger plantations in the Lower South where a mono-crop production demanded a larger work force (Conrad and Meyer 1958). Otto (1980b) also

suggests that Yell County slaveholders were practicing slave-exportation, which was typical practice for both Kentucky and the rest of the Upper South in antebellum times (Phifer 1976; Sutch 1975). What this entails is rather than bringing in large numbers of enslaved males to Yell County, slaveholders brought mothers and children instead. In this way, the slaveholders not only had viable laborers but these enslaved laborers could reproduce, providing their masters with a ready source for labor and/or sale. Slaveholders who favored mothers and children were actually making a long-term investment.

Similarly, Enos Hardin started with only one enslaved person, but later acquired two enslaved females whom he retained along with their children until his death in 1863. Of the elite Owen County slaveholders, Benjamin Ford had eight out of 16 enslaved persons under the age of 14, John B. English had eight out of 18 enslaved persons under the age of 14, Erastus Bainbridge had eight out of eight enslaved persons under 14 years of age, James Herndon had nine out of 24 enslaved persons under the age of 14, and John L. McDowell had six out of sixteen under the age of 14. Richard Yancey had the most with 14 out of 21 enslaved persons under the age of 14.

Locust Grove, south of Louisville, Kentucky, is an Upland South plantation occupied from 1790 until 1849 by two generations of the Croghan family. The Croghans started with six enslaved people, but increased the number to as many as 41 in 1820 (Table 6.2). Similar to the Hardins, the Croghans were practicing diversified farming with produce consisting of corn, wheat, and bacon rather than the traditional plantation mono-crops. A mill and ferry were also operated on the property. After 1834, a second generation of Croghans reduced the number of enslaved people to between 18 and 23 (Andrews and Young 1992:1-12; Young, Andrews, and Carr 1995:253-264). The number of enslaved laborers alone mark the Croghans as wealthier than the Hardins. The added mill and ferry insured the Croghans success through diversification.

Another Upland South plantation, Brabson Ferry plantation, is located in Sevier County along the French Broad River, in Tennessee. The plantation was occupied as early as 1798 by John Brabson and consisted initially of 250 acres. Brabson soon increased his acreage to over 5,000 acres, as well as acquiring several lots in a nearby town. By the time of his death in 1848, Brabson had 49 enslaved people working on the plantation (Table 6.2). Like Locust Grove, these enslaved people were working in fields where diversified crops like wheat, rye, corn, oats, sweet potatoes, and hay were produced. Pork was also the dominant livestock, followed by numerous horses, mules, working oxen, and sheep for wool. In addition, a tannery, grist mill, saw mill, flour mill, blacksmith shop, and mercantile store were operated on the plantation. This would have insured self-sufficiency and brought in extra profit from neighbors needing supplies (Andrews 1988; Andrews and Young 1992:1-12). Diversified farming in combination with numerous service-oriented endeavors suggests that the Brabson's were land profit-minded and commercially oriented.

Inscoe (1989) and Otto (1989) have defined characteristics of an Upland South plantation which includes rural slaveholding with a diversified farming practice mixed with services (blacksmith, ferry, store, etc.), household production and participation within the capitalist market system, a logistically/functionally organized settlement pattern, and relations between the master and the slave characteristic of the South in general. Clearly the Croghans and the Brabsons were wealthier then Enos Hardin and meet the characteristics of an Upland South plantation. Although Hardin was never as wealthy as these two plantation households, there are still some characteristics that he appears to have shared, if only on a smaller scale. Hardin did practice diversified farming, but no evidence was found to suggest that he was providing any sort of service to neighbors as Croghan and the Brabsons did through blacksmithing, etc. Although Hardin owned many slaves compared with the rest of the residents of Owen County, his number was notably fewer than the Croghans or Brabsons. However, Hardin was more than "self-sufficient" with his produce and, based on the ceramics recovered from the domestic area, he was actively participating in the capitalist market system.

Unfortunately, we cannot properly address the question of logistical and functional settlement patterning because the archaeological investigation was limited and was not able to identify slave houses or other possible structures that might have been located outside the right of way. However, distribution of architectural artifacts on the surface was concentrated in the northeastern and southeastern side yards and continued beyond the right of way, revealing at least two hypothetical structures just outside the right of way. Other structures may have existed beyond these since surficial architectural debris was noted to continue well beyond the right of way. With as many as 12 enslaved African Americans for nearly 20 years, it seems likely that one or more dwellings were present to accommodate these people.

What documentation we have of Hardin suggests his view of his own slaves was similar to the view of most southern masters, paternalistic. When Hardin died, his will contained a request that all of the slaves be divided among his children except one named Eka, who was given to his youngest daughter, America. No doubt, Eka looked after America and may have acted as a sort of surrogate mother or sister to her, depending on her age. In addition, if the slaves had to be sold for some reason, then Hardin requested that the slave Polina and her two youngest be sold together. In this sense, Hardin does seem to have a paternalistic view towards his slaves.

SUMMARY

In this chapter we have used census data and archival documents to compare the Hardin farmstead with that of his neighbors and owners of other farmsteads and plantations across the South and Midwest. At the Hardin farmstead, both the archival information and the archaeological material have revealed Hardin's significant wealth. Hardin's practice of diversified farming coupled with multiple task slave labor allowed for a successful farmstead operation in which large

amounts of corn, oats, wheat, hay, and livestock were produced. Hardin's wealth is significantly higher than both non-slaveholding farmsteads in Illinois, similar to the rural farmsteads of Yell County, Arkansas, but considerably less than the Upland South plantations of Kentucky and Tennessee.

Comparisons of the Hardin farmstead with non-slaveholding farmsteads such as Drake and Fair View proved interesting in that even if we were to compare Hardin's wealth without his slaves with the two sites, Hardin would still rank as the wealthier farmer. The numbers of livestock documented for the Drake site did not equal or better the amount of produce (mostly corn) that Hardin was generating. Although the amount of acreage was similar between the Drake and the Hardin farmsteads, improved land at the Hardin farmstead produced large amounts of corn, wheat, oats, and hay. Hardin was able to create and maintain a larger amount of improved acreage due to his successful investment and management of enslaved labor.

The successful farmers of Yell County, Arkansas compared favorably to Hardin in many ways including a reliance on diversified crops and relatively low number of enslaved laborers. Enos Hardin compared similarly with two of the top farmers of Yell County, producing similar amounts of corn, but falling slightly behind in the number of livestock and enslaved workers. Most importantly, both Hardin and these farmers were practicing long term investments in slave labor. By maintaining the two enslaved women for as long as he did, Hardin may have been making an investment in slave production as well.

Hardin did not approach the wealth of the Upland South plantation owners of Kentucky and Tennessee in our sample nor did he meet all of the characteristics of a small plantation owner. But, he did manifest several characteristics common to aspiring gentry in the Inner Bluegrass including diversified farming, ownership and management of enslaved labor, with a traditional paternalistic view towards his slaves. The Bluegrass System, dominant in central Kentucky, was patterned after elite planters from Tidewater Virginia. The Bluegrass, in fact, became a magnet for migrating gentry seeking fresh lands to regenerate the planter culture they had known elsewhere (Aron 1996). Although Hardin owned land and lived some distance from Lexington, he patterned his farm operation and behavior after the newly formed gentry in the Inner Bluegrass.

The amount of acreage and enslaved African Americans within the Hardin farmstead as compared to neighbors and other rural farmsteads, identifies Enos Hardin and his household as economically wealthy. Hardin's successful management of the farm, utilization of the land, acquisition of enslaved laborers, and large production enabled him to reach and maintain a high social status. It appears that Hardin was involved in commercial farming producing for the family and for the market, seeking a lifestyle equivalent to the planter elite in the Inner Bluegrass.

Chapter Seven

CONSUMERISM AND MATERIAL CULTURE

Introduction

In the previous chapter we have presented a documentary comparison of Hardin to his neighbors and to other sites explored through archaeology. Census records and historic documents pertaining to Enos Hardin and his neighbors in Owen County indicate that he was a successful farmer able to produce large amounts of corn for local and perhaps national markets. His land holdings were large for the county and the number of enslaved labors he utilized were among the highest in the region. Enos Hardin was a relatively wealthy man. In this chapter we examine the archaeological assemblage we recovered at the Hardin farmstead to show how Hardin used his wealth to buy consumer durables. Examinations of the ceramics and tableglass suggest that Enos Hardin used material culture to create a lifestyle in keeping with his wealth. By setting his table with specific ceramic wares and vessels Hardin proclaimed his respectability to other families and garnered membership in the middle class for himself and his children. Like the previous chapter, our approach is contextual and comparative and draws on a wide range of historic and archaeological records.

Archaeology and the Consumer Revolution

A social revolution was well underway with the emergence of a large, newly formed middle class and the redefining of gentility in Post-Revolutionary War America. It was a time that saw a domestic revolution as the commoditization of labor, and changing ideas about the role of women acted together to restructure the American family, and the burgeoning middle class. Historians, economists, sociologists, and archaeologists debate the origins and trajectory of these sweeping changes. The affects on people like Enos Hardin are complex and syncretistic. Circumstances combined so that with the emergence of the middle class there arose a pervasive materialism, and a universal ambition for personal advancement (Persons 1973). The disappearance of hereditary privilege coupled with the diffusion of knowledge and social mobility in post-Revolutionary War America fueled what Person's called "The gospel of success and the myth of upward mobility (1973:6-7)." Enos Hardin's success as a producer for local and national markets enabled his participation in the consumer revolution. His access to European and national markets and proximity to Monterey, a thriving port and market, facilitated his consumer behavior and enabled his active participation in the social differentiation of the middle class in the nineteenth century. He was engaged in producing and accumulating monetary capital in order to purchase material goods and to then secure the correct props needed for membership in the middle and upper class. How the notions of success, wealth and class, and upward mobility are affected or reflected by the material culture of this nineteenth century landowner and farmer in Owen County, Kentucky is the focus of this chapter.

Archaeologists have always used material culture as their dominant avenue of inquiry. Material culture studies have become an increasingly important and viable area of study over the past 20 years. Approaches to material culture studies have been analytical, anthropological, and historical in scope and are focused on exploring the lives and experiences of many groups, and individuals omitted from traditional historical and cultural narratives and archives. Two trends have emerged that are shaping historical archaeological inquiry: the first trend is the notion that material objects function as a kind of text. What functions did these material objects perform and what behaviors did they enable? Historians and anthropologists read the meanings of objects and place them in a context, in order to decipher their messages. The second trend in material culture studies is an emphasis on developing a contextual understanding of human behavior (Martin and Garrison 1997). Martin and Garrison (1997) suggest that cultural meaning depends on the context in which social relationships occur; the meanings of things cannot be gleaned from discrete, observable phenomena but as connected patterns of behavior. A contextual approach unites material culture and documentary data through time, across space, to explore new avenues of inquiry -- particularly, what meanings objects may have had to those who made, purchased, used, and witnessed them (Martin 1996:74). For example, to study the life and household of Enos Hardin using his material culture, we developed a contextual approach that allows us to show how larger social trends of the early to mid-nineteenth centuries affected the production, marketing, value, use, and discard of material objects, particularly ceramics and table glass. In this way, we will not only document Enos Hardin's occupation in particular, but illuminate social behavior in mid-nineteenth century Kentucky in general.

In studying the rise of a consumer society, economic and culture historians have identified several catalysts. One of these, social emulation, has received the most attention historically. However, social emulation in consumerism, while useful and important, is not an accurate description of consumer behavior or material culture. In many disciplines, including anthropology, material culture studies have concentrated on defining differences between regions and on tracing the spread of amenities from one status group to another. Material goods not only served as markers of status, but as socially important symbols or props in defining relationships and performing everyday social rituals (Martin and Garrison 1997; Martin 1994, 1996; Matthaei 1982; and Roth 1961).

Recently, attention has shifted from producer centered explanations of social change to an emphasis on cultural meaning and symbolic communication (Fitts 1999; Martin and Garrison 1997; Martin 1994; Yamin and Matheny 1996). The portrayal of consumer culture and consumer society, as a world of signs and images challenges materialistic approaches that concentrate on labor and production, consumption as a function of production, or as a corollary of class position (Warde 1997:7). In our study of Hardin's material culture we adopted a contextual, symbolic perspective as it appears to better explain Hardin's consumer behavior within the household and the community as an aspiring member of the middle class.

Consumer decisions are directly influenced by concern with the symbolic meaning of goods beyond any consideration of cost. The sociological elaboration of this notion has typically been concerned with the processes of distinction and exclusion, so that an impression of social superiority can be conveyed through the purchase and display of expensive goods (Warde 1997:97). Symbolic class differentiation can also be conveyed through the manipulation and use such symbols that imply good taste or affiliation with knowledgeable or influential social groups. Membership in such groups is acquired by buying the necessary props (material goods) and by performing the correct behavioral scripts (manners). As Martin has maintained it is not only a question of the have and have-nots but the know and know-nots (Martin 1994, 1996).

The cultivation of aesthetic sensibilities and the promotion of civilized modes of conduct or manners are elements that differentiate and promulgate social groups or classes (Warde 1997:113). Individuals used a variety of strategies for economic security and to transmit privileges to their children, such as education. Education, in the home or in separate institutions was used to perpetuate the genteel modes of conduct that defined the middle class from other classes (Ryan 1981). Throughout the nineteenth century middle class values were promulgated in advice literature that outlined the correct behaviors for every instance. Class/wealth differences constitute the elements of a hierarchical system of taste or manners that intrinsically exhibit social prestige. As one author maintains, however, "While processes of distinction almost always depend upon excluding others, and though this is largely achieved in complicated ways by symbolic means, cost still remains one of the ways of denying access and achieving the distinction of exclusivity (Warde 1997:124)." Through symbolic means and cost, ceramics and dining behavior can exhibit and reinforce a household's membership within a particular social group, as well as make strong statements about individuality (personal taste), and social superiority (inter-group distinctions). Class is not just a matter of money, but also style, aesthetic sensibilities, fashionable manners, and knowledge of the correct situational behaviors. Style relates to visual appearances and involves the use of stylized items to express in an aesthetic manner, group membership (Warde 1997:184). Fashionable manners act as scripts that allow individuals to enter or participate in social groups or particular lifestyles. As long as the correct text to go with the appropriate props is known one can claim and maintain membership in a chosen group. However, attempts at self-representation will fail without a shared understanding of the symbolic significance of particular attributes of material possessions. This shared understanding is evident in literature of the eighteenth and nineteenth centuries. By the eighteenth century individuals believed that, the self is built through consumption and that consumption expresses the self (Campbell 1983:288 in McCracken 1988:20) suggesting the importance that material culture played and plays in class formation, membership, and negotiation.

Enos Hardin was not simply wealthy enough to afford expensive ceramics, large land holdings, and a private education for his children. Hardin was an active participant in the social differentiation of the middle class in the nineteenth century. By buying expensive goods, he was also buying passage into a way of life that was more fluid in America than anywhere in the World. He was engaged in the production and accumulation of monetary capital for conspicuous consumption

of material goods to secure the correct props needed for membership in the middle and upper classes. Cultural capital was also sought after and obtained, legitimizing his family's membership in a class that wealth alone could not guarantee.

To participate in this form of social interaction and class affiliation, mid-nineteenth century custom called for certain proscribed behaviors including complex dining rituals, gender differentiation, and the knowledge and presentation of genteel manners. Many recent scholars have focused on the cult of domesticity, the related concept of gentility, and class distinction or formation as topics of study. Social historians have used probate records, etiquette literature, and even fiction to shed light on these complicated topics (Williams 1987; Kasson 1987; Wall 1994a, 1994b). Although this literature is biased, when combined with archaeology, it provides compelling arguments for class. Drawing on this literature as well as archaeology recent efforts in New York City by Fitts (1999) and Wall (1999) have examined these issues. Questions concerning middle class membership, consumer behavior, and the cult of domesticity have not been examined in rural America. The study of the Hardin farm will be the first. How did Enos Hardin, a farmer in rural Owen County, Kentucky, use material culture to define himself, maintain and create class boundaries and bridge class barriers?

In this chapter we use a contextual and symbolic approach to show how Enos Hardin used material culture to define and secure his membership in the middle class. Ceramics are used to show the economic status of the household and show the Hardin family's participation in genteel dining. These activities suggest that Hardin and his household were actively participating in the domestic and consumer revolutions of the nineteenth century and that he engaged in strategies of class membership and advancement.

Ceramics and the Study of Consumerism

Much research has been conducted using ceramics. In a recent article, Klein (1991) outlined four models that have been used in historic archaeological research to provide a context or organizational framework for ceramic analysis. These models are the status-oriented model, the accessibility model, the ceramic market model, and the gender model. Klein (1991) and others (Martin 1994, 1996; Miller 1991; Miller et al. 1994; Wall 1994a) have concluded that these models are intertwined and virtually impossible to separate cause from effect in any meaningful way. Because these models are systemic they will be considered together. The status-oriented model has been used most frequently with variable results. The model maintains that the economic level and/or social affiliation of a household will determine the quality and quantity of ceramics purchased (Shephard 1987). Households in the upper income and social categories will purchase and use more expensive ceramics, while those in lower categories can only afford the cheaper ceramics. The household is usually the unit measured and includes other distantly related or unrelated individuals that would be living in the home and contributing to ceramic purchase, use, and discard. Using the household as the starting point takes into account extended family relationships that characterized families of different ethnic groups and social class in the eighteenth and nineteenth centuries. The

status-oriented model is heavily entwined with the accessibility model and the ceramic market model. Issues of ceramic availability, cost, production, and consumer choice are bound together in what one scholar has called a Gordian knot. For this analysis, all three aspects will be taken into account together within the social and economic status discussion. Frequently, ceramic cost indices developed by Miller (1980, 1991) are used in discussions of economic strata or class (Adams and Boling 1989; Wall 1991, 1994a, 1994b; Spencer-Wood 1987). Ceramic forms, including the presence of sets, and serving vessels are also important when considering issues of status and economic level (McBride and Esarey 1995; Otto 1980a, 1984; Miller et al. 1994; Wall 1991, 1994a, 1994b). Statements concerning economic cost and status/class are complex ones mingled with issues of accessibility of goods and consumer choice.

The gender model discussed by Klein (1991) was developed by Wall (1987) and involves the domestic revolution that occurred in the late eighteenth and early nineteenth centuries. Historians have identified the period, 1780-1850 as a time of change in the structure of the American family (cf. Ryan 1981; Coontz 1988). After the American Revolution, work for men and women was family-based and agrarian in nature. By the early nineteenth century, however, the country's economy began to change resulting in a large middle class that was becoming increasing stratified. In cities and towns, wage labor began to replace family labor and men began to leave home to work. The urban family became at least two spheres, according to Wall (1994a, 1994b) one in which the male head of household devoted his time to earning a living outside the family, and one in which the married women's work remained tied to the home. Specifically, Wall (1987, 1994a) identifies an elaboration through time in the vessels purchased and used at meals. The elaboration is reflected in an increase in decorated styles, how much decoration, the relative cost of ceramic vessels, and the use of contrasting dinnerware sets in a single household (Martin 1994, 1996; Wall 1987, 1994a, 1994b). Etiquette books of the day made it clear that women were to cultivate domestic piety at home while their husbands were to face and conquer the competitive world of commerce (Douglas 1977:57). Women became increasingly responsible for the raising of children and the keeping of the household. Instead of community values being instilled in children, values became more class based. This equivalency of the family and the women's sphere, more pronounced in the middle class became popularized in the literature of the early nineteenth century as the cult of domesticity (Coontz 1988; Fitts 1999; Plante 1997; Strasser 1982; Wall 1999). Characteristics that signal ceramic elaboration will be documented in the Hardin assemblage to examine whether this farm family aspired to the divided eating practices (formal/family) of urban, wealthy and middle class families.

Tied to the domestic revolution is the development of the middle class in nineteenth century America. The cult of domesticity espoused in varying degrees by the middle class helped to define ideas and values that shaped everyday life in many households. Even the styles and decorative motifs were influenced by the ideas and values couched within this new cult of domesticity. The proximity to nature was thought to be healthy and Godly and this idea combined with the notion of home as a sanctuary greatly influenced material culture. Fitts (1999) found a high concentration of flower pots in middle class homes in New York City. Plants were commonly incorporated into

interior decorative schemes and their use in creating a tranquil sanctuary from the outside world within the home was expounded upon in advice literature of the day. Natural motifs were so popular that they could be found to influence almost any material culture including furniture, wall paper, ceramics, and table glass. While no flower pots were identified in the Hardin assemblage, many ceramic and glass vessels having natural motifs were quite common. According to Fitts (1999) and Wall (1999) motifs having to do with Christian values were also prominent among the nineteenth century middle class, particularly the Gothic pattern and complimentary patterns in ironstone or white granite occurring about 1850. Thus morality and respectability became intertwined with gentility and the middle class. While a family must have a certain amount of wealth in order to purchase the appropriate material culture (props) membership in the burgeoning middle class depended on attitudes and behaviors defined as civilized or genteel. These behaviors have been shown to be embodied in the increasing elaboration and segmentation of dining throughout the nineteenth century. By the mid-nineteenth century, dining had become increasingly formalized into a ritual where middle and upper classes displayed their knowledge of the etiquette of gentility (Williams 1987; Kasson 1987). In short, "table manners emerged as the supreme test of refinement, character, and ...good breeding" (Kasson 1990:200).

At the Hardin farmstead genteel dining by the 1850s was apparent. What is most interesting about this site is that it allows scholars to document the development of this ritualized dining from the 1820s through the 1850s and 1860s when it became an established mark of middle class membership. The fact that Enos Hardin and his family subscribed to these values and actively sought to follow fashion is remarkable given their agrarian status and location in the Outer Bluegrass Region of Kentucky far from the eastern seaboard. We see the same strategies and middle class values develop in rural Kentucky at the same time that they are documented in middle class assemblages from New York City.

Ceramic Protocol and Results

Ceramic analysis for the Hardin household consisted of cataloguing and sherd identification with the construction of a minimum vessel list. The vessel list was used to calculate a mean ceramic date that enabled us to identify changes in ceramic style, decoration, and vessel form over time. In this manner Hardin's economic and social development from a settler to a wealthy landowner was documented. Miller's ceramic price scaling indices (1980, 1991) were calculated for teawares and tablewares determining the material wealth of Hardin. Discussions of wealth using the ceramics serve as a corollary to the documentary data described in the previous chapter. Frequencies of vessel forms and functions are described for the Hardin assemblage and compared with other archaeological sites of similar time period to show how Hardin created social meaning and communicated middle class values through his ceramics use.

Vessel reconstruction and minimum vessel counts are the only way to explore issues of wealth and class discussed earlier. Minimum vessel counts allow the archaeologist to study and reconstruct contextual meaning including variations in the cultural organization of activities at a

functional level and at a symbolic one (Yentsch 1990). Minimum vessel lists have several advantages over sherd-based analysis. Sherd counts have less utility than minimum vessel counts because they eliminate vessel form and avoid subtle variations in decoration. The reliability of sherd counts to the number of vessels discarded on a site can be quite variable and really tell us very little about the vessels and how people used them. Other problems arise in comparing the utility of sherd counts and vessel counts. When a ceramic index is calculated from a sherd count, the resulting index value is usually low and not comparable with vessel-derived index values (Spencer-Wood and Heberling 1987:75; McBride and McBride 1987; Andrews 1997). Although some archaeologists estimate dates based on sherd identification, these dates are usually best when discard occurs over a short period of time and involve ceramics with short manufacture ranges; otherwise, dates can be skewed by depositional patterns, abandonment processes, and differential breakage patterns. For instance, breakage patterns of soft bodied wares vary from harder bodied wares like whiteware and ironstone. Consequently, soft bodied wares such as creamware and pearlware tend to break into smaller sherds -- which when sherds are used to calculate mean dates and establish scaling indices could skew dates and cause fewer accurate index values to be used in interpretations.

A minimum vessel count is defined as a count of the minimum number of ceramic vessels recovered from archaeological contexts, and can be calculated for individual features, and periods of occupation. The minimum count expresses how many vessels (that can be positively identified) were discarded on a site. The protocol to reconstruct vessel counts is based on unique rims, bases, and, in few instances, body sherds. Using ceramics from the Phase II and Phase III attempts to reconstruct vessels began by cross-mending sherds within units and features and between units and features. The resulting vessels were fragmentary with many vessels represented by only one distinct sherd. Vessel form, function, ware, decoration, decoration motifs, diameters (where appropriate), provenience, and number of cross mends were recorded for each vessel.

Sherds were generally in poor condition at the Hardin farmstead site. Most sherds were recovered from plowzone contexts and had undergone damage associated with freeze/thaw and frequent plowing like exfoliation. In fact, no sherds in plowzone contexts mended, although a few sherds appeared to come from the same vessel. Due to environmental and post-depositional processes, soft bodied wares faired more poorly than other wares. Coarse redware was often exfoliated, broken into more and smaller fragments and worn-down into rounded sherdlets with little analytical value. Within plowzone context, refined, soft bodied wares like creamware and pearlware also occurred in smaller sherds than those of whiteware or ironstone. As a result, soft-bodied wares like redware, creamware, and pearlware are more accurately represented by a vessel count than through analyses of sherds alone which would inflate counts due to greater fragmentation rates (Spencer-Wood and Heberling 1987).

The Hardin farmstead assemblage yielded 3325 sherds from Phase II and Phase III excavation. Refined earthen wares dominated the assemblage with 2625 sherds (Table 4.2). Whiteware accounts for 59% (1962 sherds) of the total refined wares. Pearlware (319 sherds) is the second most frequent refined ware, but only represents 10%. Creamware (19 sherds or .6%),

Chinese Export porcelain (48 sherds or 1%), ironstone (148 sherds or 4%), bone china (129 sherds or 4%), and unidentifiable refined earthenware (122 sherds or 4%) occurred in far fewer amounts. Seven hundred (21%) coarse ware sherds were recovered including 177 stoneware sherds, 460 redware sherds, and 63 yellowware sherds. From coarse and refined ware sherds, a total of 214 vessels was identified.

A minimum vessel count yielded a total of 185 refined ware and 29 coarse ware vessels. Identified vessels include 17 bone china, and nine Chinese Export porcelain, refined earthen wares including five creamware, 36 pearlware, 71 whiteware, and 36 ironstone (see Table 7.1). Four refined redware vessels were recovered and a single sherd (vessel) of cauliflower ware. The cauliflower ware represents a curated vessel or an heirloom piece of teaware service.

Coarse ware vessels consist of stoneware, yellowware, and redware. Redware vessels number 11 and are generally in poor condition. For the most part the redware vessels are all utilitarian hollow wares except one plate or pan. Most utilitarian hollow wares are stoneware vessels (18 vessels). These vessels are also larger and in better condition than the softer redware vessels. Six yellowware vessels were also recovered from the Hardin farmstead and are mostly utilitarian in function (Table 7.1). Table 7.1 shows the frequency of each ware type for a total of 214 coarse and refined vessels.

Vessel decoration on refined earthen wares ranged from plain/molded to transfer printed and overglaze painted (See Figures 7.1 and 7.2 for examples). Chinese Export porcelain vessels included overglaze enamel vessels (six vessels) and plain or undecorated vessels (two vessels) (see Tables 7.2 and 7.3). Bone china vessels were either plain/molded (eight vessels) or overglaze enameled (six vessels). Pearlware, whiteware, and ironstone vessels included specimens that were transfer printed (35 vessels), plain/molded (25 vessels), underglaze polychrome painted (10 vessels), or shell edge decorated (21 vessels). Refined redware vessels (four vessels) were not decorated but had a clear lead glaze surface treatment. Yellowware (six vessels) was molded or annular decorated with mocha, dendritic, or common cable slip trailing. One Cauliflower ware vessel represented by one sherd was also recovered. This ware is distinctively molded and covered with a green slip.

Coarse ware vessels, redware and stoneware were undecorated for the most part. Incised lines near rims or collars were the only decoration on some vessels. Brown-tinted and clear lead glaze interior treatments on redware was most common on the redware assemblage. Few coarse redware vessels were glazed on the exterior. The surface treatment on the stoneware vessels was salt glazing for the most part. Interior treatments consisted of a brown slip (Albany Slip) or unglazed varieties of stoneware.

Table 7.1 Ceramic Wares for the Hardin Farmstead, 15On55

Ware Type	Dates	Frequency
Bone China	1794-1870	17
Cauliflower Ware	1760-1780	1
Chinese Porcelain	1780-1840	9
Creamware	1780-1830	5
Ironstone, Blue/Grey	1830-1870	29
Ironstone, White	1830-1870	7
Pearlware, Transfer Print	1795-1840	13
Pearlware, General	1780-1840	23
Refined Redware	1800-1870	4
Whiteware, General	1830-1870	71
Yellowware	1830-1870	6
Total Refined Wares		**185**
Redware	1780-1850	11
Stoneware	1800-1870	18
Total Coarsewares		**29**

Figure 7.1 Ceramics from the Hardin Farmstead

Figure 7.2 Ceramics from the Hardin Farmstead

Table 7.2 Teaware Forms, Decoration and Index Values for the Hardin Farmstead

Decoration/Ware	Vessel Form	N		Index Value 1836
Overglaze CEP	Tea Bowl	5		4.5
Overglaze CEP	Saucer	1		4.5
Plain CEP	Tea Bowl	1		3.0
Plain CEP	Saucer	1		3.0
		8	/	33.0 = **4.125**

Decoration/Ware	Vessel Form	N		Index Value 1836
Plain/Molded Bone China	Tea Cup	4		3.7
Plain/Molded Bone China	Saucer	4		3.7
Overglaze Bone China	Tea Cup	3		3.7
Overglaze Bone China	Saucer	3		3.7
		14	/	51.8 = **3.7**

Decoration/Ware	Vessel Form	N		Index Value 1838
Printed	Tea Cup	8		3.0
Printed	Saucer	11		3.0
Painted	Tea Cup	4		1.5
Plain/Molded	Tea Cup	4		1.0
Plain/Molded	Saucer	3		1.0
		30	/	70 = **2.33**

Decoration/Ware	Vessel Form	N		Index Value 1846,1848
Spatter/Sponge	Tea Cup	2		1.5
Flow Printed	Tea Cup	1		2.83
Plain/Molded Ironstone	Tea Cup	6		2.08
Plain/Molded Ironstone	Saucer	6		2.08
		15	/	30.79 = **2.05**

Total Teawares = 67
Total Indices = 185.59
Average Teaware Value = 2.77

Table 7.3 Tableware Forms, Decoration and Index Values for the Hardin Farmstead

Decoration/Ware	Vessel Form	N	Index Value 1836, 1838	
Plain CC	Table Plate	9	1.0	9.0
Shell Edged	Table Plate	13	1.33	17.28
Shell Edged	Twiffler	3	1.29	3.87
Shell Edged	Muffin	1	1.64	1.64
Shell Edged	Dish	1	1.57	1.57
		30 /	37.57 =	1.25

Decoration/Ware	Vessel Form	N	Index Value 1838
Printed	Table Plate	13	2.67
Printed	Twiffler	1	3.0
Printed	Dish	2	4.29
Painted	Table Plate	1	2.17
Painted	Muffin	1	2.1
		18 /	50.56 = 2.81

Decoration/Ware	Vessel Form	N	Index Value 1836, 1846
Applique Bone China	Table Plate	1	3.0
Plain/Molded Ironstone	Table Plate	3	1.93
Plain/Molded Ironstone	Twiffler	3	2.22
Plain/Molded Ironstone	Platter/Dish	3	3.63
		10 /	26.34 = 2.63

Total Tableware = 58
Average Index Value = 1.97

Vessel form was divided into six functional categories. The categories are not only functionally specific but also refer to manufacture, price, and marketing differences (see Miller et al. 1994). These categories consist of tableware, teaware, table and tea service, food preparation and storage, household utilitarian, and utilitarian undetermined for those hollowware forms that could not be relegated to kitchen or household use. The refined wares are represented predominantly by teaware and tableware forms. Teawares make up 35% of the total vessels, while tablewares comprise 31% of the assemblage. Table 7.4 shows the relative frequencies of teawares and tablewares.

Table 7.4 Form/Function Categories for the Hardin Farmstead Ceramics

Vessel Function	Vessel Count	Percentage
Teaware	75	35%
Tableware	67	31%
Tea and Table Service	20	9%
Food Storage and Preparation	12	6%
Utilitarian Undetermined	31	15%
Utilitarian Household	3	1%
Unknown	6	3%
Total Vessels	214	100%

Ceramic indices were calculated for teawares and tablewares separately to get an idea of the variability between forms and sets, and the concomitant economic status implied by sets of teaware and tableware. Tea- and tablewares were separate purchases for most consumers till the late nineteenth century. Manufacturing, pricing, and marketing of tea and tableware was also distinct throughout the eighteenth and nineteenth centuries. Typically, consumers purchased teaware of a higher cost than tableware, so ceramic indices for teaware will often be higher than for tableware. Using primary sources Miller et al. (1994) found that tea cups and saucers were sold in sets of six, while tableware was sold by the piece with varying numbers being purchase at one time. Since differences in manufacture, marketing, pricing effect the overall cost of tea and tableware averaging indices or failing to separate these specific ware types results in a great loss of information pertaining to wealth, status, or class. Plate diameters were measured, where possible, to more accurately calculate ceramic indices, as plate prices were dependent upon the size of the plate. Also plate size bears a direct relationship to the increased elaboration of dining and serving that occurred throughout the nineteenth century and speaks to the Hardin's degree of participation in the domestic and consumer revolutions during this period.

Table and tea service-oriented vessels numbered 20 or 9% of the minimum vessels. Although not a large percentage, the presence of service vessels does tell us something about dining in the Hardin household. Chronological changes in the morphology and style of service vessels were also noted in the service vessels for Enos Hardin. Tableware vessels changed from minimally decorated platters and shallow, uncovered dishes to decorated and molded-covered tureens. Similar

changes have been documented at other sites and indicate increased elaboration of dining behavior during the mid-nineteenth century (Cummings 1940; Fitts 1999; Hooker 1981; Kasson 1987; Wall 1994a, 1994b, 1999; Williams 1987).

A total of 46 utilitarian vessels was determined through vessel analysis. Utilitarian vessels included coarse wares and refined earthen wares in forms used for food storage and preparation, household, and utilitarian undetermined categories. Thirty-one vessels (15%) were designated utilitarian undetermined or vessels that could not be differentiated into household or kitchen-oriented vessels. Vessels used in food storage and preparation were 6% (12 vessels) of the overall assemblage. This category contained coarse ware jars, crocks, bowls, a pan or plate and a pitcher. The remaining vessels, three chamber pots, were considered utilitarian household in function and were obviously not used as part of dining or kitchen activities.

Mean Ceramic Date

Mean ceramic dating for the Hardin farmstead was accomplished using 180 refined ware ceramic vessels (i.e. only those vessels that could be reliably dated were used in the calculation). Wares that have known beginning manufacturing dates were used while calculations using wares with long manufacture ranges used the end date for the site (1870). The end date for the site was based on historic documents and supported by the archaeological assemblage. A mean ceramic date of 1838 was calculated for the site (Table 7.5). Although ceramic chronologies are used to date archaeological deposits and consequently occupations, the mean date is specifically used as a starting point to assign ceramic index values. As ceramic prices fluctuated over time using mean dates derived through ceramics and site habitation provide more accurate data. The mean habitation date for the Hardin farmstead is 1848 and will also be used in helping to calculate ceramic indices. Mean habitation and ceramic dates can also be adjusted to account for longer occupations. For instance, using three dates, a beginning, middle, and end date can help to discern increases or decreases in wealth or class over time.

Table 7.5 Mean Ceramic Dating using Vessels

Ware	Frequency	Date Range	Mean Date	Product
Bone China	17	1794-1870	1832	31144
Chinese Porcelain	9	1780-1840	1810	16290
Creamware	5	1780-1830	1805	9025
Ironstone	36	1830-1870	1850	66600
Pearlware	23	1780-1840	1810	41630
Pearlware, Trans	13	1795-1840	1818	23534
Whiteware	71	1830-1870	1850	131350
Yellowware	6	1830-1870	1850	11100
Total Vessels	180		Total Product	330773

Mean Ceramic Date **1838**

Social and Economic Status at Hardin Farmstead

Miller's ceramic indices has been used for many years as a method to measure attributes related to socioeconomic status. Several studies have established strong relationships among occupation, income, wealth, and amount of consumer expenditure for durable goods and ceramics in both the twentieth and nineteenth centuries. But even more than wealth, ceramic forms and decorative types through price and fashion distinctions convey information about social stratification. Although the utility of Miller's ceramic indices (1980, 1991) has been questioned in recent years, when combined with other measures of wealth and status, it is still a useful measure. In this research, vessels and detailed attributes of the vessels like size were used in calculating indices. Tea- and tableware was kept separate for calculations also. The resulting indices were used to form a scale of sites ranked according to relative mean value (Spencer-Wood and Heberling 1987). Comparable sites from Kentucky, the Midwest, and South were added to this ranking of sites.

Tea- and tablewares were separate purchases for most consumers until late in the nineteenth century. Manufacturing, pricing, and marketing of tea and tableware was also distinct during the late eighteenth through the nineteenth centuries. Consequently, ceramic index values for teaware and tableware were calculated separately for this site. As Table 7.2 shows, the teaware index value for the Hardin farmstead is 2.77. Compared with other sites (Table 7.6) this index is quite high, comparable to a physician in New York City or a planter at Cannon's Point Plantation in Georgia (see Otto 1984; Spencer-Wood and Heberling 1987). Comparable teaware index values also occur on a merchant's house site and the town residence of a planter in Colbert, Mississippi (McBride 1991). The Hardin's teaware value suggests that attempts were made to buy, use, and display the latest in fashionable teas.

Table 7.6 Cup and Saucer Ceramic Index Rank Order

Site, Occupation, State	Cup and Saucer Ceramic Index Value	Number of Vessels	Index Year
Diaz, merchant, CA	3.59	35	1846
Green, merchant, VT	3.04	40	1833
B. Robson, physician, NYC	2.97	53	1836
J. Allen, planter, MS	2.86	132	1838
P. Warren, merchant, MS	2.50	112	1838
J. Allen, planter, MS	2.49	21	1846
Walker Tavern, MI	2.31	35	1846
P. Warren, merchant, MS	2.26	83	1846
Cannon's Point, overseer, GA	2.24	35	1824
Franklin Glass Factory, worker, OH	2.15	33	1824
Black Lucy, freed slave, MA	1.68	17	1833
L. Drake, farmer, IL	1.62	42	1845
J. Hale, farmer, OH	1.45	17	1824
M. Tabbs, tenant farmer, MD	1.44	16	1846
J. Arnold, farmer, KY	1.90	47	1836/38
E. Hardin, farmer, KY	**2.77**	**67**	**1845/46**

Several tea sets are present in the assemblage. It was quite common for teapots and associated service vessels like tea canisters, creamers, sugars, and waster bowls to be quite different from the cups used to serve the tea. Even wares kept segregated from tableware forms were only produced in teaware forms (Miller et al. 1994). For instance, refined redware was used for teapots, creamers, and sugars, but had no counterpart in tableware or cups or saucers. Four refined redware vessels were identified in the Hardin assemblage and represent at least one tea service. As refined redware was not expensive, this service was probably used within the family context for private meals.

Tea cups and saucers and teapots or other tea service forms would not match in decoration or ware. The most common practice was for consumers to purchase teaware of a higher cost than tableware, so ceramic indices for teas will often be higher than for tableware. According to Miller et al. (1994:242-243) primary sources indicate that teas were usually sold in sets of six cups and saucers, with tableware sold by the piece with varying numbers being purchased at one time. As the price of decorated wares declined and standardization in production increased, the purchase of matched sets became more affordable and readily available. Matching sets of teaware and tableware were not purchased by the average consumer until late in the nineteenth century (Miller et al. 1994). According to recent research (Fitts 1999; Praetzillis and Praetzillis 1992; Wall 1999) the middle class in the 1860s considered groups of vessels sharing the same basic shape and motifs to be a matching set.

Archaeological and documentary research has resulted in identifying some chronological trends in tea- and tableware. Tea- and tableware in the last decades of the eighteenth century typically consist of creamware plates, painted pearlware or porcelain teas, with dipt creamware or even delft bowls (Miller et al. 1994). By about 1790, blue and green shell edge plates begin to replace plain/molded creamware as the popular tableware, into the 1820s. Teas during this transitional period were usually painted or printed teas with dipt or painted bowls. By the 1830s printed plates are seen in combination with shell edged whiteware plates. Teaware during this time was painted and/or printed. By the 1840s one could have printed tea- and tableware, but usually in different patterns (Miller et al. 1994). Although these collections of wares and decorative types would vary by economic class, new ceramic styles would become popular, replace earlier styles and then fall into disuse (Miller et al. 1994; Wall 1994b). The degree to which households pursued these changing styles would depend upon their economic and social status (social emulation), the accessibility of the styles within the area (supply), regional tastes (demand), and cultural processes associated with the commoditization of labor occurring throughout the late eighteenth and nineteenth centuries.

A similar progression of tea- and tableware characterize the Hardin assemblage. An examination of the teas suggests that two distinct sets of porcelain teas associated with the post 1820s (Enos Hardin's initial ownership of the site is 1825) ceramic assemblage were present.

During Hardin's initial occupation of the site his household had two sets of Chinese Export porcelain (overglaze and undecorated) teas. Cups and complimentary or matching saucers were recovered during excavations.

By the 1830s to 1850, when Hardin was well established financially he acquired two Bone china tea sets. The bone china sets were composed of London-style shape cups with pronounced, rounded foot rings popular during the 1830s and 1840s. Three overglaze painted bone china cups with three matching or complimentary saucers and four plain/molded bone china cups with four matching saucers were recovered making two distinct tea sets.

The painted, printed, and sponged teas identified in the Hardin assemblage, also date to this period (1830s to 1850s). It is likely that these sets were used contemporaneously or at least overlapped the other sets, consequently the Hardin household clearly had more than one set of teaware (see Table 7.2). The less expensive painted and sponged teas were probably used by the family in more private teas or by servants.

The Hardins had more than one printed tea set, as printed cups and saucers in four colors; green, blue, purple and red were recovered. More importantly, tableware vessels in green and red transfer printed patterns were also recovered. One printed pattern, Coral Border, was evident on teaware (a cup and saucer) and one item of tableware. This suggests that the Hardins were attempting to gather a matched set of tea- and tableware. Apparently, matching a few printed patterns by the 1830s was possible, but this was rarely done before 1850 because of expense and manufacturing (Miller et al. 1994:241). Printed tea- and tableware in the same color and general floral motif were also evident in the assemblage. These would be considered complimentary sets. Other archaeologists have documented that tea and tableware sets need not have identical patterns to be considered a set (Fitts 1999; Praetzellis and Praetzellis 1992). The middle class by the 1860s may have considered a group of vessels sharing the same basic shape and motifs to be a matching set (Praetzellis and Praetzellis 1992:89). Although expensive, printed wares were the most popular and sought after tea- and tableware (Miller et al. 1994). Hardin's possession and use of many sets of printed teas with complimentary printed tableware indicates that the Hardin household could afford the expense and thought it important to have matching and complimentary sets of fashionable tea and tableware.

The tableware for the Hardin household during the early to mid-nineteenth century consists of several distinct sets, shell edged and printed. Early nineteenth century tableware included 13 blue and green shell edge table plates (measuring nine to 10 inches), three twifflers, three muffins, one platter, and a serving dish. These tablewares suggest that a less elaborate dining style with fewer courses and little need for variously sized plates and soup plates occurred in the early nineteenth century Hardin household. Wall (1987, 1994a, 1994b) noted similar assemblages in early nineteenth century urban contexts. Miller et al. (1994) has also suggested that this assemblage is a typical one for the period. Likewise, as Miller et al. (1994) have maintained, by the 1830s printed plates are typically present in combination with shell edged plates in many archaeological assemblages. In the

Hardin household, 13 printed table plates, one twiffler, and two serving dishes were identified in the early assemblage. These more highly decorated vessels suggest that different patterns could have been used to differentiate breakfast and lunch from dinner and that dining in general was becoming more elaborate. Dinner might have involved the participation in genteel dining where outsiders would have been invited.

The presence of serving vessels and the remarkable variety of vessel forms recovered suggests the economic class of individuals living on the Hardin farmstead. Research has shown that the frequency of certain vessel forms, generally serving vessels and particularly single function vessels are indicative of high economic or social status. Otto, in his research on Cannon's Point Plantation (1980, 1984) found that bowls were present in higher frequencies at slave sites while plates and other serving vessels dominated assemblages from the main house. McBride and Esarey (1995) found high frequencies of serving vessels and single function vessels including sauce boats, platters, and serving bowls/tureens at Ashland, home of a wealthy landowner and community leader.

Price information on serving forms is scant. However Miller provides prices for one service form, platter and several large sized plates (1990). Not surprising, it is the most expensive form in Miller's indices being priced 50% more than regular dinner plates (McBride and Esarey 1995). As serving vessels are often larger, decorated, and more ornate, assuming they would be more expensive to purchase is reasonable. Therefore, the presence of serving vessels and specialized vessels in an assemblage suggests wealth, as well as, genteel dining indicative of social and economic success.

By the late 1850s a shift in the type of ware and decoration to plain/molded whiteware and ironstone (white granite) occurred on many sites. Fitts (1999) and others (Praetzellis and Praetzellis 1992; Wall 1999) have provided research that plain or simply molded ironstone (white granite) and porcelain were popular among middle class urban households. Ironstone was an expensive ware in 1840 and would have been considered the latest in fashionable tableware. As it became more popular throughout the mid to late nineteenth century, prices on ironstone dropped as the ware became more available to consumers. In the Hardin household, undecorated and molded ironstone in popular patterns of the 1860s were sought after and used in conjunction with complimentary sets. Transfer printed whiteware tea- and tableware were also used as a distinct set comprising the 1850s - 1870 assemblage. Although ironstone was manufactured over a long period, vessel forms, shapes, and molded motifs confirm a 1850 to 1870 period of use for the ironstone recovered at the site. It seems that ironstone was the last fashionable ware bought and used by the Hardins before they left the site in 1870.

Other contemporaneous tableware in the assemblage includes one painted table plate, one painted muffin, and one applique bone china table plate. These plates of various sizes suggest an elaboration in dining like multiple courses, which would have required specialized serving dining vessels. Also, present in the assemblage were nine plain or simple geometric molded whiteware table plates. These inexpensive, plain tablewares may have been used by the family in less formal,

family-oriented dinners where status display was not important. On the other hand, these plates strongly resemble the plain/simply molded ironstone or white granite plates used by the Hardin family by the 1850s to 1870s. Although these would have been less expensive plates, they may have been used as a complimentary set with the more expensive ironstone/white granite set. Since the Hardins were concerned with class boundary negotiation (climbing the social ladder), buying less expensive wares in patterns similar to the more expensive tableware was a strategy to maximize utility and enable upward mobility. For the most part, tableware in the Hardin assemblage dating after 1850 is dominated by ironstone or white granite specimens. Ironstone tableware includes three table plates, three twifflers, and three serving dishes suggesting a continued desire to set an elaborate table.

Looking at the Hardin farmstead ceramics, the dominant assemblage used during the post-1850 to 1870 period consisted of transfer printed and molded ironstone tea- and tableware. Cheaper molded whitewares and minimally decorated whitewares were less expensive types by that time and were used by Hardin to create a large matching and complimentary set of plain/molded tea and tableware. Molded ironstone tea and tableware sets possibly in matching molded patterns are indicative of high status. As matching sets were still very expensive, the more complete a tea- or tableware service, the more elite the household. Serving vessels became more prevalent as the ritualization of dining took hold in nineteenth century America. At the Hardin farmstead, at least three distinct patterns of ironstone, undecorated/plain, simple geometric or Gothic, and Moss Rose pattern, a popular pattern in the 1860s (Wetherbee 1981:91) was identified. These patterns occurred on both tea- and tableware forms, implying that the Hardins were choosing to match their tea- and tableware. The purchase of matching sets of tea- and tableware occurred among the elite during this period (1850-1870) as large matching sets were not available to the average consumer until late in the nineteenth century (Miller et al. 1994; Williams 1987). The importance of matching or complimentary sets and the ability to set an adequate table in the nineteenth century cannot be over-stressed as genteel dining and proper etiquette became imbued with moral connotations and was a prerequisite for membership in the middle class.

Genteel Dining and Middle Class Membership

As the middle class developed in the nineteenth century, its members adopted a distinctive world view and ideologies which distinguished them from the working class. While documented archaeologically in cities, the development of the middle class in a rural, agrarian setting has not been examined through material culture. Membership in the middle class demanded that certain values, appearances, and even morals be exhibited. One of the most important values was the concept of gentility. Middle class Americans believed that a person's table manners were a direct reflection of their moral character and genteel dining quickly became a class marker. According to one scholar "A mastery of dining etiquette thus became a prerequisite for becoming respectable in middle class social circles" (Fitts 1999:49). To follow genteel dining properly, the table had to be set in a precise manner with certain ceramic and glass wares. The recovered ceramics, especially those that were used throughout the 1860s suggest that the Hardin family closely followed the

prescriptive literature and middle class norms by setting their table with matching ceramic sets and glassware. Multiple sets indicate that the Hardins differentiated between lunch, dinner, or breakfast and between formal and family-oriented meals.

Genteel dining etiquette dictated that tables be set with matching wares and specialized vessel forms for specific functions. These specialized forms were produced in ceramics, and in table glassware. Not surprisingly, it is during the mid-nineteenth century that there is a virtual explosion in the variety of patterns and vessel forms in tableware. Eating was no longer a one-pot, one-dish meal of soup and bread in nineteenth century middle class homes. According to the cult of domesticity it was essential that each food be served from its own vessel. Also, foods were not to be mixed together and, as a result, vessels with specific functions were required of genteel dining if one was to follow proper manners and one's place in society. To eat certain foods out of sequence in improper vessels was considered ill bred and low (Frost 1869). In New York City's middle class, the general principles of segmented dining and the proper use of specialized vessels would have been a prerequisite for social success (Wall 1999; Fitts 1999). In the Hardin household this was also the case.

Present within the Hardin assemblage are serving vessels that are more elaborately molded and decorated, specifically transfer printed and molded ironstone (white granite) and whiteware specimens. The elaboration in size and shape from simple, oval, shell edged shallow dishes to the molded and transfer printed dishes are striking and suggests that food was no longer the most important thing on the table and that differentiation in the kinds of dishes or food that made up the main courses of the meal was beginning to occur. Covered vessels, indicative of segmented dining, are present among the Hardins' ceramics. Two octagonal or geometrically molded tureens that would have had lids were identified. Other serving vessels included an applique decorated platter and a molded ironstone platter. Dining at the Hardins had become more ritualized with multiple courses and specialized etiquette for family members and guests.

The ability of the Hardin household to set a genteel, segmented table was demonstrated by counting the number of ceramic and table glass vessel forms and specialized vessels identified in the assemblage. Plates were recovered in at least three sizes, and teaware consisted of matching or complimentary sets with cups, saucers, sugars, and creamers. Table glass shows a similar elaboration in vessel forms for specialized uses. Along with the specialized table glass serving forms, a high percentage of the assemblage, 55% or 11 vessels, consisted of tumblers. These would have been important in setting a complete table with individual place settings. The recovery of three stemmed glassware vessels also suggests that specialized forms were used for beverage consumption as well. Rather than the simple bowl-like forms of their earlier serving vessels, the mid-nineteenth century ironstone (white granite) vessels consisted of molded, lidded tureens, platters, and serving dishes. Through time the numbers of serving vessels and specialized forms increased. These results show that the Hardins had comparable numbers of vessel forms in a basic formal table setting and that they were practicing the segmentation associated with genteel dining. Table 7.7 compares the numbers of ironstone or white granite vessel forms between the Hardin farmstead and several urban

assemblages of the same period. Clearly, the Hardin household possessed ceramic and glass serving vessels of the kinds and numbers comparable to several New York City middle class households.

Table 7.7 Number of Ceramic and Table Glass Vessel Forms Owned by Each Household

Household	Ironstone (white granite)			Glass Serving	Total Forms
	Tableware	Tea	Serving	Serving	
Elmendorf (NYC)[1]	2	3	4	0	12
Atwater (NYC)[1]	5	5	6	0	17
Bates (NYC)[1]	5	4	3	0	13
McGuire (NYC)[1]	4	2	2	1	11
450 Carlton (NYC)[1]	3	3	3	3	13
Hardin (rural KY)	3	4	3	4	14

[1] Taken from Fitts 1999:53.

Among Hardin's table settings were single-function vessels closely associated with genteel dining (Table 7.8). These forms required diners to use them for specific functions and in particular ways. For example, the salt cellar, compote, and covered tureen all had specific functions. Evidence suggests that the Hardins were setting their table with covered dishes by the 1860s following a new style of dining which emphasized the table setting and decoration rather than the food. Food historians maintain that covered serving vessels further separated the diner from the base, animal need to eat and placed a distance between "civilized" human endeavors and those of brutes (Kasson 1987; Williams 1987).

Table 7.8 Ironstone (White Granite) Vessel Forms for 15On55

Tableware	Teaware	Serving	Glass Serving
muffin	creamer	platter	salt cellar
twiffler	cup	tureen	small lidded hollow ware
10" dinner plate	saucer	serving dish	large bowl
	sugar		footed compote

The Hardins were clearly following the fashions of the day, and aspiring to middle class ideals, at least for the table, and we do see an increasing complexity of tableware in addition to a progression of teas as changes in style and fashion shifted throughout the nineteenth century. While not all the wares are expensive, Miller's indices do show that expensively decorated, and, cheaper wares were used in the home during the same period (see Tables 7.2 and 7.3). Painted, plain/molded, and sponge/spatter decorated whiteware teas having index values of 1.0 and 1.5 were likely contemporaneous in the household. These teas were present in the assemblage and used in the home probably by the family for less formal occasions. The presence of expensive teas (porcelain and printed teas) suggests that taking tea was becoming more ritualized, and distinctions

between family and social events or occasions were made. Not only was tea served at breakfast for the family, but more expensive wares were used in social events in which the Hardins entertained guests or marked special occasions.

The degrees of formality in meals can be valuable indicators of relationships within the larger community. As the ceramics have shown, the Hardins' engaged in genteel dining practices with multiple courses and specialized table settings. The glass tableware confirms this. The variety of ceramic plate sizes and decorations and the variety of specialized glass vessels suggest segmented, genteel dining. Specialized glass tableware forms complemented the ceramic forms in a variety of table service or table setting situations where degrees of formality or sophistication were important. In addition to compotes, other specialized items like tumblers, footed tumblers, stemware, a footed compote, bowl, unidentified lidded hollow ware, and a salt allude to a more formal table service in a complimentary geometric pattern consistent with the ironstone vessels documented. The conformity to advice literature and similarity between middle class households in New York City and the Hardin household suggests that these middling families consciously adopted the appropriate symbols and behaviors of the mid-nineteenth century middle class. By adopting the material symbols of domesticity and gentility, Hardin marked himself and his children as respectable members of the middle class. The Hardins' adhered to the prevailing notions of domesticity and genteel behavior declaring their social success and respectability within the middle class.

Discussion of Comparative Material

In order to place the Hardin farmstead within a Mid-South and Midwest context, five archaeological assemblages were chosen for comparison of vessel form, decoration, and socioeconomic indices. Unfortunately, comparative material is quite difficult to find in the Midwest and Mid-South regions. Consistent ware and decoration identification and vessel analyses (minimum vessel counts) are not commonly undertaken in these regions although it has been consistently accomplished in the East, Northeast, and Mid-Atlantic regions for two decades. Problems with sherd-derived data have already been discussed, but perhaps more striking is the loss or failure to collect information that persists and continues to compromise research in the Midwest and Mid-South.

Archaeological research utilizing vessel analysis involving early to mid-nineteenth century sites in the Ohio Valley region is virtually nonexistent. Few sites were encountered that had readily available data on minimum vessel counts, vessel forms, and mean dates, and also, economic scaling indices based on vessels and not sherds. These sites are the same temporal periods as the Hardin farmstead and include rural and urban (town) contexts in the middle United States. Of the two rural farmsteads, one is found in Illinois and the other in Logan County, Kentucky. The urban or town sites include the DeRossitt-Johns site in Prestonsburg, Kentucky and two individual homes in

Colbert, Mississippi. These sites were near or on major transportation routes with better than adequate ceramic marketing and distribution. In all cases, accessibility or supply was not a restrictive variable to consumer choice.

The Drake farmstead (11Sh37) was found in Illinois and occupied from about 1830 to 1860 by a prosperous farmer and community leader (Phillipe 1990). The assemblage used in this study was gleaned from two features dating before 1857. Vessel analysis from these features yielded 66 refined ware vessels, whiteware, pearlware, and ironstone. Although no utilitarian vessels were identified, specimens defined as teaware, tableware, or table service was present. Teaware dominates the sample at 42 vessels with tableware at 24 vessels a distant second. Four serving vessels were also recovered. Using Miller's revised indices (1991) ceramic index values for teaware and tableware were calculated. As Table 7.9 shows, the teaware index value for the Drake farmstead is 1.62. This number is surprisingly low given the household's middle class membership and prominent social status. This teaware index is in sharp contrast to the Hardin farmstead index of 2.77. The Hardin and Drake farmsteads were both quite successful and contained similar acreage amounts, 500 acres and 558 respectively. The lack of porcelain and overall low number of vessels on the Drake site may be a product of sampling as only two features were analyzed that contain pre-1860 artifacts. One of the most striking differences between the two households is the lack of porcelain from the Drake site. Calculations for the Hardin teaware index were accomplished without the porcelain to see if the presence of porcelain was dominating the assemblage. The Hardin teaware index is still relatively high at 2.24 even without the porcelain, implying that the Hardins were engaged in finding expensive teawares for the household--essentially conspicuous consumption. By the same reasoning, the inhabitants of the Drake farmstead seem to have favored less expensive wares and decorative styles.

When only the ceramic index value calculation is used to denote socioeconomic level, the teaware value attributed to the Drake farmstead is ambiguous or (at least) suggestive of a lower economic status. In looking at the teaware more closely, however, we see that several sets of teas were used on the Drake farmstead signaling participation in segmented dining. Based on decoration and vessel form at least four tea sets in the Drake farmstead assemblage and possibly a fifth in the 20-year occupation of the farm were identified (see Table 7.9). These include a molded/undecorated set probably used for breakfast or for family teas when display was not needed, a polychrome painted tea, a sponge decorated tea set, a transfer printed tea set and an ironstone set. The printed and ironstone teas have the highest indices, 3.0 and 2.08 respectively. These two sets were quite possibly used for more formal teas where outside guests would attend and confirms the Drake's membership in the middle class. Given the date range of the site, these sets were bought and used during their most fashionable and expensive period of popularity when segmented genteel dining and tea-taking were essential in displaying middle class attitudes and values. The painted and sponged teas were relatively inexpensive with a 1.5 index for both sets. While not expensive, they might have been used to mark special family occasions, but might also represent regional tastes in decorated tea sets. Consequently, we see a household with multiple tea sets suggesting an

Table 7.9 Drake Site (11Sh37) Vessel Forms, Decoration and Index Values

Teaware

Decoration/Ware	Vessel Form	N	Index Number	
Molded/Undecorated	cup (Irish size)	1	1.0	1.0
Molded/Undecorated	cup (London)	5	1.0	5.0
Molded/Undecorated	saucer	5	1.0	5.0
Painted	cup	6	1.5	9.0
Painted	saucer	6	1.5	9.0
Sponge	cup	6	1.5 (1848)	9.0
Sponge	saucer	4	1.5 (1848)	6.0
Printed	cup	4	3.0	12.0
Printed	saucer	2	3.0	6.0
Ironstone	saucer	3	2.08 (1846)	6.24
		42		68.24

Average Ceramic Index for Teaware = 1.62

Tableware

Decoration/Ware	Vessel Form	N	Index Number (1846)	
Molded/Undecorated	plate 9-10”	4	1.14	4.56
Molded/Undecorated	plate 7”	1	1.14	1.14
Shell Edge	plate 9-10”	5	1.14	5.70
Shell Edge	twiffler 8”	1	1.13	1.13
Painted	plate 9-10”	1	2.17 (1838)	2.17
Printed	plate 9-10”	4	2.67 (1845)	10.68
Ironstone	plate 9-10”	6	1.93	11.58
Ironstone	plate 10”	1	3.05	3.05
Ironstone	twiffler 8”	1	2.22	2.22
		24		42.23

Average Ceramic Indices for Tableware = 1.76

elaboration of tea service during family consumption and as a social event. Like the Hardins, apparently taking tea was an important part of the Drake household. The Drake farmstead, while having multiple tea sets, were finding and buying less expensive wares and decorative styles connoting variations in regional tastes or ceramic supply. These are the types of data that can only be addressed through comparative vessel analyses.

Tableware identified as part of the Drake farmstead also suggests a certain amount of differentiation between family dinners and an elaboration in genteel dining overall. A molded/undecorated set of plates of various sizes was identified in the sample implying some elaboration in service associated with courses of food. Shell edge dinner plates and smaller twifflers are also present suggesting that a certain amount of complex dining occurred even in the family setting. Molded/undecorated and the shell edge tableware was part of a ceramic assemblage defined by Miller and others (1994) to be present and used in the household at the same time. Printed, and painted plates were used after 1820 or 1830 while ironstone tableware was acquired after 1840 and used probably to the 1850s. This pattern of assemblage composition and usage is consistent with other sites, but the sample size is quite small with only 24 vessels. Even with the small assemblage evidence suggests that dining was becoming more than a family affair in the Drake household but not as elaborate as in the Hardin household.

A similar pattern of ceramic usage was documented on the Arnold farmstead (15Lo168) in Logan County, Kentucky and more closely resembles the findings at the Hardin farmstead. John Arnold was a successful farmer with a large household (nine individuals) and at least 400 acres of land, comparable to the Hardin farmstead in Owen County. Data used in this discussion was retrieved from one feature, a large rectangular cellar used by the Arnold household and backfilled during an abandonment episode in the late 1830s, that coincides with the sale of the property in 1838 (Table 7.10). A mean ceramic date of 1833 was calculated using 69 refined earthenware vessels. The ceramic assemblage is dominated by decorated pearlware and whiteware. Decoration included painted, printed, and shell edged specimens similar to the Hardin assemblage. As with the Hardin assemblage, vessels associated with teawares numbered 68% or 47 cups and saucers consistent with the Hardin assemblage. Painted teas, however far outnumbered any other decoration in the Arnold sample contrary to what was found in the Hardin sample. Although a transfer printed teapot and pitcher were identified, the Arnolds did not have the transfer printed vessels that the Hardins possessed nor did they have the amount of bone china. Unlike the Hardins, the Arnolds appear to have preferred (or were only able to afford) painted tea sets to other varieties. The teaware assemblages are notable in that not only are there matching cups and saucers, but at least three distinct sets of painted teas; polychrome fine line floral, polychrome broad line floral, and a sprig or very fine line floral pattern were identified. Two bone china cups with matching overglaze enameled saucers were also recovered from the feature suggesting that at least one bone china tea set, used for more formal occasions was owned by the Arnolds. Printed teas were also present in the Arnold assemblage and probably represent at least one set, but they were not present in the same quantity as printed wares in the Hardin assemblage.

Table 7.10 Arnold Farmstead (15Lo168) Vessel Forms, Decoration and Index Values for Feature 4

Teaware

Vessel Form	Decoration/Ware		N	Index #	
Cups and Saucers	Painted	1833	37	1.43	52.91
		1983, 1838	37	1.5	55.5
	Printed	1833	7	2.57	17.99
		1836, 1838	7	3.0	21.00
	EP, floral	Wall 1994	3	4.20	12.60

Teaware Index Value (1833) Total 83.5 / 47 = 1.78
(1836, 1838) Total 89.10 / 47 = 1.90

Tableware

Vessel Form	Decoration/Ware		N	Index #	
Plates 7”	Shell Edge	1833, 1836, 1838	2	1.33	2.66
9”	Shell Edge	1833, 1836, 1838	14	1.33	18.62
9”	Printed	1833, 1836, 1838	6	3.0	18.00

Tableware Index Value Total 39.28 / 22 = 1.79

Average Ceramic Index for Feature 4 is 3.57 / 2 = **1.79** (1833)
3.69 / 2 = **1.85** (1836, 1838)

Ceramic index values were calculated for the teawares using the mean ceramic date, 1833, and the abandonment date of 1838 when the site was sold. Miller's (1991) indices show that painted and printed teas were actually increasing in value from 1833 to 1838. The frequency of painted teas represents replacement teas as styles and decorations fell into disfavor. Broad line, medium to fine line, and sprig painted teas were present in the assemblage suggesting that the Arnolds were buying the latest in painted teas. The Hardins, on the other hand, were buying the latest in transfer printed wares suggesting that the Hardin household was wealthier than the Arnold household. Transfer printed wares were much more expensive than painted wares during this period. Bone china and Chinese export porcelain teas, abundant in the Hardin assemblage, were virtually absent in the Arnolds assemblage, again suggesting the wealth and class of the Hardin household. If one examines the cultural milieu in which the Hardins lived we find them in the upper 10% of the population of Owen County as to improved acreage, production, and number of enslaved African Americans. They were wealthy, perhaps even "upper class" at least in Owen County. The Arnold family, on the other hand, lived in an agriculturally prosperous county, Logan, that became one of the main slave counties of the Pennyrile Cultural Landscape (McBride and McBride 1990). John Arnold's land holdings, production, and number of enslaved African Americans, while comparable to the Hardin's, would have seemed paltry to many of his neighbors in Logan County, Kentucky.

The DeRossitt-Johns site is a residential occupation dating from 1822-1985 in Prestonburg, Kentucky. The earliest documented habitation of the site was by Solomon DeRossitt and his wife and children from 1822 to 1830 (see O'Malley 1990). Pearlware sherds were used by O'Malley (1990) because they can be reliably dated to the DeRossitt occupation. Ceramics would have been readily available to the DeRossitt household by the early 1800s after the town of Prestonburg had been established and the flat boat trade on the Big Sandy River was thriving. It is obvious from the pearlware recovered from excavations that ceramics were both available and desired by the DeRossitt household. Of the 123 pearlware sherds recovered from the site, 87 (70%) exhibit painted decoration (O'Malley 1990:30). Decorated pearlware was dominated by hand painted blue broad stroke floral designs and blue transfer printed specimens. Vessel analysis identified 45 vessels (minimum number). Although O'Malley did not separate teaware from tableware, Miller's Table 7.10 Arnold Farmstead (15Lo168)Vessels Forms, Decoration and Index Values for Feature 4 ceramic indices (1991) were used to assess wealth resulting in an average value of 2.1 (O'Malley 1990). Comparison of this value to other sites with similarly dated ceramics places the DeRossitt household slightly above a glass worker in Ohio and an overseer in Georgia and slightly below a merchant in Vermont (Table 7.11).

Just as the average ceramic index value connotes middle class leanings, so does the composition of the assemblage. O'Malley (1990) noted that there was a preponderance of teaware forms suggesting that the prevailing social custom of taking tea was important to the DeRossitt household. The adherence to social customs (like taking tea) is indicative of the social status of the household while the index value is a tool that gets at the economic status. A cursory examination of the decorative types recovered in the assemblage reveals the presence of several

Table 7.11 Average Ceramic Index Rank Order

Site, Occupation, State	Ceramic Index Average Value	Total Vessels	Index Year
Diaz, merchant, CA	2.69	74	1846
Cannon's Pt., planter, GA	2.63	211	1824
J. Allen, planter, MS	2.59	132	1838
Walker Tavern, MI	2.37	35	1846
Green, merchant, VT	2.29	94	1833
P. Warren, merchant, MS	2.16	225	1838
J. Allen, planter, MS	2.12	21	1846
Cannon's Pt., overseer, GA	1.94	105	1824
Franklin Glass, glass worker, OH	1.90	94	1824
P. Warren, merchant, MS	1.89	177	1846
Franklin Glass, laborer, OH	1.67	62	1824
L. Drake, farmer, IL	1.67	62	1824
Black Lucy, freed slave, MA	1.53	58	1833
M. Tabbs, tenant farmer, MD	1.42	16	1846
J. Hale, farmer, OH	1.34	45	1824
J. Arnold, farmer, KY	1.85	69	1836
S. DeRossitt, ferry operator, KY	2.10	45	1826
E. Hardin, farmer, KY	**2.40**	**125**	**1838**

distinct tea sets; monochrome painted, polychrome painted, and blue transfer printed. Transfer printed teas, especially during the 1822 to 1830 period would have been quite expensive and at the height of their desirability as symbols of middle class gentility.

Edged wares recovered from the excavations comprise part of the tableware used by the DeRossitt household. Unfortunately, saucers and plates were not identified separately, so it is not known whether transfer printed or painted plates of various sizes were present in the assemblage. Consequently, the general elaboration in dining and the increasing separation of male and female domains documented at other sites cannot be undertaken on this one. These shifts in tableware forms, decorations, and sizes, however subtle, are often the only way archaeologists can document changes in human behavior--which is after all the ultimate goal of archaeologists.

Compared with the Hardin site, the DeRossitt assemblage is similar suggesting the DeRossitts aspired to become members of the middle class and actively participate in a social custom where knowing how to act was reinforced by knowing what ceramics to buy or use.

Two urban or town site ceramic assemblages were used as comparable samples to the Hardin ceramics. The Allen and Warren sites were within the town of Colbert, Mississippi. Both households were relatively prosperous and middle class in status and economics. Colbert was a flourishing river trade center whose economy revolved around agriculture until a flood in December of 1847 devastated it. Consequently, the assemblages recovered from Colbert date no later than 1847/48. John Allen, who owned several lots in Colbert by 1835, provides one sample. Allen was a moderately wealthy planter, businessperson, and entrepreneur who owned land in town, and also 720 acres and 10 enslaved African Americans on a plantation outside town (McBride 1991). McBride identified ceramic vessels (separating teaware from tableware and bowls) and calculated index values using 1838 and 1846 index years for separate features. As Table 7.12 shows, the Allen site produced a high teaware (2.86), tableware (2.15), and average value (2.59) for 1838. This seems predictable given the wealth, particularly acreage owned, of John Allen as compared with Enos Hardin. Allen's land holdings alone put him in the upper 20% of landowners in Lowndes County, Mississippi in 1840 (McBride 1991). McBride (1991) designates Allen as an upper-middle class household. While Enos Hardin owned less land, his farm was successful and he did own a comparable number of enslaved African Americans putting him in the upper 10% of landowners/slave owners in Owen County, Kentucky. It is not surprising that Hardin's teaware index value should be as high as 2.77. When considering land ownership and ceramic consumption, Enos Hardin might also be considered upper middle class. But more importantly, we see a rural assemblage dating from the early nineteenth century comparable to urban/town assemblages of the same period suggesting that simple ruralness or urbaness is not a sufficient reason for justifying differences in assemblages or households.

Colbert contained the residence and store of Peter Warren, his wife Ann, and their five children and represented another comparative sample (McBride 1991). The Warren family occupied the site from 1838 to 1847 when they moved to Barton. Peter Warren operated a general

Table 7.12 Ceramic Indices for the Warren and Allen Sites

Warren Site

Form/Freq.	1838 Index	Form/Freq.	1846 Index
Teaware 112	2.50	Teaware 83	2.26
Tableware 66	1.71	Tableware 55	1.45
Bowls 26	1.3	Bowls 23	2.37
Other 21	2.79	Other 16	2.37
225 Total Vessels = 2.16 Average Index		177 Total Vessels = 1.89 Average Index	

Allen Site

Form/Freq.	1838 Index	Form/Freq.	1846 Index
Teaware 72	2.86	Teaware 12	2.49
Tableware 41	2.15	Tableware 6	1.34
Bowls 4	1.35	Bowls 1	1.2
Other 15	2.81	Other 2	2.65
132 Total Vessels = 2.59 Average Index		21 Total Vessels = 2.12 Average Index	

merchandise store throughout his tenure in Colbert. Warren was a prosperous merchant, town property owner, and slave owner (McBride 1991). McBride (1991:198) considers Peter Warren "roughly middle class". The ceramic assemblage recovered from excavations was dominated by pearlware and relatively early decorated types, such as broad line painted and the low proportion of later wares like ironstone. Ceramic indices were calculated for 1838 and 1846 to account for declines in socioeconomic status associated with the boom-bust nature of the town of Colbert. Index values for two features were averaged culminating in a 2.50 value for teaware and a 1.71 value for tableware using 1838 indices (shown in Table 7.12). The average value for the assemblage was 2.16. Calculations for Miller's indices using 1846 for later features revealed that the Warren's household wealth had declined slightly to 2.26 for teaware, 1.45 for tableware, with an average of 1.89. McBride suggests that this decline in the ceramic index value, although the Warren's social status remained the same was due to a change in economic conditions as in a depression or recession. Unfortunately, so few features were found on the Hardin farmstead that calculating ceramic indices and documenting economic change in the family or in the market over time was not possible.

What we can learn from the Warren and Allen sites are that their assemblages are very similar to a prosperous farmer in Owen County, Kentucky. Teawares on both sites suggest multiple tea sets including plain, painted, printed, and porcelain specimens for the features using the 1838 mean ceramic index calculation. Although both households contained similar tea sets, the Warren household had a sponged tea set besides the plain, painted, printed, and porcelain sets identified in both households. Later features using the 1846 mean ceramic index calculation also contain similar assemblages; plain, painted, printed and porcelain specimens with the addition of a sponged tea set for the Warren household. The Warren household, while containing more distinct sets of teas, these sets, the painted and sponged, were less expensive and more affordable to the Warrens. The Allen site, on the other hand, exhibited proportionately more printed teas than the Warren site inflating the teaware indices indicative of the higher economic and social status of the Allen family.

Tableware for both sites was quite similar to the Hardin farmstead. Several distinct tableware sets were in evidence for both the Warren and Allen sites, including plain, edged, Table 7.12 Ceramic Indices for the Warren and Allen Sites painted, and printed plates. In both cases, shell edged plates and printed plates dominated the tableware assemblage suggesting the increased elaboration in dining behavior and the compartmentalization of family-oriented meals and formal meals used to mark special occasions or visitors. The tableware assemblage for these Colbert sites and from the Hardin farmstead are remarkably similar confirming the middle and even upper middle class social and economic status of the Hardin's and their avid participation in genteel dining and etiquette that swept the nineteenth century.

What we have learned from the comparative material is that general trends in ceramics usage do seem to delineate middle and even upper class boundaries. While there are exceptions (see Drake farmstead discussion above) teaware indices, as well as the numbers and kinds of teaware sets in an assemblage signal class membership. Having several teasets of different decoration or ware can be

suggestive of wealth because of differential expense. Also having several teasets suggests an elaboration of tea service and that formal teas were served where outside guests would be invited. This type of tea-taking was essential to display middle class attitudes and values. In comparing teaware assemblages from various sites in our study sample, we see that all are aspiring to middle class conventions of the early to mid-nineteenth century. Perhaps the most interesting outcome of the analysis is that using Miller's indices in combination with the enumeration of distinct and complimentary teasets provides a better base with which to compare social and economic status between sites.

Comparing tableware assemblages between sites also benefits from a more holistic approach. By using Miller's indices in combination with identifying distinct and complimentary tableware sets, a more realistic assessment of wealth and class can be achieved. Simply plugging in indices numbers using sherd counts contributes little to the understanding of consumerism, how class boundaries are negotiated through material culture, or human behavior in general.

Discussion and Conclusions

Consumer decisions are among the cultural formation processes responsible for the archaeological record (Spencer-Wood and Heberling 1987:58). In selecting or acquiring goods, consumers shape and define their world. As Wall (1991:69) maintains "goods do not merely reflect various aspects of culture; rather, they constitute the very fabric of culture itself." Social historians and archaeologists (see Martin 1994) see consumer demand as influenced and even driven by two distinct models. Most studies of factors that caused changes in ceramic consumption patterns have described in varying degrees a social emulation model where consumer demand is driving production. Other historians maintain those advances in machinery and factory organization increased the supply of cheaper goods that lowered prices further making goods available to the general populace. Whether supply or social emulation were the dominant drivers of consumption patterns, has been described by one scholar as a Gordian knot (Martin 1994, 1996). It is likely that many factors contributed to this perplexing problem and argues for using multiple models or contexts in describing and deciphering culture change.

Economic status or wealth has been found by researchers to include occupation, income, aggregate wealth, level of education, and religious affiliation. Archaeological studies have relied upon comparisons of ceramic cost indices (Miller 1980; 1991; Henry 1987; Wall 1994a; 1994b), frequencies of preferred cuts of meat or species (Ewen 1986; Huelsbeck 1991; Otto 1984; Reitz 1987), frequencies of artifact groups other than kitchen-related items (Mansberger 1987; Martin and Mansberger 1987), occupation of head of household (Stine 1990) and the amount of improved acreage a household owned (Andrews 1997; Stine 1990; Blanton 1989) to establish the social and economic rank of various sites. Current research suggests that a more refined ceramic vessel analysis can yield important information in reconstructing class or status positions of households (see Fitts 1999; Wall 1999).

Documentary research indicates that the Hardin household was a moderately wealthy one. Land ownership compared with others in the county, while not large, is larger than most households engaged in agriculture. Farm production was quite good as corn was produced in large quantities for sale within the community, in Monterey, or shipped down the Kentucky River to other markets. Acreage, production levels, numbers of enslaved African Americans, and household income all suggest that Enos Hardin, compared with his neighbors in Owen County, was a successful farmer and wealthy man. His material culture, particularly ceramics and table glass also strongly suggests that Hardin was participating in the consumer and domestic revolutions of the nineteenth century and negotiating membership in the middle class.

The Hardin's were clearly following the fashions of the day for tea- and tableware. We see a progression of teas replaced as changes in style and taste preferences shifted throughout the nineteenth century. Vessel analysis shows that expensive tea sets, as well as, cheaper ones were bought and used contemporaneously in the Hardin household. Less expensive painted, plain/molded, and sponge/spatter decorated whiteware tea sets were used by the Hardin's in less formal situations when family members were together. Tea was a late afternoon or evening meal to which outsiders or acquaintances could be invited. According to Wall (1994a), parties that featured tea with bread and butter or more formal desert courses and possibly supper was a primary arena for socializing in the 1840s. The Hardin household also had expensive tea sets throughout their occupation including overglaze enameled bone china, enameled Chinese Export porcelain, and transfer printed whiteware. Tea could be served as part of breakfast for the family or as a social event. In both instances and all between, ceramics would have played an important role in establishing and maintaining the household's social status.

The changes occurring in family dining and meals caused by the separation of work from the household and man's domain from women's was evident in many areas of the society during the early nineteenth century. Between 1830 and 1920 a technological revolution occurred in American kitchens that completely restructured its physical character and the type and number of utensils it contained (Miller 1987). An increasing interest in cookery, meal planning and preparation, that hints at the elaboration of meals and the increasing control over the household that women began to exert occurred. As early as the 1840s a group of women showed their interest in improving the organization of the household and many guide books or advice books were published. Etiquette books also increased over time attesting to the increased ritualization of dining (Kasson 1987). An extensive middle class market developed for mass-produced imitations of costly luxuries that transformed the home. The effects of marketing, prices, technology and innovation, and availability on consumer choices is intertwined and each has been taken into account in this study. With the introduction of machine-made goods, luxuries became more readily available and as their price declined, they became accessible to and sought after by the middle class. These sweeping changes appear not to be affected by distance from large East Coast markets but suggest that local distribution centers and markets provided stylish ceramics in a timely manner to those who could afford them, even in rural areas and within agrarian households. This finding, at odds with most of the social history and history written for the early nineteenth century, highlights the importance of

combining historical data with archaeologically derived data. By synthesizing these two types of data new information, unattainable through archaeology or historical data done, has been inferred.

Many recent scholars have focused on the "cult of domesticity", the related concept of gentility, and class distinction or formation as topics of study. Social historians in the past have used probate records, etiquette literature, and even fiction to shed light on these complicated topics (Fitts 1999; Kasson 1987; Wall 1991, 1994a, 1994b, 1999; Williams 1987). Although this literature is biased, combined with archaeology, it does provide compelling arguments for class construction and the development of the middle class in nineteenth century America. Drawing on this literature and archaeology, recent efforts using data collected in New York City have proven fruitful (Fitts 1999; Wall 1999). These questions have not been examined using data collected within rural settings from farmers and landowners in peripheral areas of the United States, however. By looking at material culture variation between and within classes and urban and rural contexts, we are able to make statements about strategies used for class advancement and class coalescence on a farmstead in Owen County, Kentucky. The farmstead, operated by Enos Hardin from 1825 to 1870 was successful, producing for local and national markets. His success and wealth in acreage amounts, numbers of enslaved laborers, and production enabled him and his household to become members of the middle class.

Prevailing attitudes of the early to mid-nineteenth century embodied in the cult of domesticity were followed especially through dining and table etiquette. The vessel analysis of the Hardin assemblage was used to define economic status and wealth. Not only were the Hardin's purchasing the latest in tea- and tablewares but they were purchasing sets with expensive decorative treatments. Multiple sets of tea- and tableware combined with complimentary sets of glassware suggest that the Hardin's were engaged in segmented dining as well as social teas. These activities suggest that Hardin and his household purchased and displayed expensive goods conveying their economic superiority to neighbors and guests. Through symbolic means and cost, ceramics and dining behavior can exhibit and reinforce a household's membership within a particular group, as well as, make strong statements about individuality (personal taste), and social superiority. Class is not just a matter of money, but also style, aesthetic sensibilities, fashionable manners, and knowledge of the correct situational behaviors. While the Hardin family did have a certain amount of wealth and were able to purchase the appropriate material culture, membership in the middle class depended on attitudes and behaviors defined as genteel or civilized. These behaviors have been shown to be embodied in the increasing elaboration of dining and genteel manners. Enos Hardin was not simply a wealthy man able to afford expensive ceramics, more land, and an education for his children. Hardin was a believer of "the gospel of success" and an active participant in "the myth of upward mobility" (Persons 1973:6-7).

Chapter Eight

SUMMARY AND CONCLUSION

One of the most pressing problems for social historians and historical archaeologists involves the agrarian origins of American capitalism. An important problem considering one of the definitions of historical archaeology is the spread of capitalism or the material expressions of European expansion. Scholars argue that the capitalist elaborations of agrarian strategies seen in early America suggest that farmers and in fact, the whole economy was changing to accommodate commercial modes of production, at least by the early nineteenth century. The perceived need for overproduction to acquire capital that would be reinvested in the farm acted to differentiate successful farmers from those that were not successful, producers from consumers, and the middle class from the poor. Capitalism served to differentiate rural America into classes as it did urban dwellers. With capitalism, the demise of post-Revolutionary War gentility, and the rise of the American middle class, there arose values and ideals that shaped human behavior and guided the formation of American culture.

To explore these issues, a case study was examined. Specific questions were asked including: How or to what degree did an early to mid-nineteenth century farmer participate in commercial agriculture? If the household was producing for local or national markets, were they engaged in social emulation, conspicuous consumption or other values associated with a capitalist worldview? How are social identities and relationships between people of different social position materially expressed and negotiated? And finally, what strategies did Enos Hardin employ to secure his membership in the middle and upper classes? Capitalism is composed of a continuously changing set of complex social relationships that influenced consumer decisions about material culture and its use in class formation and negotiation. If archaeologists are to understand material correlates of class or consumer behavior in a rural context, the mechanisms within the rural economy that trigger social differentiation need to be identified and explored. These mechanisms in a rural setting were hypothesized to be land ownership, acreage amount (improved and unimproved), commodity production levels, numbers and kinds of livestock, numbers of enslaved laborers, and material culture evidence of genteel dining and status display. But, more importantly, these mechanisms have to be considered within the social and historical context appropriate to Enos Hardin and his family s occupation of the site. Documentary records, census data and material culture provide a snapshot of country life that reflects a society that placed a premium on creating a class-based system where wealth and the outward displays of wealth mediated and negotiated membership in a given social class. The case study approach provides an intimate look at how one-nineteenth century farmer in the Outer Bluegrass Region, produced commodities for local and national markets and acquired the material culture and genteel behaviors necessary for middle class membership. The important question is not whether status differentiation took place (we know it did) but what strategies this farmer used to attain and hold his position in the system of inequality manifested by capitalism.

These questions and the related question of capitalist formation have been considered archaeologically most recently in urban sites in New York City (see Fitts 1999; Wall 1991, 1994a,

1994b, 1999) but not in an agrarian context. Analysis of the Hardin farmstead was designed and initiated to specifically address capitalist elaborations of agriculture and how the elaborations affected or are reflected by material culture, and how the manifestations observed in urban contexts in New York City are different or similar to those in rural ones.

Research questions regarding rural antebellum farmsteads were developed using the Kentucky Historic Preservation Plan (Pollack 1990; McBride and McBride 1990:583-747) as a guide. The research design and methodology for data recovery of the Hardin farmstead utilized various disciplines including archival research, historical literature review, archaeological excavations, faunal analyses (Appendix C and E), botanical analyses (Appendix A), and geomorphological assessment (Appendix B). By using material culture together with historical documentation insights were gained that were unattainable through one source alone. Historical archaeology's contribution lies in its unique capability of gaining simultaneous access to the past through multiple, independent categories of evidence, or what Schuyler characterized as "the spoken word, the written word, observed behavior and preserved behavior" (1977). In the context of the modern world, this simultaneous access to documentary and material evidence provides the most direct path to recovering and understanding economic organization and the social processes related to it (Deagan 1988). Slavery, class formation, the manifestation of social inequality among classes, consumer choice behavior are a few of the related topics that can be accurately described and understood only by a historical archaeological approach--the use of archival data in conjunction with material culture.

An early to mid-nineteenth century historical context was developed for the Outer Bluegrass Region of northern Kentucky. Archival information determined that 15On55 and 15On57 were components of one farmstead, specifically a dwelling with houselot (15On55) and a barn in the outer farmlot (15On57) occupied by the Enos Hardin family from 1825 until 1870. Historic research revealed that Hardin was a prosperous farmer, operating a diversified farming operation that produced corn, European grains, livestock, and other commodities like honey and butter for household use and commercial profit. Hardin owned 550 acres in 1825 worth $2,300 and by 1860, Hardin has retained 388 acres (240 improved and 148 unimproved) assessed at $6,208. He also owned 12 enslaved African Americans and ranked in the upper 10% of those farmers who owned slaves in Owen County. Compared to his neighbors, Hardin was the largest slave owner in the area. Although this type of farming militated against the use of large numbers of enslaved African Americans, Hardin was successful in producing five times the amount of corn that his neighbors were producing, as well as significant amounts of hay, wheat, and oats. Numbers of pigs and horses owned by Hardin in 1850 were also significantly greater than most of his neighbors. The location of the Hardin farmstead near Monterey, on the Kentucky River, allowed direct access for selling and bartering of his produce. Such accessibility to local and national markets enabled him to acquire newly arriving merchandise and participate in the consumer revolution that swept the nineteenth century. Monterey was a major hub throughout much of the nineteenth century and would have provided goods and merchandise from the East Coast and European markets for Owen County residents. It was the place where farmers brought their tobacco and other commodities to be bought or bartered, stored and eventually shipped by riverboat to regional, national and European markets.

Much of what we can define of the houselot and farmlot configuration at the Hardin farmstead mirrors (but is not inclusive to) the Upland South farmstead model which can be summarized into several elements. These elements include the orientation of the dwelling toward the path of human approach; an array of functionally specific outbuildings arranged by convenience; recognition of a yard area comprised of the house and various outbuildings considered the female activity area; a yard area farther from the house where male (in this case slaves of both sexes) oriented activities occurred comprised of the barn, animal pens, and possible tool sheds; and the arrangement of fields to conform to natural rather than artificial features. Although the Hardin farmstead was not entirely contained within the right-of-way, artifact distribution maps using surface collections and unit excavation data yielded important information used to define much of the site layout and activity organization.

At the Hardin farmstead the houselot and yard areas were physiographically defined by the presence of features and the frequencies of functionally specific groups of artifacts (i.e., kitchen-related, architectural, personal, etc.). The domestic dwelling was located in the western portion of the site, and extended eastward with the houselot beyond the right-of-way. Low frequencies of whole and clinched nails suggest that the house was built of logs with a frame ell addition attached to the back (south) of the east pen. An end chimney composed of roughly hewn limestone was present on the west end of the house and on the south end of the addition. Artifact distribution maps show that two or more hypothetical structures may have been located outside the right-of-way and were most likely support structures for the main house. These structures likely included a quarter for enslaved laborers and possibly a smokehouse and/or other outbuilding. The eastern side yard and southeastern back yard appeared to have been the main area for domestic activities and discard. This main activity area, located within the inner yard area, had easy access to surrounding support structures (e.g. smokehouse, meathouse, privies, slave quarter, spring, etc.) and the main dwelling. Female oriented activities dominated by food preparation and storage activities would have taken place within this inner yard or houselot area. A natural division in the form of an intermittent stream, much like the one present today, separated the domestic area (houselot) from the outer farmlot. An access road paralleled this stream but it is unclear if this road was present when Hardin operated the farm. This road is present on late nineteenth century atlases, however.

The barn to the north was an area for livestock or agricultural activities. Although this outer farmlot area has historically been considered the male activity area, enslaved laborers including females, more than likely worked alongside other household members in the inner and outer farmlot areas. Based on the sparsity of artifacts, specifically architectural nails, and the presence of large post holes, it seems likely that the barn was a pole barn with frame members. Remains of the Hardin barn consisted of a series of posts with scant artifacts. The barn was frame and built in bents, that is, cross-sectional trusses consisting of posts connecting rails, and a rafter pair which was assembled on the ground then raised and connected in sequence. Post configuration and number indicated that the Hardin barn consisted of three bents with two bays and two shed additions. The barn, although not a typical Kentucky barn, served multiple purposes as a shelter for livestock (milch cows, horses, oxen, and sheep) or as storage for part of the year for crops such as hay, and oats. Other outbuildings and activity areas probably existed including corn cribs, chicken houses, privies, storage sheds and other

functionally specific outbuildings. No evidence of these were found within the right-of-way however.

Degree of commercial production and successful farm-making was explored by comparing the amount of Hardin's home and market production with his neighbors and contemporaries at other mid-nineteenth century farmsteads in Arkansas, Illinois, Kentucky, and Tennessee. Archival information, particularly agricultural censuses and wills were used to evaluate and compare farm production, acreage amounts and numbers of enslaved laborers between these sites. While the Illinois, Kentucky and Tennessee sample sites also had archaeologically derived data, the archival information, particularly improved acreage amounts, grain production, numbers and kinds of livestock, and tax assessments of these operations were compared to Hardin and revealed that he was a successful farmer with some wealth. Hardin's practice of diversified farming coupled with multiple task slave labor allowed for a successful farmstead operation in which large amounts of corn, oats, wheat, hay, and livestock were produced. Hardin's wealth was higher than most of his neighbors and other Owen county residents. He had considerable land holdings, livestock, and numbers of enslaved African Americans compared to his neighbors and the county in general. His production was significantly higher than both non-slaveholding farmsteads in Illinois, similar to the rural farmsteads of Yell County, Arkansas, and somewhat less than the Upland South plantations of Kentucky and East Tennessee. Of significance was that both Hardin and Yell County, Arkansas farmers were practicing long term investments in slave labor. By maintaining the two enslaved women, Hardin was making an investment in slave production as well. Hardin did not approach the wealth in improved acres and numbers of enslaved laborers as the Upland South plantation owners in our sample, but he did meet many of the characteristics of a small plantation owner. These elements include diversified farming with the successful use of slave labor, a traditional paternalistic view of his slaves, and preoccupation with a genteel lifestyle with status display. Hardin appears to have been patterning his management of the farm after the plantation owners in the Inner Bluegrass, who modeled their society and economy after Tidewater planters (Aron 1996).

In order to place the Hardin farmstead within a Midsouth and Midwest context, five archaeological assemblages were used in the ceramic analysis to compare vessel form, decoration, and socioeconomic indices between urban and rural sites in the region. Of the two rural farmsteads, one is found in Illinois and the other in Logan County, Kentucky. The urban or town sites include the DeRossit-Johns site in Prestonburg, Kentucky and two individual homes in Colbert, Mississippi. Not only were these sites chosen for their temporal period, but also for the type and quality of the vessel analysis. What we learned from the comparative material is that general trends in ceramic usage do seem to delineate middle and even upper class boundaries. While there are exceptions, (See Drake farmstead discussion) teaware idices, as well as, the numbers and kinds of teaware sets in an assemblage signal middle class membership. Having several teasets of different decoration or ware can be suggestive of wealth because of differential expense. Also having several teasets suggests an elaboration of tea service and that formal teas were served where outside guests would be invited. This type of tea-taking was essential to display middle class attitudes and values. In comparing teaware assemblages from various sites in our study sample, we see that all are aspiring to middle class conventions of the early to mid-nineteenth century. This finding is also true of tableware and serving vessels. Tableware, specifically flatware, was recovered in various sizes and

in complimentary motifs suggesting that the Hardin's practiced genteel dining with multiple courses and variable formality. Perhaps the most interesting outcome of the analysis is that using Miller's indices (1980, 1991) in combination with the enumeration of distinct and complimentary teasets and tableware can provide a measurement of economic and social status. By using Miller's indices in combination with a vessel analysis that identifies distinct and complimentary tableware sets, a more realistic assessment of wealth and class is achieved. Simply "plugging in" indices numbers using sherd counts contributes little to the understanding of consumerism, class formation, economic stratification, or human behavior in general.

The Hardin farmstead provided the perfect means to assess how the process, values, and ideals embodied in capitalism affected the rural Outer Bluegrass region of Kentucky between 1820 to 1870. The Bluegrass System, the political economy backed by the elites of Lexington and vicinity epitomized the capitalist underpinnings that began during frontier settlement. This system encouraged a profit-minded spirit and promoted Kentucky's thorough integration into the national and international market world (Aron 1996). By examining the archival and artifactual record, we have charted the strategies used by Enos Hardin to adapt and take advantage of the changing economic conditions of his day. Hardin was engaged in farming for profit and social gain and aspired to become a gentleman like his Inner Bluegrass counterparts. More than fancy attire and polite manners, the ownership of land, livestock, and slaves ultimately determined who was a gentleman. Through historic documents, like agricultural censuses, tax records, and wills combined with material culture analyses, we have shown that Hardin owned sufficient amounts of land and enslaved African Americans to produce successfully for local and national markets. He was engaged in commercial agriculture and was a participant in the capitalistic Bluegrass System.

Enos Hardin also aspired to become part of the middle and even upper classes. His choice of ceramics suggests that his household participated in genteel dining with the requisite table manners. The Hardin family used material culture to define their social position and to maintain or create class boundaries and bridge barriers. Membership in the middle class demanded that certain values, appearances, and even morals be exhibited. One of the most important values was the concept of gentility and middle class Americans believed that a person's table manners were a direct reflection of their moral character and genteel dining became a class marker in nineteenth century America. According to one scholar, "a mastery of dining etiquette thus became a prerequisite for becoming respectable in middle class social circles" (Fitts 1999:49).

By combining archival records and archaeological data we have gained important insights into nineteenth century Kentucky rural life. Archival records researched include will books, deed books, agricultural censuses, population censuses, historic atlases and travel logs. Archaeologically derived information consisted of material culture recovered from features, small and large unit excavation and the sites surface. With this information frequency distribution maps were generated and used to reconstruct houselot dumping and activity patterns, the locations of outbuildings, and the configuration of the main dwelling and barn. A vessel analysis was completed for ceramics and container glass recovered from the site. These vessel analyses combined with a developed historical context has contributed significant information about Enos Hardin and his household. Ceramic teaware and tableware indicate that Hardin was a relatively wealthy man aspiring to middle and even

upper class Victorian ideals embodied by genteel, segmented dining and formal tea-taking. Research suggests that contrary to current social historical scholarship, the domestic and consumer revolutions impacted rural life in the Upland South and Midwest at the same time and in similar ways documented for urban centers in the Northeast.

Appendix A

Archaeobotanical Remains from Sites 15On55 and 15On57

by

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Archaeobotanical Remains from Site 15On55, Owen County, Kentucky

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Introduction

Ten archaeobotanical samples, totaling 71 liters of soil, were processed and analyzed. Included are six samples (24 liters) from Phase II and four samples (41 liters) from Phase III investigations. A small collection of wood charcoal, cultigens (gourd rind and corn), and weedy seeds (bayberry, grass) was collected (Tables 1 to 4).

Methods

Botanical remains are produced from archaeological sites using a method known as water flotation. Soil samples from the site are placed in a tank with agitated water, and the lighter charcoal and roots float to the surface and are collected in a nylon bag. Portions of the sample that sink are caught below in fine screen. Soil samples were floated in a modified Flo-Tech brand stainless steel flotation tank.

After drying the floated samples, they were passed through a 2 mm geological sieve, before sorting charcoal from uncarbonized contaminants such as roots. In historic archaeological sites like 15On55, archaeological plant remains may be either carbonized or uncarbonized (desiccated). Plant material such as wood from the larger than 2 mm sample were identified, counted, and weighed. Sievings smaller than 2 mm were scanned carefully for seeds. This procedure is followed because fragments of wood and nutshell smaller than 2 mm are difficult to reliably identify. Charcoal specimens larger than 2 mm are representative of smaller specimens, with a few possible exceptions such as acorn nutshell and squash and gourd rind (Asch and Asch 1975). Laboratory sieving thus saves considerable laboratory sorting time without a loss of information.

The samples were analyzed under a light microscope at magnifications of 10 to 30x. Identification of materials was aided by a comparative collection of both archaeological and modern specimens, along with standard catalogs (Delorit 1970; Martin and Barkley 1973; U.S. Dept. of Agriculture 1948). Specimens were sorted by species, counted, and weighed to the nearest tenth of a gram. Macroscopic wood characteristics were observed from specimen cross-sections (Panshin and deZeeuw 1970). Changes in the visibility of macroscopic characteristics that occur during carbonization were also accounted for, to insure maximum accuracy of identification (Rossen and Olson 1985). Very small wood specimens or specimens that were badly deformed during the carbonization process were classified as "unidentified".

Preservation

Archaeobotanical preservation varies greatly between sites for reasons that are only partially understood. Two factors that influence preservation are soil drainage and chemical composition of midden deposits (such as ash content). The circumstances surrounding plant carbonization, including firing temperature and the amount of oxygen reduction present, also influence preservation. In the case of Site 15On55, soil composition, including pebbles and gravels in some samples, may have been destructive to archaeological plant materials.

The recovered archaeobotanical remains are in poor condition. The carbonized wood specimens are eroded and indicative of poor archaeobotanical preservation. Few carbonized seeds were recovered, which also may indicate the destruction of botanical remains from mechanical grinding by pebbles and gravels. In at least one sample (AS#31), streambed gravels have obliterated any charcoal that was present.

Wood charcoal

Only a small amount of wood charcoal (3.2 gm) was recovered (Table 2). Most of this (90.6%) was present in a single sample from Feature 5 (AS#35) (Table 4). Five species are represented, in order of frequency: honeylocust (*Gleditsia triacanthos*), American elm (*Ulmus americana*), butternut (*Juglans cinerea*), hickory (*Carya* sp.), and white oak group (*Quercus* sp.). These are all native species in central Kentucky (Campbell 1985, 1987). The butternut remains are notable because this species is considered a soft, friable wood with qualities that make it a poor choice for either fuel or construction use. The remaining species have a variety of economic uses.

Cultigens

Trace amounts of gourd rind (*Lagenaria* sp.) and corn (*Zea mays*) were recovered (Table 3). Gourd rind is present in two samples from Feature 1, from both Unit 6 (AS#34, n= 6) and Unit 12 (AS#33, n= 1) (Table 4). Gourd rind was used in poor and slave households as utensils and bowls prior to the Civil War (Ferguson 1992:97-98). In frontier households of Kentucky and West Virginia, gourds were used when pewter dishes were scarce (Doddridge 1989[1824]:88).

Gourd rind has also recently been recovered at military sites, such as the pioneer and Revolutionary War sites of Logan's Fort, Lincoln County, Kentucky, and Arbuckle's Fort, West Virginia, where it was the most widely distributed cultigen (Rossen n.d.b., n.d.c.). It was furthermore recovered from the Civil War African-American soldier tenting ground at Camp Nelson, Kentucky, but was absent from officer-related contexts (Rossen n.d.a.). The presence of gourd rind in Feature 1 at Site 15On55 is further evidence of this plant's cultivation and use in historic Kentucky.

A single corn cupule and kernel were recovered from Feature 1, Unit 6 (AS#34) and Feature 5 (AS#35), respectively (Table 4). The kernel fragment is nearly complete. It is a low, flat, crescent-shaped kernel that is reminiscent of Late Prehistoric period "Eastern Eight" corn. That is, it contrasts markedly with tall, narrow kernels that represent hybridized varieties that developed sometime in the middle of the nineteenth century. Its kernel width (7 mm), length (5 mm), height (5 mm), and small embryo height (1.5 mm) and width (2.0 mm) together suggest that this corn is an early historic specimen, little-changed morphologically since its transfer from Native Americans. As data rapidly accumulate on historic corn morphology in Kentucky, even this single specimen will contribute to our understanding of the developmental trajectory of corn in nineteenth century Kentucky.

Carbonized weedy plant seeds

Nine fragments of bayberry seed (*Myrica pensylvanica*) from Feature 1, and two grass seeds (Gramineae) in Feature 5 may represent fortuitous inclusions in the site. The grass seeds are minute, with lengths of 1.3 and 1.0 mm.

Summary

A small archaeobotanical collection was recovered from Site 15On55. The most notable remains in the collection are the gourd and corn specimens. Gourd rind has now been recovered from several historic sites in Kentucky, suggesting its widespread eighteenth and nineteenth century use for bowls and utensils. Two corn specimens, particularly the low, wide, crescent-shaped kernel from Feature 5, represent an early historic variety that is morphologically similar to Late Prehistoric period (A.D. 1000-1750) corn of central Kentucky, which was associated with Fort Ancient peoples (Rossen 1992; Wagner 1987).

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Table 1. Archaeobotanical materials recovered from Site 15On55 by general botanical category.

botanical category	*frequency*	*gram wt*
Wood charcoal	292	3.2
Weedy plant seeds	11	---
New World cultigens	9	.0
Nutshell	1	.0
Total	313	3.2

Table 2. Wood charcoal from Site 15On55.

species	***freq***	***pct***	***gm wt***	***pct***
honeylocust (*Gleditsia triacanthos*)	157	69.8	1.9	73.1
American elm (*Ulmus americana*)	36	16.0	.4	15.4
butternut (*Juglans cinerea*)	24	10.7	.3	11.5
hickory (*Carya* sp.)	5	2.2	.0	---
white oak group (*Quercus* sp.)	3	1.3	.0	---
Total identified wood charcoal	225	100.0	2.6	100.0
unidentified wood charcoal	67		.6	
Total wood charcoal	292		3.2	

Table 3. Plant remains from Site 15On55.

plant type/species	*freq*	*gm wt*
New World Cultigens		
gourd (*Lagenaria* sp.) - rind	7	.0
corn (*Zea mays*) - kernel	1	.0
cupule	1	.0
Nutshell		
black walnut (*Juglans nigra*)	1	.0
Seeds		
bayberry (*Myrica pensylvanica*)	9	---
grass (Gramineae)	2	---

Table 4. Botanical remains from Site 15On55.

sample	*species*	*freq*	*gm wt*
Feature 1, Trench 1 AS#27 West wall, 35-55 cm 2½ liters	wood charcoal (hickory)	1	.0
Feature 1, Trench 1 AS#28 North Wall, 40-54 cm 3 liters	wood charcoal (unidentified - small)	3	.0
Feature 1, Trench 1 AS#29 West Wall, 55-65 cm 3 liters	empty		
Trench 1 AS#30 West wall, 62-86 cm 2 liters	empty		
AS#31 40 cmbd, 6 liters	empty -- filled with streambed gravels		
Trench 1 ext Test Unit 4 AS#32 Level 5, 70-80 cm 7½ liters	wood charcoal (hickory)	4	.0
Feature 1 Unit 6 AS#34 40-61 cmbd 11 liters	wood (unidentified - small) gourd - rind (*Lagenaria* sp.) corn - cupule (*Zea mays*)	14 6 1	.1 .0 .0
Feature 1 Unit 12 AS#33 40-54 cmbd 12 liters	wood (white oak group) bayberry (*Myrica pensylvanica*) gourd - rind (*Lagenaria* sp.)	3 9 1	.0 --- .0
Feature 4 AS#35, 22 liters	wood (unidentified - small) black walnut (*Juglans nigra*)	26 1	.2 .0
Feature 5 AS#35 2 liters	wood (honey locust 65%, elm 15%, butternut 10%, unidentified 10%) corn - kernel (*Zea mays*) grass (Gramineae)	241 1 2	2.9 .0 ---

Archaeobotanical Remains from Site 15On57, Owen County, Kentucky

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August 1998

Introduction

Thirty-one archaeobotanical samples, totaling 161 liters of soil, were processed and analyzed. Included are twenty samples (53 liters) from Phase II and eleven samples (108 liters) from Phase III investigations (Tables 1 to 4). The recovered wood, both carbonized and desiccated, clearly represents the selection and use of particular species. Gourds were probably used at the site as bowls and utensils. Chenopod or goosefoot may have been collected, a practice not documented at other historic sites. A variety of other recovered plant species unfortunately occupy the historic gray zone between utilized economic plants and weedy intrusions into the archaeological record.

Methods

Botanical remains are produced from archaeological sites using a method known as water flotation. Soil samples from the site are placed in a tank with agitated water, and the lighter charcoal and roots float to the surface and are collected in a nylon bag. Portions of the sample that sink are caught below in fine screen. Soil samples were floated in a modified Flo-Tech brand stainless steel flotation tank.

After drying the floated samples, they were passed through a 2 mm geological sieve, before sorting charcoal from uncarbonized contaminants such as roots. In historic archaeological sites like 15On57, archaeological plant remains may be either carbonized or uncarbonized (desiccated). Plant material such as wood from the larger than 2 mm sample were identified, counted, and weighed. Sievings smaller than 2 mm were scanned carefully for seeds. This procedure is followed because fragments of wood and nutshell smaller than 2 mm are difficult to reliably identify. Charcoal specimens larger than 2 mm are representative of smaller specimens, with a few possible exceptions such as acorn nutshell and squash and gourd rind (Asch and Asch 1975). Laboratory sieving thus saves considerable laboratory sorting time without a loss of information.

The samples were analyzed under a light microscope at magnifications of 10 to 30x. Identification of materials was aided by a comparative collection of both archaeological and modern specimens, along with standard catalogs (Delorit 1970; Martin and Barkley 1973; U.S. Dept. of Agriculture 1948). Specimens were sorted by species, counted, and weighed to the nearest tenth of a gram. Macroscopic wood characteristics were observed from specimen cross-sections (Panshin and deZeeuw 1970). Changes in the visibility of macroscopic characteristics

that occur during carbonization were also accounted for, to insure maximum accuracy of identification (Rossen and Olson 1985). Very small wood specimens or specimens that were badly deformed during the carbonization process were classified as "unidentified".

Frequencies for wood lots containing more than 400 specimens represent carefully constructed estimates and not exact figures. Actual frequencies were recorded for lots containing fewer than 400 specimens. Frequency estimates were derived in the following manner. Two hundred specimens were counted, this subsample was weighed, and the weight of the total sample was divided by the subsample. This number was then multiplied by 200. Estimates of the species composition of each sample were derived by identifying between 20 and 50 specimens. An estimate of the relative percentage of each species represented was then used to calculate the estimated frequency of each species in a sample. This is believed to be a reliable and efficient method for handling large lots of wood charcoal (Rossen 1991).

As will be further discussed below, additional methods are used to evaluate whether individual plant species were utilized or are natural weedy itnrusions into the archaeological record. Some of these methods are distribution by feature and sample depth, ubiquity (the percentage of samples with a given species present), and specimen frequency per liter of floated soil, both overall and within particular contexts.

Preservation

Archaeobotanical preservation varies greatly between sites for reasons that are only partially understood. Two factors that influence preservation are soil drainage and chemical composition of midden deposits (such as ash content). The circumstances surrounding plant carbonization, including firing temperature and the amount of oxygen reduction present, also influence preservation. Soil particle size and and inclusions affect whether or not carbonized plant materials are mechanically ground and eroded.

Several features in Site 15On57, such as #s 3, 6, 9, and 11, contain well-preserved plant remains. Seeds in these features retain sharp details of seedcoat reticulations and exhibit little erosion or damage from mechanical grinding.

Wood

Wood, both carbonized and desiccated, is the most common component of the assemblage (n= 3315) (Table 1). A total of fifteen species was identified (Table 2). Historic wood assemblages are quite different than prehistoric wood collections. Historic collections often exhibit less common native or introduced species. Historic collections tend to indicate species selected for construction or use as ornamental plants instead of true indicators of the environment. In contrast, prehistoric Kentucky wood collections more closely reflect the mixed hardwood oak-

hickory forests that were present (Rossen 1991). Wood from Site 15On57 illustrates some of the differences between historic and prehistoric wood collections.

The dominant wood taxa in Site 15On57 are usually represented in much lower frequencies in prehistoric sites. Yellow poplar (*Liriodendron tulipifera*), the most common wood in the collection (26.3% by frequency), is usually found in low percentages at central Kentucky prehistoric sites, ranging from its total absence from the Guilfoil site (15Fa167) in Fayette County to its low presence at the Thompson site, Greenup County (7.4%), the Fox Farm site, Mason County (5.7%), and the Muir site, Jessamine County (2.8%) (Rossen 1987, 1991, 1992). The high incidence of yellow poplar at Site 15On57 must reflect its intentional selection and use. The species is primarily known as a soft, stiff wood used for furniture and cabinets (Panshin and deZeeuw 1970).

Pine, recovered only in desiccated form, is the second most common wood species (Table 2). Historic sources suggest that pine was probably present prehistorically in the Knobs Region but not in the Bluegrass Region (Campbell 1985:48). Despite this, traces of pine have been archaeologically recovered at two central Kentucky prehistoric sites, Jewell (15Bn384), a Mississippian site in Barren County, and Dreaming Creek (15Ma97), a Late Woodland site in Madison County. Pine was probably a rare tertiary species that colonized disturbed land, but its decay resisting properties made it valuable. In areas of West Virginia, where pine was a more common, invasive secondary species, pine was prehistorically selected for use as house posts during the Late Woodland period (Rossen and Ison 1985).

The desiccated pine specimens from Site 15On57, from Features 6, 7, and 8 probably represent posts (Table 4). In these features, the specimen color and ring widths are uniform, indicating that in each case a single post or beam is represented.

Other wood species represented at Site 15On57 are the red oak group (*Quercus* sp.), soft maple (*Acer* sp.), redgum or sweetgum (*Liquidambar styraciflua*), white oak group (*Quercus* sp.), and American holly (*Ilex opaca*). Of these, redgum and American holly are tertiary species in the native Kentucky forests that are only rarely recovered archaeologically from prehistoric sites. The prehistoric (Late Woodland) occupation at the Dreaming Creek site (15Ma97), with its substantial frequencies of American holly, is a notable exception (Rossen n.d.a.). Both redgum and American holly became popular during the historic period as ornamental trees. During the last century, redgum was the most important wood species used for veneer. Holly was used for handles and furniture inlays. Both species are little-used commercially today.

Minor species in the Site 15On57 collection are, in order of frequency, mulberry (*Morus rubra*), American chestnut (*Castanea dentata*), eastern redcedar (*Juniperus virginiana*), hard maple (*Acer* sp.), beech (*Fagus grandifolia*), white ash (*Fraxinus americana*), hickory (Carya sp.), and black walnut (*Juglans nigra*) (Table 2). Eastern redcedar, like pine, was much more common prehistorically in the Knobs Region than in the Bluegrass Region (Campbell 1985:48). American chestnut was probably much more common in the Western Knobs Region than in the Bluegrass

Region, and remaining stands were obliterated by the Chestnut Blight early this century (Campbell 1987:15). Oddly enough, the four trace species of the collection, hickory, white ash, black walnut, and beech are dominant or strong secondary species of the native central Kentucky forests that are usually much better represented in prehistoric sites (Rossen 1991).

Two non-carbonized wood post specimens recovered directly from excavation (not from flotation) were examined. The first, from the Northwest Quad of Test Unit 7, Level 2 is osage orange (*Maclura pomifera*). This is an introduced species from the Florida-Louisiana Gulf Coast that was a popular ornamental tree during the historic period. Osage orange was often planted along fencerows because its unusually high extractives content produces an extremely durable, decay-resistant wood. The second specimen, from Test Unit 6, 110 cm, is eastern redcedar, another popular fencerow and post species discussed briefly above.

Cultigen (gourd)

Gourd rind (*Lagenaria* sp.) was recovered from seven samples (n= 34 specimens), representing Test Unit 1, Level 9 and Features 3, 6, 8, 9, 10 and 12 (Tables 3 and 4). This widespread presence probably of gourd probably represents its utilization at the site. Gourd rind was used in poor and slave households as utensils and bowls prior to the Civil War (Ferguson 1992:97-98). In frontier households of Kentucky and West Virginia, gourds were used when pewter dishes were scarce (Doddridge 1989[1824]:88).

Gourd rind has also recently been recovered in substantial amounts at military sites, such as the pioneer and Revolutionary War sites of Logan's Fort, Lincoln County, Kentucky, and Arbuckle's Fort, West Virginia, where it was the most widely distributed cultigen (Rossen n.d.b., n.d.c.). It was furthermore recovered from the Civil War African-American soldier tenting ground at Camp Nelson, Kentucky, but was absent from officer-related contexts (Rossen n.d.d.).

Fungus

Fifteen carbonized fungus specimens were recovered from Feature 11 (AS#49). This suggest that wood in the feature decomposed prior to burning. Wood may have decayed in the feature, or perhaps old building material was disposed there.

Nutshell

Four nutshell specimens, including one complete black walnut, are probably incidental inclusions in the site materials.

Seeds

The Site 15On57 collection contains an abundance of carbonized, semi-carbonized, and desiccated seeds (n= 1933, Table 3). Semi-carbonized and desiccated seeds may be associated with the historic occupation of the site, or may be natural inclusions. Defining utilized plants from seeds in historic sites is thus a difficult issue. Suggestions may be made on the basis of frequency of seeds recovered and ubiquity, or the distribution and density per liter of the seed throughout the site and in particular contexts. For example, seeds that occur in very low frequency in many contexts may represent a broad low-level intrusion into the historic deposits. In contrast, high seed frequencies in certain contexts are more suggestive of utilization.

The most common seed in this collection is chenopod or goosefoot (*Chenopodium* sp., n= 1241), recovered primarily in carbonized form. Chenopod produces an edible starchy seed and greens, and one variety (*C. berlandieri*) was gardened prehistorically throughout the eastern United States (Rossen 1992b; Smith 1987; Watson 1989). Chenopod can also occur as a natural weedy inclusion in flotation samples, and can be fortuitously carbonized. Prehistoric cultivated varieties exhibit a special "truncate-margin" outline, a thin or absent seed testa, and relatively consistent or "pure" seed size. In contrast, wild chenopod populations exhibit simpler biconvex cross-sections, thick testa, and a broader range of seed size. On the basis of these defining characteristics, the Site 15On57 specimens represent a wild population. The specimens have biconvex cross-sections, thick seed testa, and collection overall exhibits great size variability. These traits are to be expected at a historic site because, during the Late Prehistoric period in central Kentucky (A.D. 1000-1750), chenopod was heavily deemphasized as a crop (Rossen and Edging 1987), and with the arrival of Euro-Americans, the crop was abandoned.

The chenopod distribution at 15On57 is a good example of the difficulties of separating utilized versus intrusive plants in the archaeobotanical record. A significant majority of the seeds (n= 1027, 82.8% of chenopod seeds) was recovered from five Feature 3 samples taken from Levels 2 to 5 of that deep feature (Table 4). These were relatively small flotation samples, representing only 18¼total liters, or more than 56 chenopod seeds per liter of floated soil. In contrast, Level 1 of that feature (3-34 cm below datum) contained only 16 chenopod seeds in an 11 liter sample, or barely more than one seed per liter. This suggests that if the seeds were naturally deposited, the intrusion occurred while the feature was open and not following the feature use or site occupation. Another concentration of chenopod occurred in Unit 8, Level 7, where 137 seeds were recovered from a 2½ liter sample, nearly duplicating the seed density of the lower Feature 3 samples. These high densities are difficult to dismiss as intrusion, and may represent a rare incidence of the historic use of a plant that was collected and cultivated prehistorically but was little-known or used by historic populations.

In contrast to the high seed densities of Feature 3, much lower frequencies of chenopod seeds occurred in several larger flotation samples from Features 6, 7, 8, 10, 11, 12, and 13 (Table 4). In these seven samples, a total of 65 seeds were recovered from 123 liters, a density of barely one-half seed (0.53) per liter. This density, taken from samples that each have wide depth ranges

beginning near the site surface, is more suggestive of a low-level, scattered, natural seed intrusion.

Purslane is a low, herbaceous plant with edible greens that invades gardens and disturbed land. A total of 347 desiccated seeds was recovered from nine samples, representing Features 3, 5, 8, 9, 10, 11, 12, 13, and 14 (Table 4). In the case of purslane, seed densities are relatively uniform wherever the seed was recovered. For example, all nine samples together have a purslane seed density of 2.6 seeds per liter of floated soil. The two samples that stand out in terms of purslane frequency, from Feature 9 (AS#48, n= 104) and Feature 11 (AS#49, n= 110), are also the two highest literage samples from site, with 28 and 42 liters respectively. The purslane seed densities per liter of these two high frequency samples (3.7 and 2.6) do not vary substantially from the overall density of all samples that contain purslane. That is, where purslane occurs, it was recovered in consistent, low densities that suggest natural inclusion and not utilization.

Buffalobur (*Solanum rostratum*) was recovered was recovered from seven samples (n= 108). Of the 108 recovered seeds, 95 are from Levels 2, 3, 4 and 5 of Feature 3, and the remaining seeds are from samples representing Unit 8, Level 7 and Feature 8 (Table 4). Buffalobur seeds are abundant in historic archaeological sites, but are rare or absent in prehistoric sites. It is usually categorized as an aggressive cultivated field or disturbed land weed that invaded the eastern U.S. from western North America early in the historic period (Cummings 1993:7.14).

Blackberry or raspberry (*Rubus* sp.) is common in historic sites. The fruits were eaten fresh and baked into pies and cobblers. Historic privy deposits in Kentucky are massively dominated by these seeds (Rossen 1992a). For example, approximate 400,000 blackberry seeds were recovered from the antebellum privy deposits at the Louisville Convention Center site (15Jf646), downtown Louisville, including 300,000 seeds in a single flotation sample (Rossen n.d.e.). The much lower frequencies present at 15On57 are to be expected in the more general discard contexts of the site. A total of 93 seeds was distributed at evenly low density in ten samples, including Unit 7- Level 4, Unit 8-Level 7, Levels 4 and 5 of Feature 3, and Features 6, 9, 10, 11, and 12. The highest frequencies of blackberry are present in the highest literage samples, including 28 seeds in the 28 liter Feature 9 sample and 52 seeds in the 42 liter Feature 11 sample.

Pokeweed (*Phytolacca americana*) seeds are present in low frequency, with 55 seeds distributed in nine samples representing Features 3, 6, 7, 8, 9, 10, 11, 12, and 13 (Table 4). The only substantial concentration of seeds occurred in Feature 6 where 29 seeds were recovered. Pokeweed is a common intrusive weed, and its greens are edible and remain a popular folk delicacy in the southern U.S. The berries, however, are inedible, and it is thus unclear whether the recovered seeds represent a weedy intrusion, a utilized plant, or both.

Goosegrass (*Eleusine indica*) is a probable natural inclusion in the site collection. A total of 46 seeds are distributed in five samples. The plant has no known economic uses, and nowhere does the density reach one seed per liter of soil.

The remaining seed species are represented in only trace amounts ranging from 1 to 6 total seeds (Table 3). Smartweed or knotweed (*Polygonum* sp., n= 6), elderberry (*Sambucus canadensis*, n= 2), sweetclover (*Melilotus* sp., n= 2), gilia (*Gilia* sp., n= 2), bayberry (*Myrica pensylvanica*, n= 1), morning glory (*Ipomoea lacunosa*, n= 1), sunflower? (*Helianthus* sp.?, n= 1), small-seeded nightshade (*Solanum* sp. cf. *americanum*, n= 1), and grass (Gramineae) are all weedy plants that may have grown naturally at the site during its historic occupation. Of these plants, elderberry, sunflower, and small-seeded nightshade are edible and occur in some historic sites as probable economic plants. The present frequencies are, however, too small to reach any conclusion about utilization in this case.

Discussion

The plant remains from Site 15On57 raise questions about historic plant use in 19th century Kentucky, but also highlight many of the general difficulties in performing archaeobotanical research at historic sites. Aside from privy contexts, low seed frequencies in historic sites can be difficult to interpret. Historic sites are particularly prone to intrusion by weedy plants, many of which have potential economic uses. Even consideration of seed densities per liter of floated soil may not provide definitive answers to whether particular species were historically utilized or not (Holt 1991). The tendency is for analytical conservatism, with possible utilized plants being disregarded as intrusions. At Site 15On57, high frequency plants like chenopod and purslane, and low frequency plants such as pokeweed and elderberry fall into a gray interpretive zone that cannot be resolved without associated privy contexts.

The wood remains, both carbonized and desiccated, provide the most reliable evidence. The wood species profile is so distinctive from typical prehistoric wood profiles that it must reflect historic wood selection and use. This site underscores the difference between Native American and Euro-American wood preferences. Yellow poplar and pine were preferred by settlers as building species. The amount of pine in central Kentucky must have been greatly augmented as Euro-American settlers cleared the native forests and secondary species like pine colonized disturbed areas. Other species such as redgum and American holly were rare prehistorically but were preferred as ornamental trees by settlers. The primary native species such as hickories and the white oak group, which heavily dominate prehistoric collections, are represented here in only minor percentages.

Beyond the wood collection, we must consider which plants among the 17 species and 1933 seeds were economically used. Among these plants, the emerging case for the consistent and widespread historic utilization of gourds is most compelling. Despite the fragile nature of

gourd rind and the difficulties in recovery, gourd is being recovered from many Kentucky historic sites, domestic and military, where water flotation is used (Rossen n.d.a., n.d.b., n.d.c.).

On the basis of high frequencies and irregular density per liter of soil, a strong case should be made for chenopod. Is it possible that chenopod was gathered and utilized in the 19th century? There are no historic references to the Euro-American use of this time-honored Native American cultigen. Elsewhere, however, historic plant collections clearly show the direct transfer of plants between Native American and Euro-American people. For example, corn recovered from the earliest (ca. 1790s) deposits from Site 15Lo168, a Euro-American homestead in western Kentucky, is virtually indistinguishable from Late Prehistoric varieties (Rossen 1995), and we know from sites like the Baber Motel (15McL137) of the localized Kentucky transfer of *Phaseolus* beans (Rossen n.d.f.). Why wouldn't Euro-Americans situationally use other, lower-rank Native American plants? It is apparent, however, that even if chenopod was utilized at 15On57, it was not cultivated, because the recovered carbonized specimens retained none of the specialized morphological traits of prehistoric cultivated chenopod.

Other plants with economic uses such as pokeweed, elderberry, sunflower, and small-seeded nightshade appear to have been used at some historic sites, but their low frequencies and densities here are unconvincing. Certain plants like goosegrass are certain weedy intruders.

The issues raised here can be resolved with more water flotation recovery of plants from historic sites. Kentucky is already a leader in this form of research. Sites with both privy and general discard contexts from contemporary occupations may enable researchers to clarify 19th century historic plant use patterns and practices. From comparative samples, we will, for example, better understand how the concentrated economic plant deposition of privies compares with sparser discard contexts like those of Site 15On57. In this regard, we may come to understand the plant materials described here more completely as historic archaeobotanical research results accumulate.

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Table 4. Botanical remains from Site 15On57 by sample (Phase II).

sample	*species*	*freq*	*gm wt*
Feature 2 Unit 1, Level 6 AS#2, 1 liter	*empty*		
Feature 2 Unit 1, Level 7 AS#3, 2¾ liters	wood (unidentified)	5	.0
Feature 2 Unit 1, Level 7 AS#4, 3½ liters	wood (yellow poplar)	1	.0
Feature 3 Unit 6, Level 2 AS#5, 7¼ liters	wood (mulberry, hickory, soft maple, pine, yellow poplar)	457	4.7
	chenopod (*Chenopodium* sp.)	212	---
	buffalobur (*Solanum rostratum*)	28	---
	smartweed (*Polygonum* sp.)	2	---
	unidentified-general	7	.0
Feature 3 Unit 6, Level 4 AS#6, 4 liters	wood (yellow poplar)	637	7.2
	chenopod (*Chenopodium* sp.)	306	---
	buffalobur (*Solanum rostratum*)	24	---
	blackberry (*Rubus* sp.)	1	---
	unidentified-general	8	.0
Feature 3 Unit 6, Level 5 AS#8, 3½ liters	wood (redgum)	324	6.1
	chenopod (*Chenopodium* sp.)	133	---
	buffalobur (*Solanum rostratum*)	11	---
	blackberry (*Rubus* sp.)	1	---
	unidentified-seeds	2	---
Feature 3 Unit 8, Level 3 AS#21, 1 liter	wood (white oak group, eastern redcedar, black walnut, unidentified)	99	1.1
	chenopod (*Chenopodium* sp.)	78	---
	buffalobur (*Solanum rostratum*)	8	---
	morning glory (*Ipomoea lacunosa*)	1	---
	unidentified-seed	1	---
Feature 3 Unit 8, Level 5 AS#22, 2½ liters	wood (red oak group)	408	11.3
	chenopod (*Chenopodium* sp.)	298	---
	buffalobur (*Solanum rostratum*)	24	---
	gilia (*Gilia* sp.)	2	---
	goosegrass (*Eleusine indica*)	2	---
	blackberry/ raspberry (*Rubus* sp.)	2	---
	knotweed (*Polygonum* sp.)	1	---
	unidentified-general	1	.0
	unidentified-seeds	5	---

Table 4. Botanical remains from Site 15On57 by sample (Phase II) (continued).

sample	*species*	*freq*	*gm wt*
Feature 4 Level 3 AS#9, 1½ liters	wood (unidentified) chenopod (*Chenopodium* sp.) grass (Gramineae)	5 1 1	.0 --- ---
Feature 4 Level 3 AS#10, 2 liters	wood (unidentifiable)	3	.0
Feature 4 Level 3 AS#11, 2 liters	wood (white ash, unidentified) black walnut (*Juglans nigra*)	7 1	.1 .0
Feature 4 Unit 7, Level 6 AS#20, 1 liter	*empty*		
Unit 8, Level 2 AS#12, 3 liters	wood (hickory, unidentified)	7	.1
Test Unit 1, Level 9 AS#13, 2 liters	*empty*		
Test Unit 1, Level 9 AS#14, 2 liters	wood (beech)	4	.0
Test Unit 1, Level 9 AS#15, 2 liters	wood (unidentified)	2	.0
Test Unit 1, Level 9 AS#16, 2 liters	wood (unidentified) gourd - rind (*Lagenaria* sp.)	2 1	.0 .0
Unit 1, Level 13 AS#17, 2½ liters	wood (American chestnut) unidentified-general	31 2	.7 .0
Unit 7, Level 4 AS#18, 3 liters	wood (white oak group, unidentified) sunflower? (*Helianthus*?) blackberry/ raspberry (*Rubus* sp.) unidentified-seeds	9 1 1 3	.0 --- --- ---
Unit 8, Level 7 AS#23, 2½ liters	wood (soft maple, American holly) chenopod (*Chenopodium* sp.) buffalobur (*Solanum rostratum*) blackberry (*Rubus* sp.) smartweed (*Polygonum aviculare*) unidentified-seeds	343 137 11 1 1 2	15.3 --- --- --- --- ---

Table 4. Botanical remains from Site 15On57 by sample (Phase III).

sample	*species*	*freq*	*gm wt*
Feature 3	wood (beech 15%, white oak group 5%,	42	.2
AS#46	unidentified 80%)		
3-34 cmbd	purslane (*Portulaca* sp.)	32	---
16 liters	goosegrass (*Eleusine indica*)	15	---
	chenopod (*Chenopodium* sp.)	11	---
	gourd - rind (*Lagenaria* sp.)	2	.0
	pokeweed (*Phytolacca americana*)	1	---
	unidentified - seed (deformed fragment)	1	---
	unidentified - general	1	.0
Feature 5	wood (unidentified - small)	5	.0
AS#53	purslane (*Portulaca* sp.)	3	.0
3-37 cmbd			
4 liters			
Feature 6	wood - desiccated (pine beam/post)	---	59.7
AS#51	wood - carbonized (Am chestnut 10%, ash 10%,	229	2.5
0-62 cmbs	beech, hard maple 5%, hickory 5%, pine 5%,		
26 liters	unidentified 55%)		
	pokeweed (*Phytolacca americana*)	29	---
	gourd - rind (*Lagenaria* sp.)	19	.1
	blackberry/ raspberry (*Rubus* sp.)	1	---
	chenopod (*Chenopodium* sp.)	1	---
	unidentified - general	3	.0
	unidentified - seed fragment	1	---
Feature 7	wood - carbonized (white oak group 96%, beech 2%, 83	.9	
AS#52	bark 2%)		
0-51 cmbd	wood - desiccated (pine beam/post)	40	.8
14 liters	chenopod (*Chenopodium* sp.)	1	---
	bayberry (*Myrica pensylvanica*)	1	---
	pokeweed (*Phytolacca americana*)	1	---
	unidentified - seed	1	---
Feature 8	wood - desiccated (pine)	350	6.5
AS#44	wood - carbonized (yellow poplar)	43	.5
6 liters	chenopod (*Chenopodium* sp.)	14	---
	pokeweed (*Phytolacca americana*)	8	---
	purslane (*Portulaca* sp.)	5	---
	buffalobur (*Solanum rostratum*)	2	---
	knotweed (*Polygonum* sp.)	2	---
	gourd - rind (*Lagenaria* sp.)	2	.0

Table 4. Botanical remains from Site 15On57 by sample (Phase III) (continued).

sample	*species*	*freq*	*gm wt*
Feature 9	wood (American elm 30%, white oak group 10%,	84	.8
AS#48	unidentified 60%)		
7-31 cmbd	purslane (*Phytolacca* sp.)	104	---
28 liters	blackberry/ raspberry (*Rubus* sp.)	28	---
	goosegrass (*Eleusine indica*)	25	---
	gourd - rind (*Lagenaria* ap.)	3	.0
	pokeweed (*Phytolacca americana*)	2	---
	elderberry (*Sambucus canadensis*)	1	---
	small-seeded nightshade (*Solanum* sp. cf. *americanum*)	1	---
	unidentified - seeds	4	---
	unidentified - general	2	.0
	unidentified - nutshell (Juglandaceae)	1	.0
Feature 10	wood (American elm 30%, hard maple 20%,	128	1.5
AS#50	unidentified 50%)		
0-44 cmbd	purslane (*Portulaca* sp.)	22	---
24 liters	chenopod (*Chenopodium* sp.)	14	---
	pokeweed (*Phytolacca americana*)	8	---
	blackberry/ raspberry (*Rubus* sp.)	4	---
	gourd - rind (*Lagenaria* sp.)	3	.0
	goosegrass (*Eleusine indica*)	3	---
Feature 11	wood - carbonized (unidentified - small)	42	.3
AS#49	wood - desiccated (pine)	18	.1
0-50 cmbs	purslane (*Portulaca* sp.)	110	---
42 liters	blackberry/ raspberry (*Rubus* sp.)	52	---
	fungus - carbonized	15	.0
	chenopod (*Chenopodium* sp.)	3	---
	sweetclover (*Melilotus* sp.)	2	---
	pokeweed (*Phytolacca americana*)	2	---
	elderberry (*Sambucus canadensis*)	1	---
	goosegrass (*Eleusine indica*)	1	---
	unidentified - nutshell (Juglandaceae)	2	.0
	unidentified - seed	1	---
Feature 12	wood (beech 2%, unidentified - small 98%)	53	3.7
AS#45	purslane (*Portulaca* sp.)	42	---
0-14 cmbd	chenopod (*Chenopodium* sp.)	16	---
7 liters	gourd - rind (*Lagenaria* sp.)	4	---
	blackberry/ raspberry (*Rubus* sp.)	2	---
	pokeweed (*Phytolacca americana*)	2	---

Table 4. Botanical remains from Site 15On57 by sample (Phase III) (continued).

sample	*species*	*freq*	*gm wt*
Feature 13	wood (white oak group)	1	.0
AS#47	purslane (*Portulaca* sp.)	27	---
8-19 cmbd	chenopod (*Chenopodium* sp.)	16	---
4 liters	pokeweed (*Phytolacca americana*)	2	---
Feature 14	wood (unidentified - small)	2	.0
AS#43	purslane (*Portulaca* sp.)	2	---
3 liters			

Table 2. Wood charcoal from Site 15On57.

species	***species***	***pct***	***gm wt***	***pct***
yellow poplar (*Liriodendron tulipifera*)	772	26.3	8.6	14.6
pine (*Pinus* sp.)	510	17.4	8.4	14.2
red oak group (*Quercus* sp.)	408	13.9	11.3	19.1
soft maple (*Acer* sp.)	331	11.3	11.6	19.6
redgum (*Liquidambar styraciflua*)	324	11.0	6.1	10.3
white oak group (*Quercus* sp.)	170	5.8	4.8	8.1
American holly (*Ilex opaca*)	103	3.5	4.6	7.8
mulberry (*Morus rubra*)	93	3.2	1.0	1.7
American chestnut (*Castanea dentata*)	54	1.8	.9	1.5
eastern redcedar (*Juniperus virginiana*)	50	1.7	.6	1.0
hard maple (*Acer* sp.)	37	1.3	.4	.7
beech (*Fagus grandifolia*)	36	1.2	.3	.5
white ash (*Fraxinus americana*)	30	1.0	.3	.5
hickory (*Carya* sp.)	11	.4	.1	.2
black walnut (*Juglans nigra*)	5	.2	.1	.2
Total identified wood	2934	100.0	59.1	100.0
Unidentified (including bark)	381		3.6	
TOTALS	3315		62.7	

Table 3. Non-wood archaeobotanical remains recovered from Site 15On57.

species	*freq*	*ubiquity*
seeds:		
chenopod (*Chenopodium* sp.)	1241	48.4
purslane (*Portulaca* sp.)	347	29.0
buffalobur (*Solanum rostratum*)	108	22.6
blackberry/ raspberry (*Rubus* sp.)	93	32.3
pokeweed (*Phytolacca americana*)	55	29.0
goosegrass (*Eleusine indica*)	46	16.1
smartweed, knotweed (*Polygonum* sp.)	6	12.9
elderberry (*Sambucus canadensis*)	2	6.5
sweetclover (*Melilotus* sp.)	2	3.2
gilia (*Gilia* sp.)	2	3.2
bayberry (*Myrica pensylvanica*)	1	3.2
morning glory (*Ipomoea lacunosa*)	1	3.2
sunflower? (*Helianthus* sp.?)	1	3.2
small-seeded nightshade (*Solanum* sp. cf. *americanum*)	1	3.2
grass (Gramineae)	1	3.2
unidentified seeds	26	
Total seeds	1933	
other plant remains:		
gourd - rind (*Lagenaria* sp.)	34	22.6
carbonized fungus	15	3.2
black walnut - nutshell (*Juglans nigra*)	1	3.2
unidentified - nutshell (Juglandaceae)	3	---

Appendix B

Geomorphology of Sites 15On55 and 15On57

By

Sarah Sherwood, Ph.D.

Geomorphology of Sites 15On55 and 15On57

Introduction

In conjunction with the 15On55 and 15On57 Phase III archaeological evaluation an on-site geoarchaeological examination was conducted January 24, 1997. The purpose of the brief study was to describe the local geomorphology and soils in the context of the archaeological deposits and to determine the nature of localized deep stratigraphic features identified across the site area.

Local Geology

Site 15On55 and 15On57 are located within the Outer Blue Grass region of north-central Kentucky. The local topography is the result of the weathering of horizontal Middle and Upper Ordovician interbedded limestone and shale formations. The sites are situated on a second terrace of the west bank of Cedar Creek. The creek has down cut through the Kope, Clays Ferry and Lexington Limestone formations to form a narrow valley approximately 1000 ft wide. This second order stream originates approximately two miles to the south from intermittent third order streams draining the limestone and shale uplands. Approximately .5 miles north, downstream from the project area, Cedar Creek is intersected by Sawbridge Creek and continues to the west ca. 1.5 miles cutting though a gap in the uplands at Monterey to enter the Craddock Bottom and feed into the Kentucky River.

Cedar Creek is restricted to the east by a steep bluff of interbedded limestone and shale. The west creek bank is made up of a narrow modern floodplain with low terraces, including T1, T2, and possibly a T3. The formation of these terraces appears to be determined by the differential weathering of the bedded limestone, primarily from the Grier Limestone Member of the Lexington Limestone Group (Moore 1977b). Intermittent streams drain the dissected uplands to the west and cut perpendicular across the valley floor to meet Cedar Creek. The result is an asymmetrical valley with slight “steps” cut into the bedrock. The bedrock is covered with a mixture of alluvial and colluvial deposits. The colluvial material originates in the dissected uplands to the west made up of interbedded limestone, shale and siltstone with variable grain sizes.

Local Soils

Soils in the project area are mapped as the Woolper silt loam Series (Weisenberger and Richardson 1976). This series typically consists of alluvial fans at the base of steep hills, formed in colluvium and local alluvium. The representative soil profile for the Woolper Series consists of a silt clay loam plow zone over three argillic B horizons. The B horizons consist of silty clay with increasing clay content with depth over a C horizon composed of residual and alluvial parent material. Bedrock is locally shallow, evident during the fieldwork in utility trenches, in eroded areas at the edge of the low terraces, and in the bed of Cedar Creek.

Localized lenses of gravel and stratigraphic low trench-shaped deposits were both identified within the project area. The localized lenses of poorly sorted, rounded gravel indicate past fluvial activity. The source of the gravel was not determined, however, it is suspected that this rounded chert and quartzite gravel originated from high level fluvial deposits dating to either the Pliocene or Pleistocene. These coarse fluvial deposits have been mapped throughout neighboring sections of the Kentucky River valley at elevations between 500 and 700 feet amsl (Moore 1975, 1977a, 1977b). Colluvial and fluvial processes probably eroded these high-level gravel deposits from the uplands and introduced them into the regional alluvial systems. These gravels are also evident in the channel lag deposits associated with the modern day Cedar Creek floodplain and on the T3 at the base of the uplands.

Relatively deep, dark colored (lower munsell values), anomalous sandy loam deposits were revealed in preliminary backhoe trenches (generally measuring approximately 150 cm from the surface). There is no evidence for these features on surface. They have probably been obscured through road construction and plowing from historic land use. These localized zones, well below the cultural deposits, might be attributed to two possible features on the landscape. One interpretation is that for reasons unknown, upland drainages may have become abandoned and filled with sand and silt size alluvial and colluvial deposits. Supporting this hypothesis are numerous intermittent drainages entering the creek from the west. An active drainage is currently evident in the project area between the two sites. The hypothesized original stream beds or drainage ways may have been modified due to change changing patterns and groundwater levels at the end of the Pleistocene resulting from lowering sea level and climatic oscillations.

The second possible explanation for these anomalous deposits is the localized dissolution of the Grier Limestone Member resulting in the slumping of Quaternary sediments into sink areas. Similar sinks or dolines within the region have been mapped at and colluvial deposits over time would have backfilled these localized sinks. Bioturbation could have easily obscured the presence of in filling lenses.

These anomalous deposits are determined to be the product of geological processes. There is no evidence to indicate that they might be the result of cultural activities. In order to identify the specific processes responsible for these geomorphic anomalies, systematic deep testing and physical and chemical sediment analyses would be necessary. This scale of geological analysis is not in the scope of this archaeological study. The stratigraphic positioning of these features and the development of local soils, indicates these features predate any cultural activity within the region and appear to have had little to no impact on the nature of the archaeological record.

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Appendix C

Faunal Remains Identified for Sites 15On55 and 15On57

By

Sean P. Coughlin (Phase II)

And

Judith A. Patterson (Phase III)

Table 1: Taxa Identified from 15On55 Phase II Excavations

CLASS	FAMILY	GENUS	SPECIES	NISP
B		BIRD		4
B/M		BIRD/MAMMAL		5
I	INVERTEBRATES	MUSSELL		6
M		MAMMAL		6
M		MAMMAL	M-L	76
M	CANIDAE	CANIS	SP.	1
M	CARNIVORA	CARNIVORA		1
M	CERVIDAE	ODOCOILEUS	VIRGINIANUS	3
M	LEPORIDAE	SYLVILAGUS	FLORIDANUS	1
M	SUIDAE	SUS	SCROFA	29
R	TESTUDINATA	TESTUDINATA		1

Table 2: Taxa Identified by Provenience from 15On55 Phase II Excavations

TU#	F/Z/L	CAT#	SPEC#	CLASS	FAMILY	GENUS
GS		29	1	M		MAMMAL
GS		531	1	M	SUIDAE	SUS
GS		530	1	M		MAMMAL
GS		31	1	I	INVERTEBRATES	MUSSELL
PP	101	41	1	M	SUIDAE	SUS
PP	201	137	1	B		BIRD
PP	251	185	1	M	SUIDAE	SUS
PP	262	195	1	M		MAMMAL
PP	263	196	1	M	CERVIDAE	ODOCOILEUS
PP	267	200	1	M	CERVIDAE	ODOCOILEUS
PP	268	201	1	M	CERVIDAE	ODOCOILEUS
PP	273	207	1	B/M		BIRD/MAMMAL
PP	274	208	1	I	INVERTEBRATES	MUSSELL
PP	323	249	1	M		MAMMAL
PP	329	257	1	I	INVERTEBRATES	MUSSELL
PP	340	267	1	I	INVERTEBRATES	MUSSELL
PP	341	268	1	I	INVERTEBRATES	MUSSELL
STP1	L1	276	1	M		MAMMAL
STP3	L1	292	1	M		MAMMAL
STP8	L1	318	1	M		MAMMAL
STP8	L1	318	2	M		MAMMAL
STP9	L1	333	1	M	SUIDAE	SUS
STP9	L1	332	1	B/M		BIRD/MAMMAL
STP9	L1	332	2	B/M		BIRD/MAMMAL
STP10	L1	350	1	B		BIRD
STP11	L1	366	1	M	SUIDAE	SUS
STP12	L1	378	1	M		MAMMAL

TU#	F/Z/L	CAT#	SPEC#	CLASS	FAMILY	GENUS
STP14	L1	395	1	M	CARNIVORA	CARNIVORA
STP15	L1	401	1	M		MAMMAL
STP20	L1	445	1	M		MAMMAL
STP20	L1	446	1	M		MAMMAL
STP22	L1	464	1	B/M		BIRD/MAMMAL
STP22	L1	464	1	M		MAMMAL
STP25	L1	492	1	B/M		BIRD/MAMMAL
STP27	L1	505	1	M		MAMMAL
TU1	L1	654	1	M	SUIDAE	SUS
TU1	L1	654	2	M		MAMMAL
TU1	L1	653	1	M		MAMMAL
TU1	L2	674	1	M		MAMMAL
TU1	L2	675	1	M	SUIDAE	SUS
TU1	L2	675	2	M	SUIDAE	SUS
TU1	L3	691	1	M	SUIDAE	SUS
TU1	L3	690	1	M	CANIDAE	CANIS
TU1	L3	690	2	M		MAMMAL
TU2	L1	717	1	M	SUIDAE	SUS
TU2	L1	717	2	M		MAMMAL
TU2	L1	716	1	M		MAMMAL
TU2	L2	735	1	M		MAMMAL
TU2	L2	735	2	M		MAMMAL
TU2	L2	735	3	M		MAMMAL
TU2	L2	735	4	R	TESTUDINATA	TESTUDINATA
TU2	L2	736	1	M	SUIDAE	SUS
TU2	L3	753	1	M		MAMMAL
TU2	L3	753	2	M		MAMMAL
TU2	L3	753	3	B		BIRD
TU2	L3	754	1	M	SUIDAE	SUS

TU#	F/Z/L	CAT#	SPEC#	CLASS	FAMILY	GENUS
TU2	L3	754	2	M	SUIDAE	SUS
TU3+4	F1	764	1	M		MAMMAL
TU4	L4	770	1	M		MAMMAL
TR1TU4	L3	636	1	M	LEPORIDAE	SYLVILAGUS
TR1TU4	L5	771	1	M		MAMMAL
TR1	L1	560	1	M	SUIDAE	SUS
TR1	L1	561	1	I	INVERTEBRATES	MUSSELL
TR1	L1	559	1	M		MAMMAL
TR1	L1	559	2	M		MAMMAL
TR1	L1	559	3	M		MAMMAL
TR1	L1	560	2	M	SUIDAE	SUS
TR1	L1	560	3	M	SUIDAE	SUS
TR1	L2	578	1	M		MAMMAL
TR1	L3	583	1	B		BIRD
TR1A1	L4	585	1	M		MAMMAL
TR1EXT2	L3	763	1	M		MAMMAL
TR1E-EX	L1	618	1	M		MAMMAL
TR1E-EX	L1	618	2	M		MAMMAL
TR1E-EX	L1	618	3	M		MAMMAL
TR1E-EX	L1	618	4	M		MAMMAL
TR1E-EX	L1	618	5	M		MAMMAL
TR1E-EX	L1	619	1	M	SUIDAE	SUS
TR1E-EX	L1	619	2	M	SUIDAE	SUS
TR1E-EX	L1	619	3	M	SUIDAE	SUS
TR1E-EX	L1	619	4	M		MAMMAL

Table 3: Taxa Identified from 15On57 Phase II Excavations

CLASS	FAMILY	GENUS	SPECIES	NISP
M		MAMMAL		6
M		MAMMAL	M-L	7
M		MAMMAL	MEDIUM	1
M		MAMMAL	S-M	3
M	BOVIDAE	BOS	TAURUS	3
M	CERVIDAE	ODOCOILEUS	VIRGINIANUS	2
M	LEPORIDAE	SYLVILAGUS	FLORIDANUS	1
M	SCIURIDAE	MARMOTA	MONAX	3
M	SUIDAE	SUS	SCROFA	3

Table 4: Taxa Indentified by Provenience from 15On57 Phase III Excavations

TU#	F/Z/L	CAT#	SPEC#	CLASS	FAMILY	GENUS
6	L1	22	1	M		MAMMAL
PP	102	102	1	M	LEPORIDAE	SYLVILAGUS
1	L8	11	1	M		MAMMAL
1	L5	8	1	M	BOVIDAE	BOS
1	L1	2	1	M	SUIDAE	SUS
1	L2	5	1	M	SUIDAE	SUS
8	L2	58	1	M	SUIDAE	SUS
1	L3	7	1	M	BOVIDAE	BOS
1	L3	7	2	M	BOVIDAE	BOS
1	L3	7	3	M		MAMMAL
STP1	L1	82	1	M	SCIURIDAE	MARMOTA
STP1	L1	82	2	M	SCIURIDAE	MARMOTA
STP1	L1	82	3	M		MAMMAL
1	F2	12	1	M	CERVIDAE	ODOCOILEUS
1	F2	12	1.1	M	CERVIDAE	ODOCOILEUS
8	L3	62	1	M		MAMMAL
1	L6	9	1	M		MAMMAL
1	L6	9	2	M		MAMMAL
10	L1	77	1	M		MAMMAL
8	L2	57	1	M		MAMMAL
1	L9	13	1	M		MAMMAL

Faunal Reamins Identified for 15On55 and 15On57

Methodology Used

Faunal remains were identified using the Vertebrae Comparative collection housed in the Department of Anthropology at the University of Tennessee. Bones were identified to the lowest taxonomic category possible. Bones were also classified into a size catagory. Large mammals were charactierized by domestic cattle sized remains. Medium sized mammals were represented by domestic pig, sheep, or goat sized remains. Small sized remains were characterized by squirrel or rabbit sized remains. Mice, rats, and voles represented the very small mammals. Small birds were classified as chicken sized. Remains not attributable to any class were deemed unidentifiable.

Table 1: Taxa Identified from 15ON55 Phase III Excavations

Taxa	NISP	Weight (g)
Invertebrates		
Mollusca	20	17.6
Total for Invertebrate class	20	17.6
Bird/Mammal		
Bird/Mammal	3	0.9
Total for Bird/Mammal class	3	0.9
Mammals		
Indeterminate Mammal	89	50.6
Indeterminate Very Small Mammal	3	0.5
Indeterminate Medium Mammal	75	94.6
Cricetidae (mice, rats, and voles)	2	0.2
Sus scrofa (domestic pig)	69	65.4
Bos taurus (domestic cow)	2	5.1
Caprine (sheep or goat)	1	6.8
Total for Mammal class	240	216.7
Unidentifiable		
Unidentifiable	46	15.8
Total for Unidentifiable class	46	15.8
Total for Phase III Excavations (15ON55)	**313**	**257.5**

Table 2: Taxa Identified by Provenience from 15ON55 Phase III Excavations

Bag	Provenience	Species	NISP	Weight (g)
STP's				
039	STP21 L-1 (0-30 cm)	Unidentifiable	1	0.4
		TOTAL	1	0.4
131	STP 30 Z-I L-1 (0-20 cm)	*Sus scrofa* (domestic pig)	1	0.2
		TOTAL	1	0.2
132	STP 31 Z-I L-1 (0-30 cm)	*Sus scrofa* (domestic pig)	1	0.3
		Indeterminate Medium Mammal	5	4.3
		TOTAL	6	4.6
133	STP 32 Z-I L-1 (0-25 cm)	Indeterminate Mammal	1	1.0
		TOTAL	1	1.0
136	STP 34 Z-I L-1 (0-20 cm)	*Sus scrofa* (domestic pig)	1	0.8
		Indeterminate Medium Mammal	2	5.4
137	L-2 (20-30 cm)	*Sus scrofa* (domestic pig)	1	0.2
		TOTAL	4	6.4
142	STP 36 Z-I L-1 (0-20 cm)	*Sus scrofa* (domestic pig)	2	1.9
		Indeterminate Mammal	2	1.3
		TOTAL	4	3.2
145	STP 37 Z-I L-1 (0-20 cm)	*Sus scrofa* (domestic pig)	1	0.4
		Indeterminate Mammal	3	1.4
146	L-2 (20-40 cm)	Indeterminate Mammal	4	0.9
		TOTAL	8	1.7
159	STP 39 Z-I L-1 (0-20 cm)	*Sus scrofa* (domestic pig)	3	3.5
		Indeterminate Mammal	2	0.6
160	L-2 (20-40 cm)	Indeterminate Mammal	1	0.3
		TOTAL	6	4.4

Table 2: Cont.

Bag	Provenience	Species	NISP	Weight (g)
148	STP 40 Z-I L-1 (0-20)	Unidentifiable	1	0.3
		TOTAL	1	0.3
164	STP 48 Z-1 L-1	*Sus scrofa* (domestic pig)	1	0.9
		TOTAL	1	0.9
166	STP 49 Z-1 L-1 (0-20 cm)	Sus scrofa (domestic pig)	1	1.6
167	L-2 (20-29 cm)	Sus scrofa (domestic pig)	2	4.0
		TOTAL	3	5.6
Test Units				
176	TU 5 Z-I L-1 (11-22 cm)	Indeterminate Mammal Unidentifiable	1 2	0.6 0.6
177	L-3	Indeterminate Medium Mammal	1	0.9
		TOTAL	4	1.1
173	TU 6 Z-I L-2 (6-10 cm)	Indeterminate Mammal	1	1.4
174	L-3 (10-20 cm)	Indeterminate Mammal	4	4.7
180	L-4 (20-23 cm)	Unidentifiable	1	0.4
		TOTAL	6	6.5
181	TU 7 Z-I L-1 (3-10 cm)	*Sus scrofa* (domestic pig) Unidentifiable	1 2	0.5 1.3
182	L-2 (10-20 cm)	*Sus scrofa* (domestic pig)	1	0.6
		Indeterminate Mollusca	1	0.5
		Unidentifiable	2	0.9
124	L-2 (20-30 cm)	*Sus scrofa* (domestic pig)	1	0.8
		Indeterminate Mammal	1	0.3
		TOTAL	9	4.9
185	TU 8 Z-I L-2 (10-20 cm)	*Sus scrofa* (domestic pig)	1	1.4
		TOTAL	1	1.4
196	TU 9 Z-I L-2 (10-20 cm)	*Sus scrofa* (domestic pig) Indeterminate Mammal	1 2	0.3 0.7
		TOTAL	3	1.0

Table 2: Cont.

Bag	Provenience	Species	NISP	Weight (g)
198	TU 10 Z-I	*Sus scrofa* (domestic pig)	1	4.7
	L-1 (0-10 cm)	Unidentifiable	1	1.5
199	L-2 (10-20 cm)	*Sus scrofa* (domestic pig)	1	1.0
		TOTAL	3	7.2
211	TU 12 Z-I	*Sus scrofa* (domestic pig)	1	0.7
	L-1 (2-25 cm)	Indeterminate Mollusca	1	0.7
		Indeterminate Mammal	6	3.0
213	L-1 / Feat. 3	Indeterminate Mammal	2	3.0
	(26-43 cm)	TOTAL	10	7.4
217	TU 15 Z-I	Indeterminate Mammal	4	5.1
	L-1 (0-30 cm)	TOTAL	4	5.1
219	TU 18 Z-I	*Sus scrofa* (domestic pig)	2	1.1
	L-1 (0-30 cm)	Indeterminate Medium Mammal	1	2.1
		TOTAL	3	3.2
224	TU 19 Z-I	*Sus scrofa* (domestic pig)	4	4.2
	(0-33 cm)	Indeterminate Mollusca	4	0.9
		Indeterminate Medium Mammal	8	6.0
227	TU 20 Z-IA	*Sus scrofa* (domestic pig)	1	0.5
	(0-28 cm)	Unidentifiable	3	0.7
		TOTAL	4	1.2
232	TU 21 Z-I	*Sus scrofa* (domestic pig)	7	7.0
	L-1 (0-39 cm)	Indeterminate Mollusca	3	6.8
		Indeterminate Mammal	20	12.5
		TOTAL	30	26.3
231	TU 22 Z-IA	*Sus scrofa* (domestic pig)	3	2.9
	(0-31 cm)	Indeterminate Medium Mammal	8	7.3
		TOTAL	11	10.2
235	TU 23 Z-I	*Sus scrofa* (domestic pig)	1	1.1
	(0-32 cm)	Indeterminate Mollusca	3	3.6
		Indeterminate Mammal	8	3.4
		Indeterminate Medium Mammal	2	2.8
		TOTAL	14	10.9

Table 2: Cont.

Bag	Provenience	Species	NISP	Weight (g)
238	TU 24 Z-IA	*Sus scrofa* (domestic pig)	2	0.8
	L-1 (0-36 cm)	Indeterminate Medium Mammal	11	8.9
		TOTAL	13	9.7
257	TU 24 Z-IA	*Sus scrofa* (domestic pig)	3	1.6
	L-1 (0-27 cm)	Indeterminate Mammal	9	3.8
		Indeterminate Medium Mammal	1	0.7
		TOTAL	13	6.1
242	TU 25 Z-I	*Sus scrofa* (domestic pig)	1	0.3
	L-1 (0-26 cm)	Indeterminate Mollusca	1	0.4
		Indeterminate Mammal	1	0.4
		Indeterminate Medium Mammal	1	0.8
		TOTAL	4	1.6
243	TU 26 Z-IA	*Sus scrofa* (domestic pig)	4	2.1
	L-1 (0-37 cm)	Indeterminate Medium Mammal	11	9.0
		TOTAL	15	11.1
250	TU 27 Z-IA L-1 (0-41 cm)	Indeterminate Mollusca	1	0.2
		Unidentifiable	10	3.4
		TOTAL	11	3.6
253	TU 28 Z-IA	*Sus scrofa* (domestic pig)	2	0.7
	L-1 (0-28 cm)	Indeterminate Mammal	4	0.9
		TOTAL	6	1.6
259	TU 29 Z-II (37-57 cm)	Indeterminate Medium Mammal	1	1.3
		TOTAL	1	1.3
260	TU 30 Z-IA	*Sus scrofa* (domestic pig)	1	0.5
	L-1 (0-28 cm)	Indeterminate Bird/Mammal	2	0.5
		TOTAL	3	1.0
264	TU 31 Z-IA	*Sus scrofa* (domestic pig)	6	5.6
	L-1 (0-36 cm)	Indeterminate Mollusca	2	0.2
		Indeterminate Mammal	4	1.5
		Indeterminate	3	10.2

Table 2: Cont.

Bag	Provenience	Species	NISP	Weight (g)
		Medium Mammal		
		TOTAL	18	17.5
220	988N1006E L-1 (0-25 cm)	Indeterminate Mollusca	1	0.3
		TOTAL	1	0.3
221	988N1007E L-1 (0-25 cm)	Indeterminate Mammal	1	0.5
		TOTAL	1	0.5
222	988N1008E L-1 (0-25 cm)	*Bos taurus* (domestic cow)	1	4.3
		TOTAL	1	4.3
230	Telephone Line Trench L-1 (0-35 cm)	Indeterminate Mollusca	1	1.8
		Indeterminate Mammal	3	4.5
		TOTAL	4	6.3
249	Feature 2A (30 cm)	Indeterminate Mollusca	1	0.8
		TOTAL	1	0.8
246	Feature 2B (17-48 cm)	*Bos taurus* (domestic cow)	1	0.8
		TOTAL	1	0.8
247	Feature 2B W ½ (17-50 cm)	Indeterminate Medium Mammal	4	3.7
		TOTAL	4	3.7
267	Feature 4- General Matrix	*Sus scrofa* (domestic pig)	5	6.8
		Indeterminant Mammal	1	0.3
		Indeterminant Medium Mammal	1	2.4
		Indeterminant Small Aves	1	0.7
		TOTAL	8	10.2
273	Feature 5 N ½ (0-42 cm)	Indeterminate Medium Mammal	7	13.3
		Unidentifiable	2	0.7
274	Feature 5 S ½	*Sus scrofa* (domestic pig)	1	1.6
		Indeterminate Mammal	4	3.6
		Indeterminate Medium Mammal	1	2.8

Table 2: Cont.

Bag	Provenience	Species	NISP	Weight (g)
275	Feature 5	Indeterminate Medium Mammal	2	3.8
276	Feature 5- GS	*Sus scrofa* (domestic pig)	1	7.0
		Indeterminate Medium Mammal	1	1.2
		TOTAL	19	34.0
Other				
000	General Surface	*Sus scrofa* (domestic pig)	1	0.4
000	Surface/Backhoe	Caprine (sheep or goat)	1	6.8
000	General Surface	Indeterminate Mollusca	1	1.4
		TOTAL	3	8.6
Float				
AS# 34	TU 6/ Feature 1 (40-61 cm)	Indeterminate Medium Mammal	4	7.7
		TOTAL	4	7.7
AS#35	Feature 4	Cricetidae (mice, rats, and voles)	2	0.2
		Indeterminate Very Small Mammal	3	0.1
		Unidentifiable	10	1.0
		TOTAL	15	1.3
Totals for Phase III Excavations (15ON55)			**313**	**257.5**

Table 3: Taxa Identified from 15ON57 Phase III Excavations

Taxa	NISP	Weight (g)
Bird/Mammal		
Bird/Mammal	6	4.4
Total for Bird/Mammal class	6	4.4
Mammals		
Indeterminate Very Small Mammal	1	0.1
Cricetidae (mice, rats, and voles)	4	0.6
Sus scrofa (domestic pig)	1	6.5
Bos taurus (domestic cow)	2	638.3
Total for Mammal class	12	646.3
Unidentifiable		
Unidentifiable	13	1.1
Total for Unidentifiable class	13	1.1
Total for Phase III Excavations (15ON57)	**27**	**645.3**

Table 4: Taxa Identified by Provenience from 15ON57 Phase III Excavations

Bag	Provenience	Species	NISP	Weight (g)
270	Feature 15	*Bos taurus* (domestic cow)	1	410.3
		TOTAL	1	410.3

Float Samples

AS# 43	Feature 14- N ½ (0-5 cm)	*Bos taurus* (domestic cow)	1	228.0
		TOTAL	1	228.0
AS# 45	Feature 12- E ½ (0-14 cm)	Indeterminate Bird/Mammal	6	4.40
		TOTAL	6	4.40
AS# 48	Feature 9- W ½ (7-31 cm)	Cricetidae (mice, rats, and voles)	3	0.5
		Unidentifiable	10	0.9
		TOTAL	13	1.4
AS# 49	Feature 11- W ½ (0-50 cm)	*Sus scrofa* (domestic pig)	1	0.8
		Unidentifiable	3	0.2
		TOTAL	4	1.0
AS# 50	Feature 10- S ½ (0-44 cm)	Cricetidae (mice, rats, and voles)	1	0.1
		TOTAL	1	0.1
AS# 52	Feature 7- W ½ (0-51 cm)	Indeterminate Very Small Mammal	1	0.1
		TOTAL	1	0.1
Totals for Phase III excavations (15ON57)			**27**	**645.3**

APPENDIX D -
LABORATORY METHOD,
PREHISTORIC ANALYSIS
AND
CATALOG OF HISTORIC AND PREHISTORIC ARTIFACTS
AT
15ON55
&
15ON57

LABORATORY METHODS

Artifacts recovered during field investigations were brought to the WSA Archaeology Laboratory in Lexington, Kentucky for cataloging and initial analysis. Materials were washed and sorted by general material type (i.e. Historic vs. Prehistoric). The artifacts were then analyzed according to specific methods. Historic artifacts were washed and sorted into major material categories. These were then cataloged according to the system of artifact-function association modified from South (1977). All artifacts were assigned to the functional groups (kitchen, architecture), then to a material class (e.g. ceramic, glass, metal), to a type (e.g., base of bottle, jar lip), and to a subtype (e.g., color, decoration type). In the following discussion, each of the major categories of historic artifacts is defined.

Historic Artifacts

KITCHEN GROUP

This group consists of artifacts used in the preparation, consumption, and/or storage of foods and beverages. For the most part this group comprises container glass and ceramics. As most of these are manufactured, there is significant variation in decorative style and manufacturing techniques over time. This chronological variation forms the basis for the assignment of individual sites to historic time periods.

Ceramics

Domestic ceramics are one of the most important chronologically diagnostic artifact categories on an archaeological site. In addition, these materials offer important clues to functional and social status variation among sites and cultural or ethnic components. For this reason, the ceramics are described in detail in the following chapter for each site. Typically, ceramics are divided into two major groups: refined and unrefined earthenware. Refined earthenware were primarily used as serving vessels such as dinner and tea services, or toiletry items. Refined wares treated here include porcelain, pearlware, whiteware, and ironstone. Unrefined earthenware were used for food preparation and storage, mixing bowls, churns, milk pans, etc. Unrefined wares treated here include redware, stoneware, and yellow ware.

Porcelains are vitreous white-paste, usually glazed, wares of a variety of compositions. Porcelain was a very expensive ware until the late nineteenth century, and therefore typically is rare on sites. Moreover, porcelain on nineteenth century sites can include pieces made in North America,

Great Britain, Continental Europe, China, and Japan. Porcelains are divided into two basic types, hard paste and soft paste, with several varieties of each paste type. The difference between these is body composition and firing temperature. Hard paste porcelains are composed of kaolin and feldspathic clays and fired at a high temperature. Chinese export porcelain is a hard paste variety

that can be readily distinguished from other European and Japanese hard pastes. The major period of Chinese export trade to America was ca 1784 - 1820 and declined sharply after 1830 (Palmer 1983:25). Painted underglaze wares were exported to England until 1840 and painted overglaze enamels were exported into the 1820s (Palmer 1983:16). Bone china is a type of soft paste porcelain that has been continuously produced since 1794. This ware is composed of feldspathic clays and calcined cattle bone fired at a lower temperature than hard paste porcelains. It appears with many decorative preparations including underglaze blue painted, overglaze polychrome painted, gilding, transfer printing, lustre and decals. Because of porcelains long history of manufacture, it has limited potential as a temporal indicator (Majewski and O'Brien 1987:124-127).

Creamware is a non-vitreous white-paste earthenware which has a cream colored glaze. Creamware was developed in England ca. 1762, and first exported to the United States in 1769 (Noel-Hume 1978:125). By the end of the eighteenth century creamware dominated much of the American market, but was replaced by pearlware in popularity by 1810. A variety of decorative techniques can be found on creamware and include over and underglaze transfer printing, annular or dipped preparations, over and underglaze hand painting, and molding.

Pearlware are non-vitreous and semi-vitreous, white-pasted earthenware which have a light blue-green tint created by the addition of cobalt to a clear lead glaze. Pearlware was developed in England ca. 1780 and had become the most common tableware in the United States by ca. 1810. Although pearlware may have been manufactured until the mid-1800s, its popularity had declined by 1840 (Majewski and O'Brien 1987:118-119; Noel Hume 1978:128-132; Price 1982:10-11). Pearlware was usually decorated in some way. Decorative types include over and underglaze transfer printing, over and underglaze hand painting, annular or dipped preparations, edge decorated and molded varieties. Because of the persistence of pearlware over time and its overall similarity to whiteware, it is more reliable to date sherds based on decorative technique and color. Before 1828 potters were unable to use bright colors under the glaze. Consequently, sherds having pink, red, purple, bright green, light blue, and light yellow date after 1828 and are considered whiteware. The pearlware color palette consisted of autumn colors like olive green, dark yellow, bronze, deep blue, black, and brown.

Whitewares are non-vitreous and semi-vitreous, white-paste earthenware usually having a clear, colorless glaze. Whitewares were first manufactured in England ca. 1800, had become popular by 1820, remained common throughout the 1800s, and are still being manufactured today. The period of greatest popularity of whiteware was 1830 to 1890 (Majewski and O'Brien 1987:119-125; Miller 1980:16-17; Noel Hume 1978:130-131; Price 1982). Whiteware occurs in virtually every decorative type that was available in the nineteenth century and decoration type and style can be used as relative temporal indicators.

Ironstone refers to a semi-vitreous white-paste ware that contains china stone (petunse). Charles Mason began producing "Mason's Ironstone China" in England in 1813. Mason claimed his ware contained iron slag. English ironstone began appearing on American sites during the 1840s. These heavy-bodied vessels often were decorated to imitate Chinese porcelain. After 1850, ironstone

predominantly was undecorated, or was decorated with molded geometric, floral, or foliate motifs. American manufacturers began making refined, white-paste wares, including ironstone, during the Civil War. Two varieties of ironstone from the mid-to-late nineteenth century are now recognized: blue-bodied and white-bodied. Blue-bodied ironstone was manufactured by British, and perhaps, by American firms. White-bodied ironstone was made by both British and American firms, but primarily by British ones. The period of greatest popularity of embossed ironstone was 1840 to 1907 (Majewski and O'Brien 1987:20-21). The difficulties of assigning fragmentary ceramics to either whiteware or ironstone can result in an under-enumeration of ironstone and an over-enumeration of whiteware.

Redwares are non-vitreous wares with red, buff, or brown paste. Although redwares can occur unglazed (such as flower pots), the vessels may have a clear or mottled lead glaze or a black or brown glaze resulting from iron additions to the lead glaze. Redware was manufactured in Kentucky during the early 1800s, and continued to be commonly used until about the mid-1800s. Due to the abundance of redware makers and the lack of distinguishing characteristics that would identify the maker, redware is a poor temporal indicator.

Stonewares are semi-vitreous wares, usually glazed, which were made in a great variety of thick, utilitarian forms. Stoneware paste ranges in color from red to buff to brown, and can turn grey during firing. Stoneware is primarily categorized by exterior surface treatment, the most common category of which is salt glazed. Stonewares were made in Europe by the seventeenth century, in England by the eighteenth century, and were in abundance in the United States, including Kentucky, by the mid-nineteenth century. In fact, stoneware effectively replaced redware as the utilitarian vessel type of choice. Consequently, the proportion of redware as compared to stoneware may be a general temporal indicator.

Due to the abundance of domestic stoneware manufacturers and the difficulty in attributing vessels to a particular manufacturer, stoneware is considered a poor chronological indicator on nineteenth century sites. However, two common slips used as glazes, Bristol and Albany, are useful for dating purposes. Albany slip ranges in color from light brown to black, and was ubiquitous in the Midwest from 1830 to 1900 (Phillippe 1990:80). Bristol slip is white and was introduced into the United States by the 1880s, frequently in combination with Albany slip until about 1920. After 1920, Bristol slip generally occurred alone (Lebo 1987:132).

Yellow wares are semi-vitreous or non-vitreous wares of yellow- or cream-colored paste, which usually have a clear or mottled (Rockingham) lead glaze. The Ohio River valley is well known for its yellow ware potteries (Gates and Omerod 1982). Yellow ware vessels include utilitarian forms similar to stonewares and redwares, as well as specialty items such as inkwells, footwarmers, etc. Yellow wares were popular from about 1830 until the 1920s (Herskovitz 1978:97).

Container Glass

Container glass, like ceramic sherds, constitutes one of the most important components of a historic assemblage. Like domestic ceramics, these artifacts convey significant chronological, functional, and social information. Analysis of these offers an important source of data on the period of occupation at the site, the kinds of activities undertaken there, and potentially the social or ethnic status of the occupants. Studies of bottle glass have isolated the significant chronological characteristics of these vessels. Jars and other glass containers are discussed in a separate section.

Bottle Glass

European and American bottles were free blown and shaped to the vessel form, or were blown into simple dip molds. Dip molds are single component iron or wooden molds that give the body of the vessel its shape. These molds can only be square or cylindrical with the basal area being smaller or the same width as the shoulder area. Dip molds continued to be used as late as 1860 (Deiss 1981:12-18). Multipart molds having dip molded bodies (Rickett's molds) were produced into the 1920s, however (Jones and Sullivan 1985). To finish the neck of these early bottles, a glass-tipped rod (pontil) was attached to the bottle base to provide a means of holding it. Early types of finishing included fire-polished, flanged, folded, and applied string. All of these finishes persisted until the 1840s-1870s, when they were replaced by improved methods (Deiss 1981:18-24; Jones and Sullivan 1985; Jones 1971).

English bottle manufacturers used simple two-piece molds to make proprietary medicine bottles since the mid-1700s, and by 1800, American bottle makers were also using two-piece molds. These molds were hinged at the base or shoulder and may be referred to as open and shut molds. Bottles could be shaped in any form, square, round or multi-sided. Consequently, polygonal bottle forms were very popular in the mid-nineteenth century (Deiss 1981:62).

These molds enabled embossed lettering to be put on the fronts, backs, sides, and shoulders of the bottles (Jones and Sullivan 1985) and Gothic-style lettering was the most common style used until ca. 1850 (Deiss 1981:48-49). Liquor flasks made in two-piece molds were introduced ca. 1810 and were very popular by 1830. Embellished with a wide variety of molded or pictorial images, flasks remained popular until after the mid-1800s (Deiss 1981:62-65). Removable plates or panels that could be inserted into the mold was patented in 1867 (Jones and Sullivan 1985). These panels or plates were often embossed with the manufacturers name, product name, and city of manufacture, and could be used to personalize large shipments of bottles. This became popularly used on pharmaceutical and bitters bottles.

Two-piece molds were eventually eclipsed by multipart open and shut molds by 1850. These molds are similar to two-piece molds, but have a separate base plate. During the period 1840 to 1860, the two-piece and multi-part open and shut molds were the most popular mold types (Jones and Sullivan 1985). Vessel finishes (lip and necks) could still be hand formed by applying additional glass to the vessel and hand shaping a lip. By the 1820s, lipping shears were being used to shape the

inside of the bottle, producing a standardized form known as an applied-tooled finish, which was most common from about 1840 to 1870.

Open and shut molds, dip molds and multipart dip molds were all popularly used molds in the nineteenth century. Another mold, the turn-mold or turn-paste mold was developed and used in France on wine bottles as early as 1860 (Jones and Sullivan 1985). This mold type leaves no mold seams. In America, this mold type was most frequently used for wine and other beverages from 1870 to the 1920s (Jones and Sullivan 1985).

Even though molds are the most often used method to establish the manufacturing date of glass vessels, changes in the glass formula and innovations in overall glass vessel manufacture can aid in establishing chronology. For example, although the soda-lime formula was in use to make moderately clear glass for many centuries, a modified form of the soda-lime formula was developed in 1864 that revolutionized the glass industry in that it was less brittle and could be molded, cut, and engraved easily (Jones and Sullivan 1985). Because of this new formula, decorated and highly colored glass became cheaper and easier to produce allowing it to be affordable and subsequently popular after the 1870s (Jones and Sullivan 1985; Innes 1976). By 1880, manganese oxide was used in molten glass as a decolorizer. Glass containers made with manganese oxide turn purple or amethyst when exposed to sunlight. Selenium began replacing manganese oxide as a decolorizer by 1915, and the replacement was complete by 1918 (Deiss 1981:78-83). Selenium glass when exposed to ultraviolet rays becomes a straw yellow color.

Another turning point in the glass industry occurred between 1850 and 1860, with the development of a device called the snap case. This implement held the vessel while the neck and lip were finished. No longer was a pontil rod attached to the base of a glass vessel. Other innovations occurred to revolutionize glass production. By the 1870s, finishes incorporated in the mold had become common. This type, involving the reheating and tooling of the finish to eradicate mold seams on the lip, is referred to as the improved-tooled finish. Improvements in annealing ovens also helped to totally fuse the lip to the neck. Bottle lips were no longer distinctly separate bits of glass. Molds with incorporated finishes predominated until the early twentieth century, when automated glass vessel manufacture replaced less efficient processes (Deiss 1981:54-59).

By 1884 and 1892, semi-automatic manufacture of wide and small mouth containers was possible. The only difference between semi-automatic manufacture and automatic manufacture is the way that the melted glass is passed to the machine. In semi-automatic manufacture, the glass is introduced by skilled laborers and in automatic manufacture, the glass is introduced mechanically to the machine. It was not until the perfection of the Owen's machine in 1903 that fully automatic bottle manufacture was possible. This machine leaves a distinct mark on the base of the vessel. By 1917, 50 percent of glass containers were machine-made using this machine (Miller and Sullivan 1984). Vessels made using the Owen's machine are not found in archaeological contexts after 1970 (Miller and Sullivan 1984). Also, during the late nineteenth and early twentieth centuries, semi-automatic machines continued to be used and modified for automatic manufacture through the development of glass feeding devises like the Peeler Paddle Gob Feeder (Miller and Sullivan 1984).

Vessels made by semi-automatic machines are indistinguishable from vessels made on other machines (except the Owen's machine). The precision of automatic manufacturing enabled the standardization of continuous thread finishes, and screw caps replaced other forms of nonpressurized sealing.

Table Glass

The manufacture of glass tableware is a somewhat problematic area. In many cases discerning the manufacture type is not helpful in answering questions concerning chronology. Processes used to make tableware were used over long periods of time. These processes include free blowing, press molding, optic molding and pattern molding. Most of these methods are still used to lesser degrees today.

Free blowing is still used today to make tableware. Eighteenth and nineteenth century glass was also formed by hand. Usually these pieces are distinctive to specific glass houses and their age can be determined if the manufacturing house can be ascertained. For instance, table glass produced at the Stiegle glass house had a distinctive smoky color and specific stylistic motifs were patented and developed by glass houses for their use.

Although the process of press molding glass had been used to make door knobs and stemware feet, by the late 1820s, press molding hollowware became possible. Pressed glass made in the first few decades of the nineteenth century was often decorated with relief motifs, including classical busts, and a finely stippled or mat background that hid defects in the glass and mold seams. These highly decorated pieces, usually made using leaded glass, reflected light and were aptly referred to as "lacy glass". By the 1850s, improvements in manufacturing eliminated the need to hide defects. By the 1870s, the popularity of pressed glass increased as white, multi-colored, and other new shades of glass became affordable due to improvements in the glass formula (Deiss 1981:71-76; Davis 1970; Innes 1976; McKearin and McKearin 1948). The new glass formula resembled leaded formulas and was used extensively in press-molding after the 1870s. Consequently, press molded, leaded tableware is uncommon on American sites after 1870 (McKearin and McKearin 1948:395).

More elaborate combinations of decoration types and color became popular in press molded table glass after 1870 (Innes 1976). Carnival glass, for example, often given away as prizes at carnivals and fairs, was made by coating pressed glass with metallic paint to simulate more-expensive wares. Carnival glass was produced from the late 1890s to the 1930s (Deiss 1981:86).

Optic molding was used to make tableware during the eighteenth century. Optic molding, never a popular form of manufacture, was eclipsed by press molding early in the nineteenth century. By the late nineteenth century, optic molding had a resurgence in popularity. This molding type was used predominantly for tableware, specifically tumblers. It is a distinctive molding style involving a two-stage process. The vessel is formed by blowing glass into a part-size mold. This gives the vessel a rudimentary shape and decoration on the interior of the vessel. The vessel is then placed in another mold that provides the final shape to the vessel. This type of molding is easy to identify

as the interior of the vessel will often have a totally different decoration than the exterior of the vessel.

The process of pattern molding has been used for several centuries but was most popular in the late eighteenth and early to mid-nineteenth centuries (Jones and Sullivan 1985). This method involves two stages. Glass is blown into a mold that imparts the rudimentary shape and decoration to the vessel. Usually the decorations are simple ribs, panels, and stars. The partially blown vessel is then removed from the parison and its final shape is free blown. The enlargement of the vessel causes the decorations to become very diffuse.

Although these methods of manufacture alone are not useful in determining chronology, decorative style can be used to temporally place a vessel. Decorative styles changed over time in table glass. For instance, after 1870 naturalistic designs featuring animals and flowers became popular eclipsing the geometric motifs of the earlier part of the nineteenth century (Innes 1976).

Other Kitchen

This category includes all kitchen artifacts not accommodated by the above categories, including utensils, cooking vessels, metal cans, metal can pull-tabs, glass bottle crown caps, metal foil, and other wrapping materials, etc. Aluminum foil was developed in 1913, and was shortly thereafter used for cigarette pack linings. Household wrap, however, was not widely used until the 1940s, when Reynold's Wrap was introduced (Farin 1969:90). Crown caps were patented in 1892, but complete transition to its use was slow (Leif 1965:17; Riley 1958:101-102). Cans with pull-tabs were introduced in 1962, and had become common by 1965 (Wright 1976:22-23).

ARCHITECTURE GROUP

Artifacts assigned to this group include all items associated with construction and hardware furnishings. Specimens include bricks, mortar, cement, window glass, doorknobs, faucet parts, and various nails. The major categories of this group are described below.

Nails

Like ceramics, nails form one of the most widespread categories of artifacts recovered from historic sites. As with many other materials, increasing industrialization has had a major impact on the manufacturing of nails and associated hardware. Archaeologists have devoted considerable attention to nails in order to identify their chronologically significant characteristics (Nelson 1968). These are identified by manufacturing process (wrought, cut, wire) and, when possible, their size.

Wrought nails are the earliest form of iron nails, and were made by hand, usually in a local smithy or forge. Typically these nails are square or rectangular in cross section, and taper on all four sides towards the point. Wrought nails were in common use until approximately the 1830s and 1840s.

Cut nails are stamped from a sheet of steel, and consequently taper on two sides only. The artifacts show some variation between early and late forms. Early cut nails have a constricted shank just below the head, and were first produced in the late 1790s. Later cut nails are not constricted below the head, and were in general use by the late 1830s. Cut nails are still made and used today for special purposes.

Wire nails are made by cutting hardened steel wire and are round in cross-section. Wire nails were first produced in the 1850s but were not commonly used until the 1880s. These are the dominant type manufactured today (Nelson 1968).

All nails were assigned to one of these three major categories; unidentified fragments were assigned to a miscellaneous category. The presence of cut nails suggests a mid-nineteenth century occupation rather than an early twentieth century occupation; the presence of significant numbers of wire nails indicates that the some portion of the occupation postdates the 1880s and continued into the twentieth century.

Flat Glass

Flat glass fragments are presumed to have been used in window panes if no other function can be determined, such as for mirrors, table tops, picture frames, etc. Flat glass comprises an important, chronologically sensitive artifact. During the eighteenth century, flat glass appropriate for windows was cut from a large disk of glass which was then cut into panes. By the early nineteenth century, glass manufacturers produced broad glass which may be distinguished by a slight thickening toward the plate margin, one surface slightly more opaque than the other, and bubbles in the glass usually distorted in straight lines. In the late nineteenth century, machine-made glass, characterized by a uniform thickness, with occasional wavy lines of bubbles, was widely produced. In the early twentieth century, production of sheet pane glass eclipsed other manufacturing processes.

Studies have demonstrated that the measurement of flat glass thickness can be a useful indicator of chronology (Moir 1987, Ball 1983, McBride and Sharp 1991, Roenke 1978). In this study, flat glass thickness was not measured as sample size was too small from feature context to be statistically valid. Surface collected flat glass was not measured since dating was more accurately achieved through ceramic analysis.

Bricks

The manufacturing of bricks changed from locally crafted, handmade varieties to machine-produced during the nineteenth century. With this chronological information in mind, bricks are classified according to method of manufacture. The fragmentary nature of most brick fragments often precludes an accurate assessment of age.

Hardware and Other Building Materials

The hardware group includes metal items such as nuts, bolts, hinges, window sash weights, locks, knobs, screws, staples, hooks, bands, braces, and wire. The other building materials category includes items made of various materials, including mortar, plaster, roofing materials, building stone, glass insulators, and wall, floor, and drainage tiles, etc.

FURNITURE GROUP

A variety of artifacts associated with furnishings and household fixtures are often recovered in small numbers from historic sites. Examples of these include lamp globe or chimney parts, mirror glass, faucet parts, fireplace equipment, clock parts, draw pulls, flower pots and similar items.

ARMS GROUP

This category includes firearm parts, lead balls or bullets, cartridge casings, percussion caps, bullet molds, lead sprue, powder horn parts, and gunflints.

CLOTHING GROUP

This category of artifacts consists of artifacts associated with clothing, such as buttons, collar studs, buckles, shoe leather, irons, eyelets, garter snaps, thimbles, straight and safety pins, and hooks and eyes.

PERSONAL GROUP

This category includes objects typically reserved for one person's exclusive use, which often could be carried in a pocket or purse, such as smoking pipes, watches, clasp knives, gaming pieces, toys, jewelry, combs and brushes, coins, etc.

TRANSPORTATION/MACHINERY GROUP

Artifact assigned to this category include those associated with any form of wheeled transport, and those associated with horse, mule or ox harnessing and shoeing. Hand tools are also included in this category.

FUEL GROUP

This category includes items such as coal, coal cinders, ash, slag, and charcoal. Coal was adopted as a primary fuel in the middle to late nineteenth century, prior to which firewood and charcoal were used both domestically and commercially as an energy source.

OTHER GROUP

This category includes all materials that are not readily assignable to a major group. Items in this category include, for example, unidentified rusted metal artifacts and fragments of synthetic materials such as plastic, etc.

Prehistoric Artifact Analysis

All projectile points (fragments and whole specimens) are examined to determine if they are chronologically identifiable. A projectile point is a prepared stone tool that displays specific morphological characteristics to which a general temporal designation can be assigned. The attributes of each point will be described and a regional term for that type will be identified.

All nondiagnostic bifacially worked artifacts, such as large and small bifaces, scrapers, biface cores, etc., are identified and described in the report to determine what kinds of activities were conducted at the site, what periods it was occupied, and to establish any areas of the site where particular activities might have occurred such as lithic production, retooling, butchering, etc.

One of the most ubiquitous categories of artifact on a prehistoric site is lithic debitage, which is considered to include all the material produced from the initial reduction stage to the use/reworking stage. Debitage is divided into five major classes including primary flakes, secondary flakes, tertiary flakes, flake shatter, and blocky shatter. Debitage from all classes is produced during all stages of reduction, but the representation of each class as compared to the other classes provides insight into the type of lithic activities which occurred at a specific location. A brief description of each debitage class is provided. Primary flakes result from the reduction of raw material down to initial biface. These flakes are usually large and cortex is present on over 50 percent of the dorsal surface. Secondary flakes result from the reduction and shaping of the initial biface. These flakes can be produced during Stages II to V of Collins' system. Secondary flakes characteristically display a well developed bulb of percussion, one or more flake scars on the dorsal surface, and may exhibit platform preparation. Tertiary flakes result from the sharpening and/or reworking of tools or points. These flakes are generally very small with moderate bulbs of percussion and platforms. Chert shatter results from a flake breaking apart. This debris displays some flake characteristics, but a significant percentage of the flake is missing. Therefore, the exact flake type is unknown. Blocky shatter results during any reduction stage. This is identified as angular chert displaying no flake or core characteristics. These lithic reduction categories follow Boisvert et al. (1979) with slight modifications. Boisvert et al. (1979) identified five basic stages in lithic reduction technology. These are as follows: 1) unmodified primary resource; 2) initial reduction or core preparation; 3) primary trimming; 4) secondary trimming and thinning; and 5) use or reworking. A brief description of each lithic artifact category is provided below.

Cores display the removal of one or more flakes from a lump of parent rock, usually from a cobble, or tabular piece of raw material. Cortex may be retained over some of the surface, although this depends on the number of flakes removed. The presence of cores at a site indicates that lithic

working may have occurred there. Exhausted cores, (i.e., those too small for further reduction) may be discarded at a site after use; cores still fit for reduction may also be stored at a site for later use.

Informal tools may also be identified by examination of flakes, chunks and cores. Informal tools offer an important opportunity to examine activities at a site, as they are often discarded when no longer needed for the immediate task at hand. Tools such as utilized flakes are often reported from sites where they were used as cutting or trimming implements. However, functional designations for informal tools are not readily ascertainable without microscopic study.

Ceramics

The methodology implemented in this study follows the standard procedures reported elsewhere (e.g., Henderson 1988; O'Malley 1990). All sherds were examined macroscopically and assigned to two size categories or to a rim category:

A. Sherds smaller than 4 cm^2
B. Sherds larger than 4 cm^2
C. All rim sherds regardless of size.

As in previous studies, sherds smaller than 4 cm^2 were weighed and counted, but not subjected to any additional study and are not described in the following analysis. This procedure reduces the amount of bias that results from the inclusion of numerous small body sherds when few variables can be accurately recorded. In the following discussion, only sherds greater than 4 cm^2 or rim sherds regardless of size are included in the analysis.

Body sherds larger than 4 cm^2 were examined to identify temper, sherd thickness, surface treatment and the size and density of tempering agents.

Archaeobotanical Analysis

Analysis of botanical material recovered from historic farmsteads is useful in revealing several things including what types of crops the inhabitants grew, what cultigens they used, and what native plants were used. Flotation samples were collected from every feature and from random excavation units in the both Phase II and III. A minimum sample of 10 liters was taken from each feature sampled and more from larger refuse features.

The archaeobotanical assemblage was analyzed by Dr. Jack Rossen of the University of Kentucky and Ithaca College, New York, using comparative collections at the same university. A detailed report for both Phase II and III of his investigation is included in Appendix A of this report.

Faunal Analysis

Information about subsistence and changes in subsistence activities may be revealed through faunal analysis. Mr. Sean Coughlin of the University of Tennessee conducted the Phase II analysis of the faunal assemblage and Judith A. Patterson, also of the University of Tennessee, conducted the Phase III assemblage. Both reports can be found in Appendix C of this report.

Soil Analysis

Stratigraphy at the site required a soil specialist to answer some questions of the origins of some unusually deep alluvial sediments occurring in only certain areas of the site. A Geoarchaeologist, Sarah Sherwood, of the University of Tennessee, was therefore contracted to study the soil and site stratigraphy at 15On55/57. Standard procedures for soil analysis include chemical filtration to identify major and trace elements. Significant concentrations of elements that do not conform to the standard soil profiles for a region may signify human agency in the particular area of the soil. Another procedure is grain size analysis which is helpful in establishing the physical origin of soils to determine if these are alluvial, colluvial or other soil forms. Sampling strategies consisted of collection and processing of soil samples from all areas of the site. A detailed report of her findings is in Appendix B of this report.

Curation

All artifacts, photographs, and other records generated by the field investigations have been curated at University of Kentucky, Lexington.

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PREHISTORIC ASSEMBLAGE AT 15ON55 AND 15ON57

Introduction

A small number (n = 1240 at 15On55, and n = 536 at 15On57) prehistoric artifacts were recovered from Phase II and Phase III studies combined. This small assemblage occurs as a moderate to light scattering of lithic debrisover the sites' surface, and mixed in with historic deposits. Three diagnostic point types are represented in the sites' assemblages, indicating that none of the non-diagnostic specimens can be safely assigned to a particular time period. The materials recovered from the site are tabulated by site in Table D-1 and D-2, and are discussed below.

Table D-1 Prehistoric Artifacts From the Hardin Houselot, 15On55

Artifact Type	N	wgt
PP/K Adena Point	1	12.3
PP/K Saratoga Point	1	10.3
PP/K Madison Triangular Point fragment	1	2.9
PP/K Fragments	11	100.3
Bifaces	7	512.3
Biface Fragments	15	150.6
Multi-edge Scrapers	3	78.4
Other Uniface	1	4.9
Spokeshave	1	0.5
Utilized Flakes	8	20.6
Ceramic	1	1.1
Blocky Fragment	225	986.4
Broken Flake	222	386.8
Core	16	856.7
Other Rock	69	259
Primary Form	9	9.9
Primary Flake	224	1122.9
Secondary Flake	163	437.7
Tertiary Flake	262	809.6
Total Assemblage	1240	5763.2

Table D-2 Prehistoric Artifacts From the Hardin Yard, 15On57

Artifact Type	N	Weight
PP/K Fragments	4	23.4
Biface Fragments	5	80.7
Cores	8	781.0
Primary Flakes	39	341.3
Secondary Flakes	65	139.40
Tertiary Flakes	170	59.7
Broken Flakes	97	89.2
Blocky Fragments	147	1865.0
Utilized Block Fragments	1	11.3
Total	536	3391.0

Projectile Point/Knives and Fragments (3 Diagnostic, 15 Fragments)

Three diagnostic projectile point was recovered from the site. The earliest point found appears to be a Late Archaic stemmed specimen. An Adena point, dating to the Early Woodland was also recovered, and a fragment of a Late Prehistoric small triangular arrow head was also collected. Each of these is described below.

Late Archaic Saratoga Cluster (n = 1)

Specimen # appears to be a Late Archaic Saratoga Cluster point, although it cannot be assigned definitively to one of the several Saratoga types. One significant attribute is that the basal portion of the stem is a hinge or snap fracture, which Justice suggest characterize Saratoga Stemmed points If the point is a Saratoga Stemmed specimen, then it likely dates after 2000 B.C. (Justice 1987: 158). This specimen was recovered from the surface adjacent to Test Unit 31, and is illustrated in Figure D-1a.

Early Woodland Adena (n = 1)

Specimen # is a large Adena point made from locally available St. Genevieve/St. Louis chert. It was recovered from Trench 1 extension of Test Unit 4 at15On55. The specimen has a length of 84 mm, a blade width of 35 mm, stem length of 20 mm and stem width of 18 mm. Justice assigns these points to the Early Woodland, c. 800 to 300 B.C.(Justice 1987: 191-196) This specimen was

recovered from Feature 1 in Test Unit 4. It is unclear if the point is in undisturbed prehistoric contexts or historic feature, as historic artifacts were found in Feature 1. The specimen is illustrated in Figure D-1b.

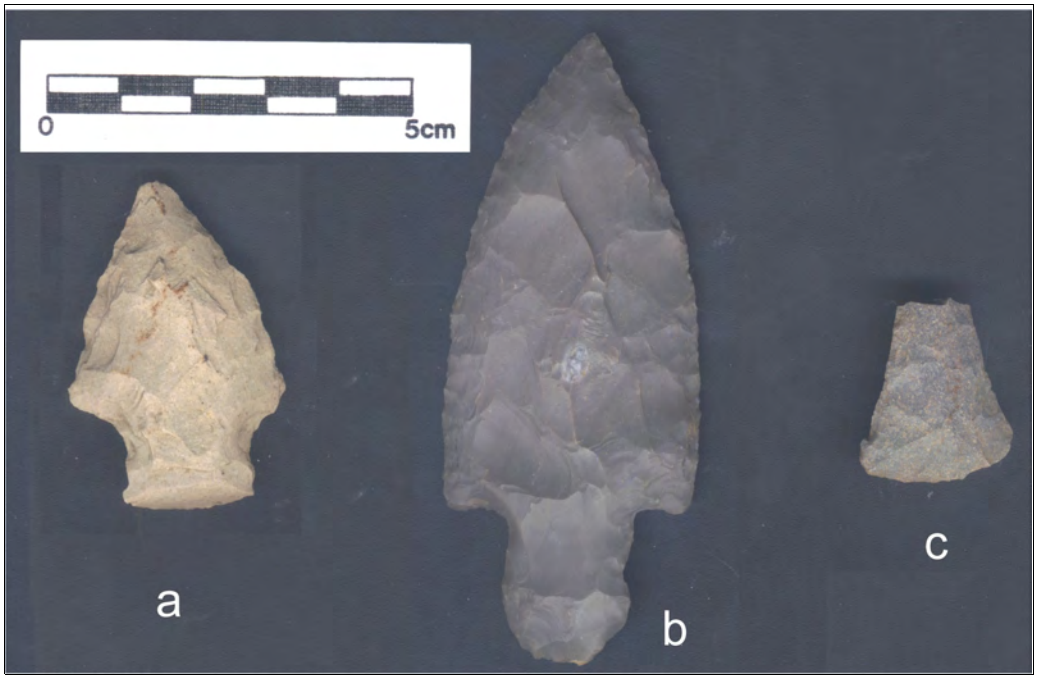

Figure D-1a. Saratoga Point; b. Adena Point; c. base of Madison Point

Late Prehistoric/Fort Ancient Madison Point (n = 1)

The third point recovered from the site is a basal specimen of a Fort Ancient convex point. This point type is assigned by Justice to the Madison point series, and dates to about 800 A.D. to 1300 A.D. (Justice 1987: 227). The point is missing its tip. This specimen was recovered from Test 15On55 Unit 20 in the plowzone and is illustrated in Figure D-1c.

Projectile Point/Knife Fragments ((15On55 n = 11; 15On57 n = 4)

In addition to the complete specimens, there were 16 fragments of projectile points (tips and medial and distal fragments recovered from 15On55/57. Most of these were collected from the site surface, although some were found in excavated contexts (shovel test pits, or from test unit), although in the plow zone. None of these specimens is chronologically diagnostic.

Biface Preforms (15On55 n = 9; 15On57 n = 0)

There were a total of nine biface preforms recovered from 15On55 and none from 15On57. They all came from the Phase III mitigation on 15On55. None of these can be assigned to a cultural period of occupation at the site and could associate with either of the three documented periods of occupation.

Biface (15On55 n = 7; 15On57 n = 0) & Fragment (15On55 n = 15; 15On57 n =5)

In all, seven complete nondiagnostic bifaces were recovered from the investigation. These specimens are of unknown cultural affiliation. None of them can be assigned to known periods of occupation, or assigned a function. The excavation also produced 20 fragments of bifaces.

Unifacial Tools (15On55 n = 13; 15On57 n = 1)

A number of unifacial tools were recovered from 15On55 and 15On57. The total of 14 specimens includes three scrapers at 15On55, a uniface and a spokeshave, as well as eight utilized flakes. At 15On57, a utilized blocky fragment was the only documented unifacial tool. Although none of these tools can be assigned to a period of occupation, there presence attests to a variety of activities conducted there during the prehistoric period.

Cores (15On55 n = 16; 15On57 n = 8)

A total of 16 cores were recovered from15On55, and half that number from 15On57. These specimens varied in size and weight, but cannot be assigned to a period of occupation.

Debitage (15On55 n = 1096 ; 15On57 n = 518)

A variety of debitage pieces were collected from the site, most during the surface pick up and test unit excavation. At 15On55, a total of 1096 pieces were recovered with broken flakes and blocky fragments accounting for half of the assemblage, and primary and tertiary flakes accounting for almost 40 % of the remainder. Secondary flakes occurred in low quantities. At 15On57, a total of 518 pieces of debitage were recovered, but secondary flakes were almost twice as numerous as primary flakes, and both of these flake types were less common than tertiary flakes, which account for more than 170 specimens at 15On57.

As at least three periods of occupation are represented at this site, it is not possible to assigne debitage to a particular period of occupation.

Ceramics (n = 1)

A single very small, worn sherd was recovered from the site. It appears to have been tempered with crushed limestone, and dates on this basis to before about A.D. 1000. It cannot be

assigned to a particular Woodland period occupation, although it may associate with the Adena point.

Summary

A small assemblage of cultural materials dating to at least three prehistoric occupations of the farm and out-lot site was recovered. Much of the material was recovered from surface collection. Analysis of three diagnostic projectile points indicate at least three periods of occupation, none of them substantial and none that can be separated from any other. No further analysis was conducted on this assemblage, as it appears to be mixed in origin, and disturbed by the historic occupation which was the focus of the mitigation.

PREHISTORIC ARTIFACT CATALOGUE 15ON57

Provenience	Artifact Type	N	Weight (gms)
STP1	Tertiary Flake	3	1
STP1	Unidentified PP/K Fragment	1	3
STP2	Broken Flake	2	6.2
STP2	Other flaked stone	1	0.5
STP2	Tertiary Flake	3	1.3
STP3	Blocky fragment	3	7.5
STP3	Broken Flake	1	1.9
STP3	PP/K Flared base complete	1	6.3
STP3	Tertiary Flake	2	0.5
STP5	Broken Flake	1	1
STP5	Secondary Flake	2	2.6
STP5	Unidentified PP/K Fragment	1	2.5
STP6	Other flaked stone	1	0.2
STP6	Secondary Flake	1	0.9
STP6	Tertiary Flake	4	1.1
STP7	Broken Flake	1	0.6
STP7	Tertiary Flake	3	1.5
STP8	Other flaked stone	2	1
STP8	Primary Flake	1	19.6
STP8	Secondary Flake	1	1.4
STP8	Tertiary Flake	2	0.4
STP9	Secondary Flake	2	0.1
STP9	Tertiary Flake	1	4.7
STP10	Tertiary Flake	1	0.2
STP11	Tertiary Flake	3	1.6
STP4	Broken Flake	3	1
surf	Blocky fragment	47	1310.4
surf	Broken Flake	16	23.9
surf	Core	8	781
surf	Biface fragment	2	74.3
surf	Biface fragment	1	6.4
surf	Other stone	4	39.6
surf	PP/K basal fragment	1	2

Provenience	Artifact Type	N	Weight (gms)
surf	PP/K basal fragment	1	9.6
surf	Primary Flake	17	256.2
surf	Secondary Flake	20	58.5
surf	Tertiary Flake	9	6.1
surf	Utilized Blocky Fragment	1	11.3
TU1	Blocky fragment	12	144.4
TU1	Broken Flake	11	6.8
TU1	Fire Cracked Rock	2	7.9
TU1	Other unmodified rock	4	81.9
TU1	Primary Flake	1	26.4
TU1	Secondary Flake	4	22.3
TU1	Tertiary Flake	39	14.1
TU1	Unmodified rock	1	0.1
TU1FEA2	Blocky fragment	4	8.1
TU1FEA2	Broken Flake	3	15.4
TU1FEA2	Burned Clay	3	2.2
TU1FEA2	Unmodified rock	1	93.4
TU1FEA2	River Cobble	1	1.6
TU1FEA2	Sandstone	2	0.7
TU1FEA2	Secondary Flake	1	1.8
TU1FEA2	Small Pebbles	3	4.4
TU1FEA2	Tertiary Flake	4	0.4
TU1FEA2	Unidentified other rock	1	3.6
TU2	Blocky fragment	5	6.6
TU2	Broken Flake	3	1.5
TU2	Secondary Flake	1	2.1
TU2	Tertiary Flake	8	2.6
TU3	Blocky fragment	3	8.9
TU3	Broken Flake	1	0.4
TU3	Tertiary Flake	5	0.9
TU4	Blocky fragment	1	21
TU4	Broken Flake	1	0.3
TU4	Secondary Flake	1	1.4
TU4	Tertiary Flake	3	0.7

Provenience	Artifact Type	N	Weight (gms)
TU5	Blocky fragment	9	18.9
TU5	Broken Flake	5	10.1
TU5	Secondary Flake	10	22.9
TU5	Tertiary Flake	14	4
TU6	Blocky fragment	5	13.6
TU6	Broken Flake	6	4.8
TU6	Fire Cracked Rock	1	15.5
TU6	Primary Flake	1	5
TU6	Secondary Flake	4	4.6
TU6	Tertiary Flake	19	5.9
TU6FEA3	Fire Cracked Rock	1	25
TU6FEA3	Limestone Angular rock	1	267.2
TU6FEA3	Other unmodified rock	1	843.7
TU6FEA3	Other unmodified rock	1	416.8
TU6FEA3	PP/K Scraper	1	0.3
TU6FEA3	Tertiary Flake	1	0.6
TU7	Blocky fragment	4	146.5
TU7	Broken Flake	8	3.1
TU7	Other flaked stone	3	1.7
TU7	Secondary Flake	2	4.7
TU7	Tertiary Flake	4	1.3
TU7FEA4	Broken Flake	1	0.4
TU7FEA4	Other unmodified rock	1	101.2
TU7FEA4	Secondary Flake	2	2.8
TU7FEA4	Broken Flake	1	0.4
TU7FEA4	Other unmodified rock	1	154.1
TU8	Blocky fragment	8	110.4
TU8	Broken Flake	5	5.8
TU8	Burned Clay	1	1
TU8	Other flaked stone	2	5.8
TU8	Other unmodified rock	1	49.2
TU8	Primary Flake	3	16.5
TU8	Sandstone	6	17.1
TU8	Secondary Flake	5	5

Provenience	Artifact Type	N	Weight (gms)
TU8	Tertiary Flake	7	2.5
TU8FEA3	Other unmodified rock	1	179.8
TU9	Blocky fragment	6	7.2
TU9	Broken Flake	5	1.6
TU9	Primary Flake	2	17.6
TU9	Secondary Flake	2	3.6
TU9	Tertiary Flake	12	4.6
TU10	Blocky fragment	9	11.3
TU10	Broken Flake	10	4
TU10	Other flaked stone	1	0.9
TU10	Secondary Flake	3	4.7
TU10	Tertiary Flake	12	3.7

PREHISTORIC ARTIFACT CATALOG 15ON55

Prov. #	Zone	Level	Group	N	Weight
GEN STRP			PP/K Side-notched distal fragment	1	10.3
GEN STRP			PP/K Corner-notched medial fragment	1	12.3
GEN STRP			Other Biface thin incomplete	1	5.3
GEN STRP			Other Biface thin incomplete	1	5.6
GEN STRP			Other Biface thin incomplete	1	2.5
GEN STRP			Utilized Flake	1	3.6
Backdirt			Other Biface	1	362.1
Backdirt			Other Biface thick complete	1	102.7
Backdirt			Blocky Fragment	1	27.6
GEN SURF			Blocky Fragment	7	61.1
GEN SURF			Core	2	304.
GEN SURF			PP/K Fragment	1	6.8
GEN SURF			Primary Flake	6	23.5
GEN SURF			Other Rock	7	41.1
GEN SURF			Secondary Flake	4	6.8
GEN SURF			Tertiary Flake	4	2.1
GEN SURF			Other Uniface	1	4.9
TREN CUT			PP/K Unidentifed proximal fragment	1	6.7
TRENCH			Blocky Fragment	6	10.8
TRENCH			Broken Flake	23	14.8
TRENCH			Other Rock	2	71.6
TRENCH			Primary Flake	10	141.
TRENCH			Secondary Flake	14	44.1

Prov. #	Zone	Level	Group	N	Weight
TRENCH			Tertiary Flake	29	10.6
TRENCH 1			Other Biface	1	11.2
TRENCH 1			Biface Fragment	1	1.6
TRENCH 1			Blocky Fragment	8	74.8
TRENCH 1			Broken Flake	12	7.1
TRENCH 1			Core	1	80.1
TRENCH 1			Other Rock	1	4.5
TRENCH 1			Primary Flake	19	97.7
TRENCH 1			Secondary Flake	11	30.9
TRENCH 1			Tertiary Flake	14	3.1
TR 1 EXT			Blocky Fragment	51	417.8
TR 1 EXT			Broken Flake	25	23.8
TR 1 EXT			Other Rock	21	31.5
TR 1 EXT			Primary Flake	22	184.5
TR 1 EXT			Secondary Flake	31	67.3
TR 1 EXT			Tertiary Flake	59	48.1
TR 1 EXT			Core	2	275.
TR 1 EXT			PP/K Fragment	1	56.7
TRENCH A			Core	2	100.
TEL LINE			Tertiary Flake	1	0.2
STP 1			Broken Flake	1	0.6
STP 1			Primary Flake	2	5.6
STP 1			Tertiary Flake	3	1.
STP 2			PP/K Fragment	1	16.8
STP 3			Broken Flake	1	0.3

Prov. #	Zone	Level	Group	N	Weight
STP 3			Core	1	69.6
STP 3			Other Rock	1	0.7
STP 4			Other Biface fragment	1	100.
STP 4			Blocky Fragment	4	12.3
STP 4			Primary Flake	2	0.6
STP 4			Other Rock	1	5.6
STP 4			Secondary Flake	2	1.
STP 4			Tertiary Flake	1	16.8
STP 8			Blocky Fragment	6	0.3
STP 8			Primary Flake	1	69.6
STP 8			Other Rock	17	0.7
STP 8			Secondary Flake	2	13.3
STP 8			Tertiary Flake	5	12.3
STP 9			PP/K Fragment	1	0.1
STP 9			Other Rock	1	34.4
STP 10			Broken Flake	1	1.
STP 10			Secondary Flake	2	0.6
STP 11			Blocky Fragment	1	11.8
STP 11			Primary Flake	1	2.
STP 11			Other Rock	6	14.4
STP 12			Blocky Fragment	1	2.2
STP 12			Secondary Flake	3	1.2
STP 13			Primary Flake	1	6.
STP 13			Other Rock	1	0.7

Prov. #	Zone	Level	Group	N	Weight
STP 13			Tertiary Flake	1	0.6
STP 14			Other Rock	1	4.
STP 14			Tertiary Flake	2	3.1
STP 15			PP/K Fragment	2	3.1
STP 16			Blocky Fragment	1	7.9
STP 16			Primary Flake	1	0.5
STP 18			Blocky Fragment	2	1.1
STP 18			Other Rock	1	2.8
STP 18			Tertiary Flake	1	0.6
STP 19			Secondary Flake	2	0.3
STP 19			Tertiary Flake	1	2.7
STP 20			Blocky Fragment	1	0.4
STP 20			Primary Flake	1	3.2
STP 20			Tertiary Flake	1	1.1
STP 21			Broken Flake	1	1.2
STP 21			Other Rock	1	1.
STP 21			Other Rock	3	0.5
STP 22			Broken Flake	1	0.1
STP 22			Primary Flake	2	3.9
STP 23			Tertiary Flake	1	0.5
STP 24			Broken Flake	3	2.4
STP 24			Primary Flake	1	12.3
STP 24			Tertiary Flake	1	0.5
STP 25			Blocky Fragment	1	0.3
STP 25			Broken Flake	1	2.1

Prov. #	Zone	Level	Group	N	Weight
STP 25			Other Rock	1	10.7
STP 25			Secondary Flake	1	0.4
STP 25			Tertiary Flake	2	2.6
STP 26			Blocky Fragment	1	0.4
STP 26			Broken Flake	1	1.5
STP 26			Other Rock	1	3.3
STP 26			Primary Flake	1	0.3
STP 26			Secondary Flake	1	3.8
STP 27			Broken Flake	1	0.6
STP 27			Tertiary Flake	3	1.9
STP 28	Z 1		Blocky Fragment	6	0.8
STP 28	Z 1		Primary Flake	2	0.6
STP 28	Z 1		Primary Flake	1	6.8
STP 28	Z 1		Secondary Flake	1	0.4
STP 29	Z 1		Primary Flake	1	0.6
STP 31	Z 1		Tertiary Flake	1	4.8
STP 31	Z 1		Blocky Fragment	1	1.6
STP 31	Z 1		Primary Flake	1	1.
STP 33	Z 1		Tertiary Flake	1	1.1
STP 33	Z 1		Blocky Fragment	2	60.2
STP 33	Z 1		Primary Flake	2	4.6
STP 33	Z 1		Primary Flake	1	1.
STP 34	Z 1		Tertiary Flake	1	3.
STP 34	Z 1		Broken Flake	2	0.2
STP 34	Z 1		Primary Form	4	0.3

Prov. #	Zone	Level	Group	N	Weight
STP 34	Z 1		Primary Flake	3	0.8
STP 34	Z 1	L 2	Blocky Fragment	1	2.5
STP 34	Z 2	L 1	Secondary Flake	1	0.2
STP 35	Z 1	L 1	Tertiary Flake	1	0.9
STP 35	Z 1	L 1	Primary Flake	1	4.
STP 35	Z 1	L 1	Broken Flake	2	5.9
STP 35	Z 1	L 1	Blocky Fragment	1	0.2
STP 35	Z 1	L 2	Tertiary Flake	1	1.5
STP 35	Z 1	L 2	Broken Flake	1	6.7
STP 35	Z 1	L 2	Secondary Flake	1	5.7
STP 35	Z 2	L 1	Primary Flake	1	1.2
STP 36	Z 2	L 1	Secondary Flake	1	0.7
STP 37	Z 1	L 1	Secondary Flake	1	0.1
STP 37	Z 1	L 2	Broken Flake	1	1.2
STP 38	Z 1	L 1	Secondary Flake	1	0.3
STP 38	Z 1	L 2	Secondary Flake	1	7.2
STP 39	Z 1	L 1	Primary Flake	2	0.1
STP 39	Z 1	L 1	Broken Flake	2	0.1
STP 39	Z 1	L 2	Primary Form	2	1.3
STP 40	Z 1	L 1	Blocky Fragment	1	0.1
STP 40	Z 1	L 2	Primary Flake	2	3.4
STP 40	Z 3	L 1	Secondary Flake	2	3.4
STP 40	Z 3	L 1	Broken Flake	2	1.6
STP 41	Z 1	L 1	Primary Flake	1	2.3
STP 41	Z 1	L 1	Blocky Fragment	1	0.2

Prov. #	Zone	Level	Group	N	Weight
STP 42	Z 1	L 1	Tertiary Flake	1	2.7
STP 42	Z 1	L 1	Blocky Fragment	1	2.9
STP 42	Z 1	L 1	Secondary Flake	1	0.7
STP 42	Z 1	L 1	Primary Flake	1	0.9
STP 42	Z 1	L 1	Broken Flake	1	2.2
STP 42	Z 1	L 1	Other Biface thin incomplete	1	4.1
STP 42	Z 1	L 2	Other Biface thick incomplete	1	2.
STP 42	Z 1	L 2	Tertiary Flake	2	0.7
TU 1			Blocky Fragment	3	14.8
TU 1			Broken Flake	3	0.1
TU 1			Other Rock	1	30.7
TU 1			Secondary Flake	2	1.
TU 1			Tertiary Flake	7	0.5
TU 1			Ceramic	1	1.1
TU 2			Blocky Fragment	3	2.
TU 2			Broken Flake	4	24.3
TU 2			Other Rock	1	0.4
TU 2			Tertiary Flake	6	48.2
TR1 TU3			Secondary Flake	2	1.4
TR1 TU3			Tertiary Flake	2	1.4
TU 5	Z 1	L 1	Primary Flake	2	2.3
TU 5	Z 1	L 1	Secondary Flake	5	2.2
TU 5	Z 1	L 1	Broken Flake	2	2.7
TU 5	Z 1	L 2	Blocky Fragment	1	21.
TU 5	Z 1	L 2	Secondary Flake	2	1.

Prov. #	Zone	Level	Group	N	Weight
TU 5	Z 1	L 2	Primary Flake	2	0.8
TU 5	Z 1	L 3	Primary Flake	3	1.9
TU 5	Z 1	L 3	Broken Flake	2	3.
TU 5	Z 1	L 3	Tertiary Flake	1	0.4
TU 5	Z 1	L 3	Blocky Fragment	1	19.9
TU 5	Z 1	L 3	Primary Form	1	3.9
TU 5	Z 2	L 1	Broken Flake	1	1.3
TU 5	Z 2	L 1	Primary Flake	1	0.5
TU 5	Z 3	L 1	Blocky Fragment	1	1.6
TU 6	Z 1	L 3	Blocky Fragment	2	2.1
TU 6	Z 1	L 3	Secondary Flake	4	4.3
TU 6	Z 1	L 3	Primary Flake	3	1.3
TU 6	Z 1	L 2	Primary Flake	3	0.2
TU 6	Z 1	L 2	Secondary Flake	1	0.3
TU 6	Z 1	L 2	Tertiary Flake	1	0.7
TU 6	Z 1	L 2	Broken Flake	2	0.4
TU 6	Z 1	L 4	Primary Flake	1	3.2
TU 6	Z 2	L 1	Broken Flake	1	6.5
TU 6	Z 2	L 2	Primary Flake	1	4.8
TU 6	Z 2	L 2	Tertiary Flake	1	12.9
TU 6	H INT	L 1	Primary Flake	2	4.8
TU 6	H INT	L 1	Secondary Flake	1	7.9
TU 6	H INT	L 1	Tertiary Flake	1	4.4
TU 6	H INT	L 1	Broken Flake	2	0.3
TU 6	H INT	L 2	Broken Flake	1	2.2

Prov. #	Zone	Level	Group	N	Weight
TU 6			Multi-edge Scraper	1	0.7
TU 6			Blocky Fragment	2	0.1
TU 6			Primary Flake	3	0.2
TU 6			Secondary Flake	3	0.2
TU 6			Tertiary Flake	4	4.6
TU 6			Broken Flake	8	0.6
TU 7	Z 1	L 1	Other Biface thin incomplete	1	0.1
TU 7	Z 1	L 1	Primary Flake	1	0.9
TU 7	Z 1	L 1	Tertiary Flake	1	0.2
TU 7	Z 1	L 1	Broken Flake	1	1.9
TU 7	Z 1	L 2	Primary Form	2	4.4
TU 7	Z 1	L 2	Primary Flake	2	1.9
TU 7	Z 1	L 2	Blocky Fragment	1	9.
TU 7	Z 1	L 2	Broken Flake	4	1.1
TU 7	Z 1	L 2	Secondary Flake	1	4.5
TU 7	Z 2	L 1	Primary Flake	1	0.3
TU 7	Z 2	L 1	Secondary Flake	2	0.5
TU 7	Z 2	L 1	Broken Flake	1	0.1
TU 7	Z 2	L 2	Primary Flake	3	0.4
TU 7	Z 2	L 2	Secondary Flake	2	6.
TU 7	Z 2	L 2	Blocky Fragment	1	3.7
TU 7	Z 2	L 2	Core	1	7.9
TU 7	Z 2	L 2	Broken Flake	1	2.
TU 7	Z 2	L 2	Tertiary Flake	6	1.9
TU 7	Z 2	L 3	Primary Flake	2	2.8

Prov. #	Zone	Level	Group	N	Weight
TU 7	H INT	L 1	Primary Flake	7	0.5
TU 7	H INT	L 1	Blocky Fragment	1	0.2
TU 7	H INT	L 1	Tertiary Flake	1	2.7
TU 7	H INT	L 2	Primary Flake	2	1.5
TU 7	H INT	L 2	Tertiary Flake	1	3.3
TU 7			Blocky Fragment	1	70.3
TU 7			Tertiary Flake	1	0.3
TU 8	Z 1	L 1	Primary Flake	1	0.4
TU 8	Z 1	L 1	Broken Flake	1	0.7
TU 8	Z 1	L 2	Primary Flake	1	19.6
TU 8	Z 1	L 2	Tertiary Flake	1	12.4
TU 9	Z 1	L 1	Blocky Fragment	1	0.1
TU 9	Z 1	L 1	Primary Flake	1	1.6
TU 9	Z 1	L 1	Broken Flake	1	0.3
TU 9	Z 1	L 2	Broken Flake	2	1.6
TU 9	Z 1	L 2	Other Biface thick complete	1	0.1
TU 10	Z 1	L 1	Secondary Flake	1	1.1
TU 10	Z 1	L 1	Blocky Fragment	1	0.3
TU 10	Z 1	L 1	Tertiary Flake	1	0.2
TU 10	Z 1	L 2	Core	1	0.6
TU 10	Z 1	L 2	Primary Flake	1	43.
TU 10	Z 1	L 2	Tertiary Flake	2	0.7
TU 10	Z 1	L 3	Blocky Fragment	1	0.5
TU 10	Z 1	L 3	Tertiary Flake	1	4.5
TU 11	Z 1	L 1	Blocky Fragment	1	14.7

Prov. #	Zone	Level	Group	N	Weight
TU 11	Z 1	L 3	Primary Flake	1	3.3
TU 12	Z 1	L 1	Primary Flake	4	0.6
TU 12	Z 1	L 1	Tertiary Flake	5	1.
TU 12			Blocky Fragment	3	2.7
TU 12			Secondary Flake	1	0.6
TU 12			Tertiary Flake	1	0.7
TU 12			Broken Flake	1	2.3
TU 12			Scraper on Blocky Fragment	3	0.3
TU 12			Primary Flake	1	8.3
TU 12			Broken Flake	1	4.3
TU 12		L 1	Primary Flake	7	59.2
TU 12		L 1	Tertiary Flake	1	1.7
TU 12			Blocky Fragment	1	4.6
TU 12			Blocky Fragment	1	0.4
TU 12			Primary Flake	1	0.2
TU 12			Secondary Flake	1	0.1
TU 14	Z 1	L 2	Primary Flake	2	1.6
TU 14	Z 1	L 2	Tertiary Flake	1	6.1
TU 15	Z 1	L 1	Primary Flake	1	0.3
TU 15	Z 1	L 1	Tertiary Flake	1	66.7
TU 15	Z 1	L 2	Tertiary Flake	1	0.3
TU 16	Z 1	L 1	Other Biface thin incomplete	1	2.4
TU 16	Z 1	L 1	Spokeshave	1	0.5
TU 16	Z 1	L 1	Blocky Fragment	3	1.
TU 16	Z 1	L 1	Primary Flake	4	0.9

Prov. #	Zone	Level	Group	N	Weight
TU 16	Z 1	L 1	Secondary Flake	3	32.1
TU 16	Z 1	L 1	Tertiary Flake	2	0.1
TU 16	Z 1	L 1	Broken Flake	4	0.7
TU 17	Z 1	L 1	Primary Flake	1	0.3
TU 17	Z 1	L 1	Secondary Flake	1	0.2
TU 17	Z 1	L 1	Tertiary Flake	2	2.7
TU 18	Z 1	L 1	Other Biface thin incomplete	1	2.9
TU 18	Z 1	L 1	Primary Flake	3	87.
TU 19	Z 1	L 1	Blocky Fragment	1	5.5
TU 19	Z 1	L 1	Secondary Flake	3	5.4
TU 19	Z 1	L 1	Tertiary Flake	1	0.6
TU 19	Z 1	L 1	Broken Flake	1	1.6
TU 19	Z 2	L 1	Primary Flake	4	11.4
TU 19	Z 2	L 1	Secondary Flake	4	3.5
TU 19	Z 2	L 1	Tertiary Flake	2	0.4
TU 19	Z 2	L 1	Broken Flake	3	4.
TU 19	Z 3	L 1	Tertiary Flake	2	6.7
TU 19	Z 3	L 1	Broken Flake	1	1.
TU 20	Z 1A		PP/K Triangular distal fragment	1	2.9
TU 20	Z 1A		Blocky Fragment	1	0.1
TU 20	Z 1A		Primary Flake	3	1.2
TU 20	Z 1A		Broken Flake	1	8.8
TU 20	Z 1B		Other Biface thin incomplete	1	16.7
TU 20	Z 2		Tertiary Flake	1	0.5
TU 21	Z 1A	L 1	Blocky Fragment	6	1.

Prov. #	Zone	Level	Group	N	Weight
TU 21	Z 1A	L 1	Primary Flake	4	0.7
TU 21	Z 1A	L 1	Secondary Flake	4	0.2
TU 21	Z 1A	L 1	Tertiary Flake	4	2.1
TU 21	Z 1A	L 1	Broken Flake	4	22.6
TU 21	Z 1B	L 1	Blocky Fragment	1	16.6
TU 21	Z 1B	L 1	Primary Flake	2	0.8
TU 21	Z 1B	L 1	Secondary Flake	2	42.
TU 21	Z 1B	L 1	Tertiary Flake	2	0.1
TU 21	Z 1B	L 1	Broken Flake	3	22.3
TU 21	Z 2	L 1	Broken Flake	1	7.8
TU 21	Z 2	L 1	Blocky Fragment	2	4.9
TU 21	Z 2	L 1	Secondary Flake	1	1.5
TU 21	Z 2	L 1	Tertiary Flake	6	2.4
TU 21	Z 2	L 1	Broken Flake	13	25.3
TU 22	Z 1A	L 1	Other Biface thin incomplete	1	1.1
TU 22	Z 1A	L 1	Other Biface thin incomplete	1	3.5
TU 22	Z 1A	L 1	Blocky Fragment	4	0.8
TU 22	Z 1A	L 1	Primary Flake	6	0.6
TU 22	Z 1A	L 1	Secondary Flake	9	60.8
TU 22	Z 1A	L 1	Tertiary Flake	3	87.8
TU 22	Z 1A	L 1	Broken Flake	6	0.8
TU 23	Z 1B	L 1	Broken Flake	1	1.2
TU 23	Z 2	L 2	Broken Flake	1	3.6
TU 23	Z 2	L 2	Other Biface thin incomplete	1	2.1
TU 23	Z 2	L 2	Blocky Fragment	1	2.3

Prov. #	Zone	Level	Group	N	Weight
TU 23	Z 2	L 2	Primary Flake	1	2.3
TU 23	Z 2	L 2	Secondary Flake	2	6.5
TU 23	Z 2	L 2	Tertiary Flake	1	11.2
TU 23	Z 2	L 2	Broken Flake	1	0.8
TU 23	Z 1	L 1	PP/K proximal fragment	1	2.7
TU 23	Z 1	L 1	Blocky Fragment	6	1.1
TU 23	Z 1	L 1	Primary Flake	1	138.9
TU 23	Z 1	L 1	Secondary Flake	2	19.4
TU 23	Z 1	L 1	Tertiary Flake	2	0.9
TU 23	Z 1	L 1	Broken Flake	4	0.7
TU 24	Z 1A	L 1	PP/K Unidentified distal fragment	1	5.5
TU 24	Z 1A	L 1	PP/K Unidentified medial fragment	1	0.3
TU 24	Z 1A	L 1	Other Biface thin incomplete	1	0.7
TU 24	Z 1A	L 1	Core	1	2.7
TU 24	Z 1A	L 1	Blocky Fragment	6	31.5
TU 24	Z 1A	L 1	Primary Flake	4	6.8
TU 24	Z 1A	L 1	Tertiary Flake	4	1.4
TU 24	Z 1A	L 1	Broken Flake	7	0.3
TU 24	Z 1B	L 1	Primary Flake	2	1.
TU 24	Z 1B	L 1	Tertiary Flake	1	3.8
TU 24	Z 1B	L 1	Broken Flake	2	2.3
TU 24	Z 2	L 1	Blocky Fragment	1	2.3
TU 24	Z 2	L 1	Primary Flake	3	33.5
TU 24	Z 2	L 1	Secondary Flake	4	7.5
TU 24	Z 2	L 1	Tertiary Flake	7	25.2

Prov. #	Zone	Level	Group	N	Weight
TU 24	Z 2	L 1	Broken Flake	15	0.5
TU 24	Z 2	L 2	Blocky Fragment	1	6.8
TU 24	Z 2	L 2	Secondary Flake	2	1.1
TU 24	Z 2	L 2	Tertiary Flake	1	0.2
TU 24	Z 2	L 2	Broken Flake	3	1.1
TU 25	Z 1	L 1	Utilized Flake	1	2.6
TU 25	Z 1	L 1	Blocky Fragment	10	1.5
TU 25	Z 1	L 1	Primary Flake	6	4.5
TU 25	Z 1	L 1	Secondary Flake	1	1.1
TU 25	Z 1	L 1	Tertiary Flake	4	7.2
TU 25	Z 1	L 1	Broken Flake	8	2.3
TU 26	Z 1A	L 1	Blocky Fragment	5	1.1
TU 26	Z 1A	L 1	Primary Flake	3	0.1
TU 26	Z 1A	L 1	Tertiary Flake	3	0.9
TU 26	Z 1A	L 1	Broken Flake	4	1.7
TU 26	Z 1B	L 1	Blocky Fragment	1	11.3
TU 26	Z 1B	L 1	Primary Flake	1	20.3
TU 26	Z 1B	L 1	Secondary Flake	1	0.8
TU 26	Z 1B	L 1	Tertiary Flake	2	1.
TU 26	Z 2	L 1	Primary Flake	1	3.6
TU 26	Z 2	L 1	Secondary Flake	1	8.5
TU 26	Z 2	L 1	Tertiary Flake	3	5.2
TU 26	Z 2	L 1	Broken Flake	2	0.4
TU 27	Z 1A	L 1	Blocky Fragment	6	1.6
TU 27	Z 1A	L 1	Tertiary Flake	5	1.2

Prov. #	Zone	Level	Group	N	Weight
TU 27	Z 1A	L 1	Broken Flake	3	4.
TU 27	Z 1B	L 1	Other Biface	1	0.3
TU 27	Z 1B	L 1	Broken Flake	1	0.2
TU 27	Z 2	L 1	Blocky Fragment	1	0.3
TU 27	Z 2	L 1	Primary Flake	1	0.4
TU 27	Z 2	L 1	Secondary Flake	1	0.9
TU 27	Z 2	L 1	Tertiary Flake	1	0.2
TU 27	Z 2	L 1	Broken Flake	2	51.8
TU 28	Z 1A	L 1	Blocky Fragment	3	0.8
TU 28	Z 1A	L 1	Core	1	1.1
TU 28	Z 1A	L 1	Primary Flake	1	29.3
TU 28	Z 1A	L 1	Tertiary Flake	2	0.3
TU 28	Z 1A	L 1	Broken Flake	2	56.1
TU 29	Z 1A	L 1	Utilized Flake	1	2.6
TU 29	Z 1A	L 1	Blocky Fragment	6	1.4
TU 29	Z 1A	L 1	Primary Flake	4	0.1
TU 29	Z 1A	L 1	Secondary Flake	2	5.4
TU 29	Z 1A	L 1	Tertiary Flake	1	320.4
TU 29	Z 1B	L 1	Secondary Flake	1	11.8
TU 29	Z 1B	L 1	Tertiary Flake	1	1.
TU 29	Z 1B	L 1	Broken Flake	1	0.2
TU 29	Z 2	L 1	Core	1	3.6
TU 29	Z 2	L 1	Tertiary Flake	2	9.3
TU 30	Z 1A	L 1	Other Biface	1	29.1
TU 30	Z 1A	L 1	Utilized Flake	1	8.3

Prov. #	Zone	Level	Group	N	Weight
TU 30	Z 1A	L 1	Utilized Flake	1	0.9
TU 30	Z 1A	L 1	Utilized Flake	1	0.2
TU 30	Z 1A	L 1	Primary Flake	2	0.3
TU 30	Z 1A	L 1	Blocky Fragment	11	0.1
TU 30	Z 1A	L 1	Tertiary Flake	5	0.3
TU 30	Z 1B	L 1	Multi-edge Scraper	1	76.3
TU 30	Z 1B	L 1	Utilized Flake	1	0.2
TU 30	Z 1B	L 1	Primary Flake	2	0.6
TU 30	Z 1C	L 1	Utilized Flake	1	2.2
TU 30	Z 1C	L 1	Primary Flake	5	2.7
TU 30	Z 1C	L 1	Secondary Flake	1	0.6
TU 30	Z 1C	L 1	Tertiary Flake	5	5.
TU 30	Z 1C	L 1	Broken Flake	2	19.9
TU 31	SURFACE		PP/K Corner-notched complete	1	1.6
TU 31	Z 1A	L 1	Core	1	5.3
TU 31	Z 1A	L 1	Blocky Fragment	3	15.7
TU 31	Z 1A	L 1	Primary Flake	5	14.4
TU 31	Z 1A	L 1	Secondary Flake	2	2.4
TU 31	Z 1A	L 1	Tertiary Flake	1	4.
TU 31	Z 1A	L 1	Broken Flake	3	2.6
TU 31	Z 1B	L 1	Multi-edge Scraper	1	1.4
TU 31	Z 1B	L 1	Primary Flake	1	0.3
TU 31	Z 1B	L 1	Broken Flake	1	12.1
TU 31			Blocky Fragment	2	13.
TU 31			Primary Flake	2	12.2
TU 31			Other Biface	1	6.8

Prov. #	Zone	Level	Group	N	Weight
TU 31			Primary Flake	1	1.3
No provenience			Blocky Fragment	10	0.1
No provenience			Broken Flake	1	1.
No provenience			Core	2	6.8
No provenience			Primary Flake	2	3.
No provenience			Other Rock	1	0.4
No provenience			Secondary Flake	5	6.5
No provenience			Tertiary Flake	1	9.2

HISTORIC ARTIFACT CATALOGUE

ON CD

Appendix E

Dietary Patterns

DIETARY PATTERNS

Very little archaeological information regarding faunal and botanical remains was recovered from the plow zone and filled features at the Hardin farmstead. Because of the small size of this assemblage (n=499) and only a portion of the site contained within the right-of-way, only a little information can be said about the dietary pattern of the Hardin household and how it compares with the traditional Upland South dietary pattern of the southern U.S. The traditional pattern as characterized by Hilliard (1988) is a reliance on mostly pork and corn. McCorvie et al. (1989) has also shown that other domesticated and non domesticated plants and animals were also added to the diet based on availability.

Archival information has already revealed that pork and corn played a key role on the Hardin farmstead. In 1850, Hardin grew 2,500 bushels of Indian corn, 300 bushels of oats, 24 tons of hay, owned 30 pigs, eight sheep, nine working oxen, four milch cows, and one other cattle. Compared to his neighbors, Hardin grew nearly twice or more the corn and twice the amount of oats. His number of swine outnumbered most of the neighbors. In 1850, with his 40 sheep, Hardin produced 40 pounds of wool and with his four milch cows he was able to produce 250 pounds of butter. In addition, 300 pounds of beeswax/honey was produced in 1850. We know that Hardin was aggressively producing for the market, but some of this produce was used for his own household consumption.

Archaeologically, the few faunal remains (n=443) recovered from the domestic area (15On55) listed on Table 1 have shown that Hardin relied mostly on pig for his own household consumption, comprising 67% of the identifiable faunal specimens. Other faunal remains recovered revealed that this Upland South dietary pattern was also supplemented by wild game. The vertebrae faunal assemblage from the Hardin farmstead shows a mixed group of domestic and wild taxa with minimal burning, modest rodent modification, and little evidence of butchering (see Appendix C for Faunal Analysis). Identified domestic taxa include pig, cow, sheep, dog. Identified wild taxa include whitetail deer, rabbit, mice/rats/voles, woodchuck, and turtle (Tables 1 and 2). Unidentifiable bird was also recovered and may be chicken or turkey. Although Hardin did not list any chickens on either census from 1850 or 1860, he most likely raised some for his own consumption and not to sell. Gizzard sherds, recovered from the barn area of the site, confirm this.

Similar dietary patterns can be observed within other mid nineteenth century sites. One example is the upper-middle class ranking Drake farmstead in northern Illinois. There, pig comprised over 80% of the identified vertebrae remains. The remainder of the domestic assemblage consisted of a small amount of cow, and sheep or goat, and chicken. Wild game consisted of rabbit, woodchuck, skunk, goose, turkey, white sucker, and mussels. Beef and sheep both appear to be secondary in importance at both the Drake farm and the Hardin farm with nearly the same counts of both. At both sites, beef may have been consumed only when a cow was aged and of no further use. It was not until later in the nineteenth century that beef became an important source at the Drake site. Sheep also may have been more important as a cash produce for wool and not consumed until the

Table 1: Taxa Identified from 15ON55 Phase II/III Excavations

Taxa	NISP	Weight (g)
Invertebrates		
Mollusca	26	26.4
Total for Invertebrate class	26	26.4
Bird/Mammal		
Bird/Mammal	12	3.2
Total for Bird/Mammal class	12	3.2
Mammals		
Indeterminate Mammal	95	53.2
Indeterminate Very Small Mammal	3	0.5
Indeterminate Medium Mammal	75	94.6
Indeterminate Medium to Large Mammal	76	68.5
Cricetidae (mice, rats, and voles)	2	0.2
Odocoileus virginianus (whitetail deer)	3	92.1
Sylvilagus floridanus (Eastern cottontail rabbit)	1	0.3
Canivora canis (sp) (dog)	1	1.0
Carnivora canivora	1	0.6
Sus scrofa (domestic pig)	98	88.4
Bos taurus (domestic cow)	2	5.1
Caprine (sheep or goat)	1	6.8
Total for Mammal class	370	414.5
Reptile		
Testudinata testudinata	1	0.1
Unidentifiable		
Unidentifiable	46	15.8
Total for Unidentifiable class	46	15.8
Total for Phase II/III Excavations (15ON55)	**443**	**456.8**

Table 2: Taxa Identified from 15ON57 Phase II/III Excavations

Taxa	NISP	Weight (g)
Bird/Mammal		
Bird/Mammal	6	4.4
Total for Bird/Mammal class	6	4.4
Mammals		
Indeterminate Very Small Mammal	1	0.1
Indeterminate Small Mammal	6	0.5
Indeterminate Medium Mammal	1	0.6
Indeterminate Medium to Large Mammal	7	24.9
Cricetidae (mice, rats, and voles)	4	0.6
Marmota monax (woodchuck)	3	3.8
Sylvilagus floridanus (Eastern cottontail rabbit)	1	0.8
Odocoileus virginianus (whitetail deer)	2	7.4
Sus scrofa (domestic pig)	4	4.3
Bos taurus (domestic cow)	5	638.3
Total for Mammal class	37	690.4
Unidentifiable		
Unidentifiable	13	1.1
Total for Unidentifiable class	13	1.1
Total for Phase II/III Excavations (15ON57)	**56**	**695.9**

sheep was of no further use. We know Hardin was producing wool, but it is unclear whether or not they were producing wool at the Drake site.

A similarity is again observed at the Fair View farm, a middle nineteenth century to early twentieth century farmstead in southern Illinois. Occupied as early as 1853, the original occupants ranked in the lower-middle class socioeconomically and only later in the late nineteenth century prospered. One feature, Feature 2, was the only feature that dated to the early occupation with a mean ceramic date of 1858. The faunal assemblage recovered from Feature 2 reflected a similar pattern as the Hardin and Drake sites with pig again as the primary food source making up 70% of the assemblage. Cow and chicken followed in small quantity. Wild game was recovered and included opossum, squirrel, rat, white-tailed deer, turkey, and fish. Wild game made up of 18% of the assemblage at the Fair View site, very similar to both the Drake and Hardin sites, which also came in just under 20%. Both the Fair View Farm and Drake sight would later see a change of preference during the later occupation, but the middle nineteenth century occupations seem to be similar.

Very few faunal remains were recovered from the barn area (Table 2) of the Hardin farmstead (n = 55) in comparison to the domestic area (n = 443). What few faunal specimens were recovered from the plow zone and post fill in and around the barn area included cow, pig, bird (possibly chicken), deer, rabbit, and woodchuck. This suggests that most of the slaughtering of animals and

the preparation of meat occurred within the inner yard of the domestic area. A smokehouse would have likely been located near the dwelling and certainly the discarding of the bones from meat occurred near there. The faunal remains recovered from the Hardin site are dominated by pig, reflecting one of the major characteristics of the Upland South tradition and of the southern diet in general; that is, a reliance on pork (Hilliard 1988; Otto 1989). A moderate amount of the faunal remains consist of wild game as well. Apparently, wild game was used by the Hardin household to supplement a diet based on pork and corn products.