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Foodways, Economic Status, and the Antebellum Upland South in Central Kentucky

ABSTRACT

Regional cuisines or foodways have been a topic of interest to both historians and archaeologists for at least the past 30 years. Scholars recognize a regional foodway in the antebellum Upland South that is part of the larger "Upland South" cultural tradition. The agricultural and archaeological data on subsistence in the antebellum Upland South have been woven into an idealized set of subsistence practices that revolved around agricultural practices. The examination of four contemporaneous faunal assemblages representative of different societal classes living in 19th-century Kentucky shows that this generalized version of Upland South foodways does not hold true across economic classes. Instead, a closer look reveals that many people living on Kentucky's antebellum farmsteads struggled regularly for food security and that the idealized version of a shared "Upland South foodway" was restricted to the wealthy planter class that had ready access to the market economy.

Introduction

The earliest recorded historical archaeology in Kentucky was conducted in 1936, when William S. Webb and William D. Funkhouser recorded evidence of saltpeter mining in Menifee County rockshelter sites (McBride and McBride 1990b). Many of the subsequent investigations of Kentucky's historic sites in the 1960s and 1970s were conducted to aid the reconstruction of large plantations and urban residences, Civil War fortifications, and at least one mill site (McBride and McBride 1990b, 1993). Investigations such as these were common in historical archaeology during this time, causing the discipline to be viewed by some as a handmaiden to history (Harrington 1955; Noël Hume 1969; Faulkner 2003). In the late 1970s, the recording of historic sites increased, in conjunction with cultural resource management projects; however, many of these sites went unexcavated, with the exception of a few sites associated with individuals of the upper class of society. These excavations were largely descriptive, with few exceptions, and added to the database of historic sites, artifacts, and features of Kentucky.

Investigations of historic period sites in Kentucky have steadily grown in volume and complexity since the late 1960s, and by the mid-1980s, several full-scale excavations of sites from this time period were undertaken by archaeologists housed in government agencies (i.e., Kentucky Transportation Cabinet and Kentucky Archaeology Survey), universities (i.e., University of Kentucky and University of Louisville), and private cultural resource management firms (McBride and McBride 1990b). Analytically, a shift occurred from description of artifacts (late 1970s), to "synthetic and methodological studies," to "detailed problem-oriented research designs" (McBride and McBride 1990b:560). Research topics included settlement patterns, spatial organization, household formation, ethnicity, economic development, subsistence strategies, and social and economic status differences (McBride and McBride 1990b:560). Early analyses of faunal remains from historic sites in Kentucky date to the early and mid-1980s and focus on the collection of basic data (for example, Fay 1980; Walters 1985). Emphases were placed on species lists, minimum numbers of individuals, edible meat weights, and some taphonomic factors pertaining to sample formation.

The increased emphasis in historical archaeology placed on the study of foodways in general during the past three decades is evidenced by more systematic, comprehensive, and sophisticated zooarchaeological analyses performed on Kentucky sites during the 1990s and into the current decade. Sites like the William Whitely House (Linebaugh and Loughlin 2003), Vardeman House (Madsen et al. 2005; Peres 2005), Duckworth Farm (Peres 2003a), Cowan Farmstead (Peres 2003b; Huser and Lynch 2005), Armstrong Farmstead (Barber 2003), McConnell Homestead (Day and Clay 2000), Locust Grove (Young 1995b, 1997; Lev-Tov 2004), and Logan's Fort (Davenport 2000), among others,

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have allowed zooarchaeologists the opportunity to ask and answer questions pertaining to consumer choice, temporal and socioeconomic variations in diet, farmstead economies, regional foodways, and ethnicity.

While some thematic topics have gained the attention of Kentucky's historical archaeologists, Kim McBride and Stephen McBride (1990a, 1990b) emphasize the lack of attention to the topic of rural slavery in the antebellum period (1820–1861). This is not surprising, given that archaeology conducted pre-1990 at most historic sites in the commonwealth was concerned with large urban residences and even larger plantations. An exception is the multiyear excavation conducted at the Locust Grove plantation near Louisville, Kentucky, by the University of Louisville's Department of Anthropology. The multiyear excavations produced information about the slaves who lived at the site during the antebellum period (Young 1995a, 1995b, 1997; Young et al. 1995, 1998). The data from the three slave houses and corresponding pit cellars yielded important information on subsistence strategies practiced by the slaves at Locust Grove (Young 1995b, 1997; Lev-Tov 2004).

Regional cuisines or foodways have been a topic of interest to historians and archaeologists alike (Hilliard 1969, 1972, 1988; Owens 1976; Reitz and Honerkamp 1983; Brown and Mussell 1984; Berlin and Morgan 1991, 1993; Young 1993; Lev-Tov 1994; Singleton 1995; Patterson 1998; Poe 1999, 2001; Scott 2001; Hodgetts 2006; Reitz et al. 2006). The focus of defining regional cuisines within an archaeological framework is useful because it allows for the recognition of patterns and trends; however, a large database from the circumscribed region in question is needed to draw broad definitive conclusions on dietary patterning. Few would argue against the unique foodways that are part of the American South. In the antebellum period of Kentucky, scholars recognize a regional foodway that is part of the larger Upland South cultural tradition.

Historians and geographers (Bidwell and Falconer 1925; Power 1953; Hilliard 1969, 1972, 1988; Mitchell 1972, 1978; Mason 1984) have traditionally viewed Upland South foodways as an expression of values and farming practices shared by those living in Kentucky and Tennessee in the 19th century and based this on historic documents of agricultural production for the region. In contrast, archaeologists have tended to view Upland South foodways as shared but differentiated among socioeconomic classes and even ethnic groups, based on cuts of meat as interpreted from faunal assemblages (Walters 1985; Young 1993; McKelway 2000; Allgood and Kirkwood 2002). As often happens with archaeologists' views of the past, the foodways have been woven into an idealized or romanticized view of what life was like for people living in the past (Perkins 1991; Stothers and Tucker 2002; Cabak and Groover 2006). Upon further examination, however, this generalized version of Upland South foodways does not hold true across economic classes that were represented in Kentucky during the 19th century. Instead, a closer look reveals that many people living on Kentucky's antebellum farmsteads struggled regularly for food security and that the idealized version of a shared Upland South foodway was restricted to the wealthy planter class that had ready access to the market economy.

The Upland South Cultural Tradition

The term "Upland South" has been used to signify a geographic and physiographic region, a "highland way of life" (Jordan-Bychkov 2003:5), an agricultural complex, and a cultural tradition (Owsley 1949; Kniffen 1965; Mitchell 1972, 1978; Newton 1974; McCorvie 1987; O'Brien and Majewski 1989; McBride and McBride 1990b; Jordan-Bychkov 2003). Robert Mitchell (1978) and Terry Jordan-Bychkov (2003) describe the diffusion of different components of the Upland South cultural tradition from the primary "hearth areas" of the lower Delaware River Valley, the Chesapeake Tidewater, and the Carolina Low Country into the interior of the eastern United States and its eventual emergence in Kentucky and Tennessee. The expression of this tradition in Kentucky and Tennessee was distinct from that in the Lower South—an area known for the production of export crops such as cotton, rice, and sugar as well as corn, cattle, and mules. Additionally, the Lower South's farming practices centered on vast plantations worked by large populations of enslaved laborers, in contrast to the Upland South where fewer slaves were needed (Mitchell 1972; McKelway 2000). Farmsteads and plantations that fit into

the Upland South definition include those that were located in areas where mono-cropping was not environmentally feasible. Henry McKelway (2000:27) states that, archaeologically, Upland South plantations are found in specific physiographic regions, located to the north and west of the Coastal Plain, specifically, the Piedmont Plateau, Blue Ridge, Ridge and Valley, Appalachian Plateau, Interior Low Plateau, Ouachita Plateau, and Ozark Plateau.

The social and agrarian components of this tradition are the result of the fusion of elements from the primary hearth areas: the lower Delaware River Valley, where corn, wheat, and livestock were emphasized; and the Chesapeake region, where tobacco, hemp, and slavery were dominant. These ideals and preferences rapidly spread from western Virginia to central Kentucky after 1780 (Mitchell 1972:741, 1978:81) but also flourished in the Carolinas, Tennessee, northern Georgia, and Alabama and eventually spread into southeastern Illinois (Mitchell 1972; McCorvie 1987). By 1860, states situated in the Upland South region—Maryland, Virginia, North Carolina, Tennessee, Missouri, and Kentucky—led as the top producers of tobacco, hemp, and flax in the U.S. and were the "second-level producers" of corn, wheat, beef cattle, and hogs (Mitchell 1972:740). The antebellum expression of the unique Upland South culture in Kentucky included the diversified agricultural production of crops such as tobacco, hemp, flax, barley, rye, wheat, corn and the raising of pigs and cattle (Mitchell 1972, 1978). Generally, landholdings by individual Upland South planters were not as big as some of the plantations located in the Lower South (McKelway 2000). As in the Lower South, however, two classes of people existed in the agricultural Upper South: "direct producers, with the general status of 'slaves,' and owners with the general status of 'planters'" (Orser 1987:126). The need for copious amounts of labor, whether enslaved or hired, was not as prevalent in the Upper South as compared to the Lower South, due in part to the size of the farms, the crops under cultivation, and differences in environmental settings (McKelway 2000).

Documentary and archaeological research have shown that pigs, cattle, and other domestic livestock were important to antebellum farmstead economies in Kentucky and the surrounding region. One historic account of the livestock kept on Judge Adam Beatty's plantation in Mason County (situated due north of Bath County, along the present-day Kentucky-Ohio border) notes that, "large, stout horses and mules are mostly used for the farm work; the cows for milk, and the cattle for fattening, are principally a high cross of the Durham, the swine a greater or less intermixture of Irish Grazier or Berkshire; and the sheep of pure or mixed Merino blood" (Schwab 1973:302). The relative importance of domestic stock (especially pigs) versus wild species in the Upland South diet has been previously examined from site-specific contexts, and that importance is not disputed here (Walters 1985; McCorvie 1987; Young 1993; Lev-Tov 1994, 2004; Young 1997; Patterson 1998; McKee 1999; Day and Clay 2000; Tuma 2000; Allgood and Kirkwood 2002; Peres 2002, 2003a, 2003b, 2005; Groover 2003, 2005).

The research presented here compares the idealized Upland South foodways to the zooarchaeological records of four mid-19th-century farmsteads to better understand the role economic status played in the dietary reality of central Kentuckians. The study of these four sites together is able to provide a new and important contribution to the understanding of Upland South foodways because, unlike the material analyzed in previous studies, the sites examined here all fall within a restricted date range, and they represent at least three different economic classes of society in Central Kentucky. Furthermore, the author examined all of the faunal assemblages over a three-year period, making the data analyzed fully comparable from a methodological standpoint. The ultimate goal is to show that the foodways traditionally associated with the Upland South cultural tradition are largely idealized and do not reflect the daily food insecurities that different classes of this society faced.

Archaeology of Four Upland South Farmsteads in Central Kentucky

The zooarchaeological data from four contemporaneous sites are compared to assess the degree to which different economic classes in antebellum Central Kentucky participated in the Upland South foodways. The assemblages included here were recovered from sites dating from 1817 to

1870 and represent enslaved peoples as well as free planters from middling and wealthy economic classes.

Slaves Owned by Middling to Wealthy Planters: Duckworth Farm

The major component at the Duckworth Farm site (15BH212), located in Bath County, Kentucky, represents a domestic occupation that spanned approximately 75 years (ca. 1775–1850) (Peres 2003a) (Figure 1). The faunal remains discussed here belong largely to the period from 1817 to 1850 when the Duckworth family owned the property. Historic documents record that the Duckworths, a middling to wealthy family, owned properties in the nearby town of Sharpsburg in addition to the family farm. They raised wheat and "Indian corn," on the farm as well as horses, mules, cows and cattle, sheep, and hogs. They also owned slaves (Peres 2003a). Archaeobotanical analyses indicate that some of the plants that were being grown on the property included corn, peaches, gourds, and barley (Rossen 2003). The area excavated included two root cellars, the only remaining evidence of slave houses at the site (Peres 2003a). The faunal assemblage recovered from these two root cellars was large (n=5,104), owing to the remarkable preservation of the root cellar features.

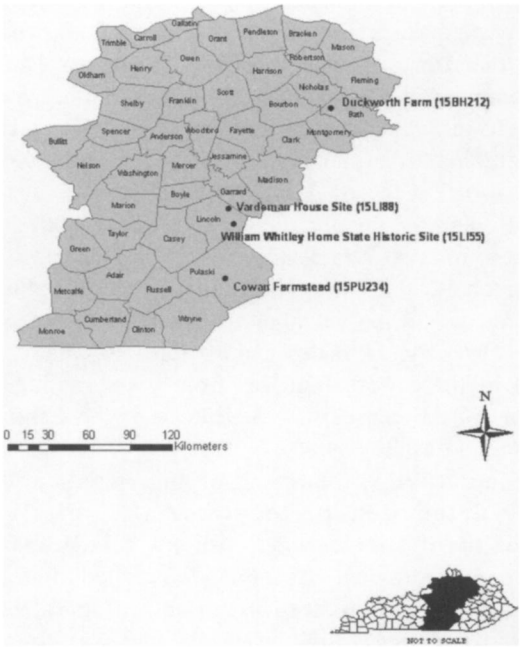

FIGURE 1. Location of Antebellum Upland South sites discussed in the text, central Kentucky. (Map by Lacey Fleming, 2007.)

Middling Class Planters: Cowan Farmstead

The Cowan Farmstead (15PU234) in Pulaski County, Kentucky, yielded deposits that date to the early- to mid-19th century (Figure 1). During the early historic period of Kentucky, Pulaski County was one of the most sparsely settled areas of the frontier; hence major transportation routes connecting the rural county to more urban areas were slow to develop (Torma et al. 1985:1; Huser and Lynch 2005). The Cumberland River was the main transportation route until 1877 when the railroad established a line through the county (Tibbals 1952; Huser and Lynch 2005).

The major component at the Cowan Farmstead is the 19th-century rural domestic occupation by Robert Cowan, his wife Elinore, and their 10 children. By 1829 this single-family farm totaled 244 acres, which were later divided between Robert's heirs according to his will (Henderson 1989; Huser and Lynch 2005). The Cowan family lived on the farm from as early as 1826 until after the death of Robert Cowan in 1845, and the contents of the residence and farm were divided in 1856 (Huser and Lynch 2005). According to the estate sale record of Robert and Elinore Cowan, the family raised cows, horses, pigs, sheep, oats, flax, wheat, and corn on the farm. The few faunal remains recovered from the excavated features, including a pit cellar, two fire pits, robbers' trench, two trash pits, robbed wall trench, privy shaft, and two features of unknown function, were combined to increase sample size. These deposits all date to the Cowan occupation of the property. The composite faunal assemblage totaled 966 specimens (Peres 2003b).

Slave-Owning Wealthy Planters: Vardeman House

The Vardeman House Site in Lincoln County, Kentucky, was owned and occupied by several

generations of the Vardeman family (Figure 1). John Vardeman, Jr., a member of Daniel Boone's company that blazed the Wilderness Trail into Kentucky, had acquired the land ca. 1781 from his son-in-law, William Menifee (Sussenbach 2000; Milton-Ping and Madsen 2005). Morgan Vardeman, who acquired the property from his father, John, was the head of household on record from 1803 until his death in 1844 (Milton-Ping and Madsen 2005). After his death, Morgan's son Jeremiah lived on the property until it was sold, sometime between 1851 and 1853, to Ephraim Pennington (Morgan's brother-in-law, Jeremiah's uncle, who occupied the William Whitley house during this period; see below). The dataset included here is from Morgan Vardeman's occupation of the site. Historic documents indicate that Morgan was a wealthy landowner and the local magistrate. He had numerous relatives living in Lincoln and adjoining counties (Madsen et al. 2005). In Morgan's will he refers to his landholdings as his "plantation," and it is clear from the numerous deed transactions recorded at the time that Morgan acquired more than 400 acres of land in Lincoln County during his lifetime (Milton-Ping and Madsen 2005:53). Census records indicate there were at least 5 slaves living on the Vardeman property in 1820, increased to 10 by 1840 (Milton-Ping and Madsen 2005). Additionally, historic documents indicate hogs (n=50), cattle (n=20), sheep (n=50), and horses (n=8) were being raised on the Vardeman farm (Milton-Ping and Madsen 2005). Available historic documents make little mention of crops being grown on the farm, although in Morgan Vardeman's will, several fields of corn were sold to Ephraim Pennington (Madsen et al. 2005:Appendix B).

The faunal remains included in this analysis were recovered from six trash pit features. The associated mean ceramic dates for these features, ranging from 1824 to 1828.5 ($\bar{x}$=1825.92), place them in contemporaneous association with one another. The total number of faunal remains recovered from these six features consists of 1,912 specimens (Peres 2005). The lengthy review of the Vardeman House Site is given here to underscore the fact that the Vardemans were relatively wealthy and had long-standing ties to the community.

Slave-Owning Wealthy Planters: William Whitley State Historic Site

The William Whitley State Historic Site (15LI55) in Lincoln County, Kentucky, was the state's first brick home, built in 1794 by William and Esther Whitley (O'Malley 2000; Linebaugh and Loughlin 2003) (Figure 1). The Whitleys had a circular clay racetrack for horse racing built in the 1790s, which increased the reputation of the home as a fall gathering place and earned it the nickname "Sportsman's Hill" (Kentucky Department of Parks 2005). William Whitley was killed in 1813, leaving his property to his wife Esther (Linebaugh and Loughlin 2003:13). The property was sold in 1824 to David Shanks who in turn sold it to Ephraim Pennington (Morgan Vardeman's brother-in-law) in 1827 (Lincoln County Deed Books 1827a, 1827b; Linebaugh and Loughlin 2003:13). Recent archaeological investigations have been focused on the period from 1827 to 1919 when the site was occupied by Ephraim Pennington and his family (Linebaugh and Loughlin 2003). Pennington was a farmer and a magistrate. Information in the 1840 census indicates that he and his wife (Bettie Vardeman) and their five children were living on the property. In addition, Pennington had 15 male and 17 female slaves, quite a few for a Kentucky landowner at that time (O'Malley 2000). Ten years later, Ephraim was living with his second wife, Jane, their infant son, and three of Ephraim's sons from his first marriage. His real estate value was in excess of $21,720, and he owned 16 male and 17 female slaves (O'Malley 2000). In 1860, his real estate value was $29,200, and his personal value was $19,115—very high values compared to his neighbors. Forty slaves lived on his property, 21 males and 19 females (although 14 of these were fugitives from the state at the time of the census) (U. S. Bureau of the Census 1860; O'Malley 2000).

The lengthy treatment of the Penningtons is included here to stress the relative wealth of this early Kentucky family. The zooarchaeological assemblage included in this study was recovered from an intact sheet midden dating from the 1830s that was found near the house. The faunal assemblage consists of 1,119 specimens.

Patterns of Subsistence and Economic Status in the Upland South

Faunal remains can be useful in answering questions about status-related behaviors and choices, but there are clear limitations when assigning status based on identified faunal remains (Reitz 1986, 1987; Lyman 1987). The use of the term "status" can be problematic if not defined clearly. The terms "social status," "socioeconomic status," and "class differentiation" are often used interchangeably, although they do not always mean the same thing (Otto 1980; Schulz and Gust 1983; Lyman 1987; O'Brien and Majewski 1989). A person's socioeconomic status may be defined by income level, thus controlling consumer choices, but social status may have no direct correlation to income level. In the present study, a person's status is defined as economic standing within a community. To relate status to consumer choice as reflected in the zooarchaeological record is dependent upon a number of variables. These variables include but are not limited to ethnicity, cost of product/service, access to resources/goods, time period, environment, and site function (Reitz and Scarry 1985; Reitz 1987:105–107; Scott 2001; Lev-Tov 2004). Many of these variables are interrelated and, if looked at individually, may produce data patterns that are similar to those produced by other variables, or as Elizabeth Reitz (1987:105) states, "ethnicity may become confused with a culture of poverty."

It is imperative that status interpretations be based on multiple lines of evidence, including documentary sources, architectural remains, and material culture in addition to faunal evidence (Reitz 1987; Spencer-Wood 1987; O'Brien and Majewski 1989). The use of a single-line of evidence, instead of multiple lines, may result in misleading interpretations of diet and subsistence at a site (McKee 1987; Crabtree 1990). Faunal remains and historical documents taken alone may not reflect the original diet or deposit, and other factors that operate directly on zooarchaeological assemblages such as taphonomy, disposal, and recovery of the remains must be taken into consideration. If not, archaeologists risk the misinterpretation of deposits based on what Justin Lev-Tov (2004:304) terms "ethnic faunal indices," when in reality the deposits may be reflective of economic status and access to resources, regardless of ethnic identity.

Status and ethnic determinations for the sites discussed here were based on multiple lines of evidence, including historical documentation, assemblage provenience, and material culture status markers. It is outside the scope of this paper to review the data for each of the four sites; for that, the reader is referred to works by Nancy O'Malley (1999), Donald Linebaugh and Michael Loughlin (2003), Tanya Peres (2003a), William Huser and David Lynch (2005), and Andrew Madsen and colleagues (2005). The goal of this research is to understand how food choices in the antebellum Upland South were affected by economic status and access to resources, regardless of ethnic identity.

One of the main traits of the "idealized" diet practiced in the Upland South is an emphasis on the consumption of pigs to the near exclusion of other domestic and wild animals. A number of studies have demonstrated that pork is a fundamental part of the Upland South diet (Breitburg 1976, 1983; Price 1985; Martin 1986; McCorvie 1987; Lev-Tov 1994, 2004; Day and Clay 2000; Peres 2002, 2003a, 2003b, 2005; Groover 2003, 2005). The intersite comparison presented here addresses the general diet at each site in terms of diversity and richness of taxa exploited, the composition of the diet in terms of wild and domestic animals, the importance of the hallmark Upland South dietary indicator (pig) at each of the sites, the application of Upland South consumption patterns to different classes of the Upland South society (wealthy planter, middling planter, slave), and the social and archaeological implications of the observed foodways.

The first component of the analysis is the diversity of species within each assemblage and among assemblages. Assemblage diversity was addressed in two ways. First, diversity of each assemblage is calculated based on the number of different taxa represented. The present analysis compares the species diversity of the four assemblages, using only the vertebrate taxa. The most diverse assemblage is that from the Duckworth Farm with 20 taxa represented. The Vardeman House and the Cowan Farmstead both had 12 taxa represented, and the William Whitley House is the least diverse, having 8

taxa represented. These numbers may be due to sample size but also may be due to other causes such as cultural and economic factors in play at the time of use and deposition, differential deposition, length of occupation of the site, and taphonomic factors.

A second approach to sample diversity is one that looks at the number of taxa that are expected for a particular sample size, thus allowing researchers to control for the potential bias of sample size. It is reasonable to assume that larger assemblages (in terms of NISP) tend to contain a richer composition of taxa than smaller assemblages (Reitz 1987; Rhode 1988; Kintigh 1989; Baxter 2001). It should not be assumed that larger assemblages with more taxa are more diverse than smaller assemblages with fewer taxa, as richness and equitability may be functions of sample size. To overcome the possibility that sample sizes are biasing interpretations of diversity within the four assemblages included here, the statistical program DIVERS was employed (Kintigh 1984, 1989, 1991). The DIVERS program compares the diversities of different assemblages to themselves, based on the expectations for diversity, given the sample sizes. The assemblages then are compared not to each other but, rather, to the expected diversity for a sample of a given size (Kintigh 1984). This allows zooarchaeologists to bypass the issue of sample-size differences completely. The actual values are then plotted against sample size with a 90% confidence interval that is based on the expected values (VanDerwarker 2006). Values that plot above the confidence interval are more diverse than expected, while values that plot below the confidence interval are less diverse than expected (VanDerwarker 2006).

Discrete taxa were entered into Kintigh's DIVERS program, and the results for diversity are plotted in Figure 2 and evenness in Figure 3. The center line of the plot indicates the expected richness or evenness, while the lines above and below the center indicate the 90% confidence interval for the expected values. The faunal assemblage from the Cowan Farmstead is within the 90% confidence interval, meaning that, given the sample size, the diversity values for this assemblage are what can be expected (Figure 2). In contrast, the other three sites show diversity values that are less rich than would be expected, given the sample size. The Duckworth Farm assemblage falls just below the confidence interval, while the William Whitely House and Vardeman House assemblages fall well below the confidence interval.

The evenness values calculated by the DIVERS program show that the Duckworth Farm faunal assemblage is more evenly distributed than expected, falling above the 90% confidence interval (Figure 3). The Cowan Farmstead faunal assemblage is the only sample that falls within the 90% confidence interval of the expected range of values. Both the William Whitely House and Vardeman House faunal assemblages fall below the 90% confidence interval for the expected evenness figures, thus these samples are skewed towards specific taxa. The results of the DIVERS analyses strongly suggest that the Vardemans and Penningtons (of the William

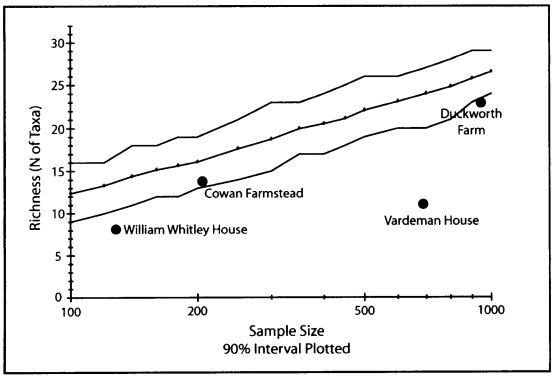

FIGURE 2. DIVERS richness plot of faunal assemblages, by site. (Graph by Amber M. VanDerwarker, 2006.)

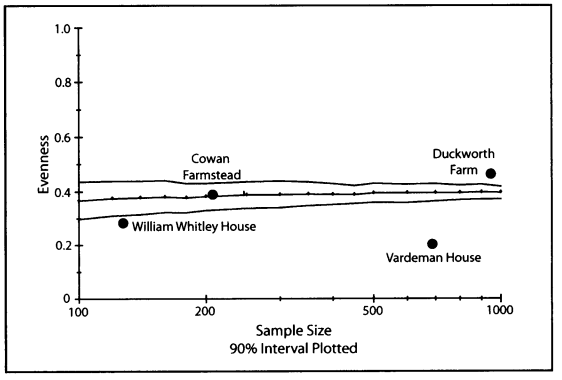

FIGURE 3. DIVERS evenness plot of faunal assemblages, by site. (Graph by Amber M. VanDerwarker, 2006.)

Whitely House) exploited fewer types of animals than did the occupants of the Cowan Farmstead and Duckworth Farm.

In addition to diversity and evenness of taxa, the four assemblages are composed of a variety of both wild and domesticated animals (Table 1); the second issue addressed is species use. Using NISP values for identified taxa (identified to genus or species), divided into either wild or domesticated, the percentage

TABLE 1
TAXA IDENTIFIED FROM SITES DISCUSSED IN THE TEXT

		Vardeman House		William Whitely		Duckworth Farm		Cowan Farmstead	
Taxon	Common Name	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI
Domesticated Taxa									
Canis familiaris	domestic dog	2	1	0	0	0	0	0	0
cf. *Felis domesticus*	domestic cat	0	0	0	0	3	2	0	0
Equidae	horse, mule, zebra	0	0	0	0	0	0	1	1
Equus caballus	horse	6	1	0	0	1	1	0	0
Sus scrofa	pig	588	9	96	2	532	41	128	2
cf. *Sus scrofa*	pig	3	0	0	0	0	0	0	0
cf. Bovidae	sheep, goat, bison, cows	0	0	0	0	1	1	0	0
Bovidae	sheep, goat, bison, cattle	2	0	5	1	0	0	0	0
Ovis/Capra sp.	sheep/goat	0	0	0	0	2	2	1	1
Bos taurus	domestic cattle	29	1	7	1	12	8	1	1
Gallus gallus	domestic chicken	0	0	10	1	149	16	36	2
Wild Taxa									
Didelphis virginiana	opossum	0	0	2	1	34	3	0	0
Talpidae	moles	0	0	0	0	5	3	0	0
Parascalops breweri	hairy-tailed mole	0	0	0	0	2	1	0	0
Mustelidae	weasels, minks, skunks, otters	0	0	0	0	3	2	0	0
Mustela sp.	mink	0	0	0	0	1	1	0	0
cf. *Ursus americanus*	black bear	0	0	0	0	1	1	0	0
Cervidae	elk, deer	0	0	0	0	3	0	1	0
Cervus canadensis	eastern elk, wapiti	0	0	0	0	3	1	1	1
cf. *Odocoileus virginianus*	white-tailed deer	0	0	0	0	0	0	2	0
Odocoileus virginianus	white-tailed deer	5	1	2	1	28	2	16	2
Rodentia	rodents	2	0	0	0	0	0	1	1
Marmota monax	woodchuck	0	0	1	1	0	0	0	0
Sciuridae	chipmunks, squirrels, muskrats	0	0	0	0	2	0	0	0
cf. *Tamias* sp.	chipmunk	0	0	0	0	2	1	0	0
Sciurus sp.	squirrel	1	0	0	0	47	7	0	0
cf. *S. carolinensis and niger*	gray and fox squirrel	0	0	0	0	2	1	0	0
Sciurus carolinensis	gray squirrel	14	2	0	0	23	11	0	0
Sciurus niger	fox squirrel	11	1	0	0	98	8	0	0
Cricetidae	rats and voles	0	0	0	0	2	2	0	0
Sylvilagus sp.	rabbit	0	0	1	1	16	4	0	0
Sylvilagus floridanus	eastern cottontail	0	0	8	1	2	1	6	1
Phasianidae	bobwhites	9	2	0	0	0	0	0	0
Turdus migratorius	American robin	0	0	0	0	0	0	4	1
Amphibia	amphibians	0	0	0	0	1	1	5	1
Ranidae/Bufonidae	frogs/toads	0	0	0	0	17	3	0	0
Osteichthyes	bony fishes	0	0	4	1	3	1	7	1
Ictaluridae	freshwater catfish	0	0	0	0	1	1	0	0

TABLE 1 (CONTINUED)
TAXA IDENTIFIED FROM SITES DISCUSSED IN THE TEXT

		Vardeman House		William Whitely		Duckworth Farm		Cowan Farmstead	
Taxon	Common Name	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI
Wild Taxa (Continued									
Aplodinotus grunniens	freshwater drum	0	0	0	0	0	0	4	2
Micropterus salmoides	freshwater bass	0	0	2	1	0	0	0	0
Bivalvia	bivalves	6	1	4	3	47	12	17	0
cf. *Villosa taeniata*	painted creekshell	0	0	0	0	0	0	5	2
Gastropoda	gastropods	6	1	1	1	6	3	3	0
Anguispira alternata	flamed tiger snail	0	0	0	0	6	3	0	0
Anguispira cumberlandia	Cumberland tiger snail	0	0	0	0	4	3	0	0
Helix sp.	garden snail	1	1	0	0	0	0	0	0
Mesodon thyroidus	white-lip globe	0	0	0	0	0	0	2	2
Stenotrema sp.	slitmouth snail	0	0	0	0	8	5	1	1
Stenotrema stenotrema	inland slitmouth	0	0	0	0	2	2	0	0
Mollusca	mollusks	25	0	2	0	2	0	0	0
Indeterminate Domesticated/Wild Taxa									
Vertebrata	vertebrates	117	0	3	0	258	0	8	0
Mammalia	mammals	938	0	760	0	2,933	21	497	0
Canis sp.	dog, wolf, coyote	1	0	0	0	0	0	0	0
Artiodactyla	"even-toed" ungulates	0	0	2	0	0	0	0	0
Aves	birds	99	0	209	1	809	16	216	0
Anatidae	ducks, geese	14	0	0	0	12	3	0	0
Branta canadensis	Canada goose	21	3	0	0	1	1	0	0
cf. *Branta canadensis*	Canada goose	2	0	0	0	0	0	0	0
Meleagris gallopavo	turkey	2	1	0	0	17	3	2	2
TOTALS		1,912	25	1,119	17	5,104	199	966	24

of wild vs. domesticated taxa are compared. Identified taxa are those specimens that are identifiable to genus or species. The more general categories that subsume both wild and domestic taxa as well as geese and turkey were not included in either category since it is unclear if these are domesticated or wild forms. The Duckworth Farm slave assemblage has the highest wild to domesticated ratio of the four sites (Table 2). The wild taxa portion of the Cowan Farmstead assemblage is lower than the Duckworth Farm assemblage but is higher than the William Whitley midden assemblage. The Vardeman House assemblage is comprised predominantly of domestic animals with a very low percentage of wild taxa represented. The slaves at the Duckworth Farm appear to have used the most wild taxa out of all the groups represented in this study. The Vardemans, the wealthiest group in this study, were using the least amount of wild taxa and the highest amount of domestic taxa.

The third issue addressed in this analysis is the occurrence of pork at each of these sites. Settlers on the western frontier are traditionally thought to have relied on whatever locally available foods they could hunt to survive (Hilliard 1972). This traditional theory has not been borne out in historic documents or the archaeological record of the antebellum Upland South. In fact, settlers relied on the high productivity of the domestic swine that they brought with them into the region (Hilliard 1988). Indeed, according to Sam Hilliard (1969, 1972), Kentucky and Tennessee were the highest pork-producing states from 1840 to 1860, based on census records. This is not to say that local wild animals were not eaten, for they certainly were. By whom

TABLE 2
PERCENT NISP OF WILD VS. DOMESTICATED TAXA IDENTIFIED AT EACH SITE

	Vardeman House	William Whitely	Duckworth Farm	Cowan Farmstead
Wild Taxa	4.66%	12.40%	27.81%	19.62%
Domestic Taxa	91.69%	87.60%	70.18%	79.43%

and to what degree they were eaten, however, is unclear.

In the Duckworth Farm faunal assemblage, pig is represented by 54.68% of the identified faunal assemblage (Table 3). Cows, sheep/goat, and chickens are represented as well. In addition, there were numerous eggshell fragments present in the assemblage; they could not, however, be identified to a specific bird species. As can be seen in tables 1 and 2, many of the wild taxa are more abundant in this assemblage than the domesticated species.

The Cowan Farmstead faunal assemblage contained the lowest percentage of pig in any of the comparative assemblages but not in a significantly lower amount than the majority of the other assemblages. The other domesticated mammals in this assemblage are all represented by one specimen each and include the horse, sheep/goat, and cow.

The William Whitley faunal assemblage included the highest occurrence of pig. Other domestic animals identified include cow and chicken. There were also numerous eggshell fragments present in the assemblage; they could not, however, be identified to a specific bird species. The extremely low number of cow remains recovered from the intact sheet midden may be evidence that cows were used for their secondary resources, such as dairy products and labor, or raised to sell at market.

Pig is one of two domestic animals identified in the Vardeman House assemblage; the other is cow. The Vardeman House faunal assemblage shows a heavy reliance on domestic mammals, particularly pigs. One can conclude that the Vardemans were subsisting mainly on pork, using few wild taxa to augment their diet. Beef seemed to have played a very small role in their diet, even though cattle were being raised at the Vardeman House site. The faunal assemblage is similar in domestic livestock composition to the others described here but does exhibit some differences, such as the lack of specifically identified chicken remains (although these may be included in Galliformes and are listed in the estate sale of bill).

TABLE 3
PERCENT NISP OF PIG (*SUS SCROFA*) FROM IDENTIFIABLE PORTIONS OF FAUNAL ASSEMBLAGES

	Vardeman House	William Whitely	Duckworth Farm	Cowan Farmstead
Pig (*Sus scrofa*)	55.76%	71.82%	54.68%	53.00%
Remainder of identifiable assemblage[a]	44.24%	28.18%	45.32%	47.00%

[a]Identifiable assemblage refers to those taxa identified to genus or species level.

Discussion

The comparison of these four historic faunal assemblages supports the view that pork was very important in the Upland South cultural tradition practiced in Kentucky in the 19th century. It appears, however, that the only constant in the Upland South diet is the widespread consumption of pork. The variation in diet among the four Central Kentucky sites compared here shows that use of domesticated animals as the foundation of the Upland South diet was variable. Dietary practices were restricted by access to resources and economic status. Animals that could be hunted, trapped, or fished were important to those economic classes that were faced with food shortages when the availability of domestic livestock was limited due to restricted access (i.e., accessible markets, money, food rations).

Differential access to food was surely a factor for some economic classes in the Upland South. Detailed discussions of slaves, subsistence, and risk theory are available elsewhere (McKee 1988, 1999; Berlin and Morgan 1991, 1993; Young 1997; McKelway 2000; Lev-Tov 2004), so only a summary will be offered here. The diets of enslaved groups in the Upland South were dependent on a number of factors, which have been incorporated into what Larry McKee (1988:28) calls a "subsistence triangle." These factors include (1) provision/rations provided

by the masters, (2) self-production of produce and livestock, (3) hunting/fishing/gathering, and (4) theft of food from the master's coffers. The archaeological correlates of some of these factors likely overlap, as for the case of self-production of crops and livestock vs. theft. Some of these factors may not leave a strong signature at all (i.e., provisioning of salt pork, cornmeal, molasses). Generally the strongest case can be made for hunting and fishing by enslaved persons, as evidenced in faunal assemblages (i.e., diversity of wild taxa). One must be cautioned against making assumptions about economic or social status based solely on the presence of a variety of wild taxa from farmstead faunal assemblages. The presence of wild taxa should not be the only line of evidence considered when determining ethnicity of a site or assemblage.

A diet consisting of domestic animals, especially pork, augmented by wild taxa, was followed by the slaves at the Duckworth Farm. This supports the hypothesis that the slaves there followed a modified Upland South diet, in which wild animals were regularly used to supplement the diet. The domestic animal portion of the slave diet may have been rationed by the master, bought, expropriated from the master, or raised by the slaves themselves. If they were raising the animals themselves, this suggests that they may have had to be self-reliant in providing their own food. In the absence of documentary evidence to support or refute the degree of self-reliance of these individuals, and regardless of what provisions (or lack of) were provided by the Duckworth family, the analysis of the faunal assemblage suggests that the slaves at this site had to hunt to meet their dietary needs, not an uncommon practice in Kentucky and Tennessee. This phenomenon has been illustrated at other sites (Young 1997; McKelway 2000; Lev-Tov 2004). Additionally, the high diversity of taxa represented at this site attests to this practice. The diet followed by the slaves at the Duckworth Farm is one based in Upland South realities (i.e., the major crops and livestock produced in the region) but deviates from the idealized notion of Upland South foodways. Food insecurity would have been common for those groups that had limited access to markets and domestic livestock, as was the case for most slaves. The dietary remains analyzed from the root cellars attributed to the slaves living at the Duckworth Farm were likely influenced equally by economic status and limited access to resources.

Also interesting are the data from the Cowan Farmstead. The Cowan family is not considered to have been of low economic status; rather, this was a middling, landowning, planter family living in a very rural, sparsely populated area of central Kentucky. The family's access to markets would have been limited due to the absence of substantial trade routes in Pulaski County at that time. Given the low population density and isolation of the area, among other factors, it is likely the Cowans hunted wild animals in addition to slaughtering some of the domestic animals they raised, either by necessity or choice. The DIVERS analysis of the assemblage recovered from this site shows that the Cowans had a varied diet, in that one or a few taxa were not favored to the exclusion of all others. The importance of hunting wild animals for even middling planter families living in the Upland South during the 19th century is underscored at this site. The faunal assemblage suggests that the inhabitants of the Cowan Farmstead followed the Upland South diet to the extent that they could. The location of the farmstead in Pulaski County suggests that it may have been relatively isolated until the late-19th century when the Cincinnati & Southern Railway built a line through the county (Tate 1992:748). This isolation may have resulted in residents of the county subsisting on what livestock they could raise and animals they could hunt and catch locally.

The analysis of the Cowan Farmstead faunal assemblage is most similar to the assemblage from the Duckworth Farm, suggesting that access to resources, regardless of economic standing, is the highest-ranking factor in the diet followed by individuals living in the early- to mid-19th-century Upland South. For those individuals who were both impoverished and living in rural isolated areas, the daily subsistence struggle would surely have been even more pronounced. It should be noted that while everyday diet composition for these two groups may have been similar, food was likely prepared in ways that had different meanings for each group. Additionally, these faunal assemblages almost certainly reflect the everyday diet and not any special meals, foods, or seasonings that people

from different economic classes may have had.

The diets interpreted from the Vardeman House and William Whitley House sites are the most similar in this analysis. What is most interesting about the Vardeman House faunal assemblage is the low variety of domesticated species the wealthy inhabitants here seemed to have consumed. According to the available documentary evidence, at least six different animals (horses, pigs, cows, mules, sheep, and chickens) were being raised at the farmstead, yet only two of these (pig and cow) are definitively represented in the archaeofaunal record. Given the added value of horses, cows, mules, sheep, and chickens, it is likely that some of these animals were eaten on an infrequent basis, if at all. The secondary resources these animals can provide in the form of traction (horses, mules, cows), transportation (horses, mules), dairy products (cows), wool (sheep), eggs (chicken), and economic profit (horses for racing, and breeding; horses, cow, mules, sheep, and eggs for sale or trade) will always be underrepresented in archaeofaunal assemblages.

The faunal assemblage recovered from the Pennington occupation of the William Whitley House suggests a fairly restricted diet, one that closely follows the idealized Upland South foodways. The Penningtons subsisted mainly on pork and chicken, supplementing these with very few wild animals. This may speak to the Penningtons relatively higher socioeconomic status as compared to the other assemblages included in this analysis. Given the high economic status and physical location of the Vardeman and Pennington families, access to markets would have been fairly stable and regular, which is evident in the material culture recovered from excavations at these sites (Linebaugh and Loughlin 2003; Madsen et al. 2005). In addition, the Vardemans and Penningtons were part of a larger extended kin group, and this undoubtedly affected the food available to these two families. To what extent, however, is unclear at this time.

Conclusions

In summary, the faunal assemblages recovered from four contemporaneous sites in Central Kentucky analyzed here can nuance understanding of the foodways idealized as part of the Upland South cultural tradition. Previous research has shown that pig, cattle, and other domestic livestock were important to antebellum farmstead economies in Kentucky. It should be noted, however, that the importance of domestic animals in Upland South foodways has been overstated. All evidence points to pig as the most important faunal resource for this region during the 19th century. The research here does not dispute this. The research presented here does suggest, however, that some economic classes were faced with food insecurity and thus hunted wild animals to fill the dietary gap. The faunal assemblages from both impoverished slaves and middling planters show that limited access to resources, whether due to social standing (slaves) or isolation from markets and necessary transportation routes (regardless of economic situation), was the main factor in dietary choices during this time. Based on the faunal assemblages from these two sites, it appears that the slaves at the Duckworth Farm and the Cowan family of Pulaski County had similar diets. These two groups also had the most limited access to resources. Concomitantly, the Vardemans and Penningtons, two related kin groups of high economic status, had the most restricted diet (in terms of species diversity) and would have had the most access to resources via family relationships, wealth, and markets. The traditionally held notion that people living in the Upland South during the 19th century followed a circumscribed set of foodways has been shown to have been an overdrawn ideal that does not match the practice of those groups with poor market access, whether due to low social and economic standing or to living in isolated rural areas.

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