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Cover Page Footnote

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STATUS, TECHNOLOGY, AND RURAL TRADITION IN WESTERN PENNSYLVANIA: EXCAVATIONS AT THE SHAEFFER FARM SITE

John Bedell, Michael Petraglia, and Thomas Plummer

Archaeological excavations have been performed at the Shaeffer Farm site (36AR410), a rural residence in Armstrong County, Pennsylvania. Documentary research and archaeological investigations indicate that the site was mainly occupied in the 19th century, probably by the Shaeffer family during its earliest occupation phase, and later by tenants. The site consisted of a dry-laid stone foundation and artifacts dating from approximately 1830 until shortly after 1900. The artifacts included architectural, domestic, faunal, and personal items. The study provided information about the lives of rural middle- and lower-class residents in western Pennsylvania, focusing on the housing, diet, recreation, and social aspirations of the residents. Information was obtained about the nature of small farming communities in American backcountry areas and the attitude of farmers toward an increasingly capitalist marketplace.

Des fouilles archéologiques ont été effectuées au site de la ferme Shaeffer (36AR410), une habitation rurale dans le comté d'Armstrong en Pennsylvanie. Les recherches historiques et archéologiques ont révélé que le site avait été occupé principalement au XIX^e, probablement par la famille Shaeffer à l'origine, puis par des locataires. Le site comprenait des fondations en pierres sèches et des artefacts qui remontent à une période qui s'étend de 1830 environ jusqu'à un peu après 1900. Il s'agit de quincaillerie de bâtiment, d'objets domestiques et agricoles, d'effets personnels et de restes fauniques. L'étude a livré des informations sur les modes de vie des classes moyennes et pauvres du milieu rural de l'ouest de la Pennsylvanie, en particulier concernant le logement, l'alimentation, le loisir et les aspirations sociales de résidents ruraux. Des renseignements ont été obtenus sur la nature des petites communautés agricoles dans les zones d'arrière-pays américains et sur les attitudes des fermiers vis-à-vis un marché de plus en plus capitaliste.

Introduction

The historical archaeology of western Pennsylvania has been studied little, and important questions about the lives of the residents in the 18th and 19th centuries have therefore remained unanswered and essentially undiscussed (Davis 1985). With the excavation of the Shaeffer Farm site

(36AR410), a 19th-century, rural domestic site in Valley Township, Armstrong County, Pennsylvania (FIG. 1), a small but interesting step has been taken to change this situation. The site was discovered during the cultural resources survey of a pipeline corridor (Petraglia et al. 1992a). Evaluation of the site indicated its potential to contribute to our knowledge of regional

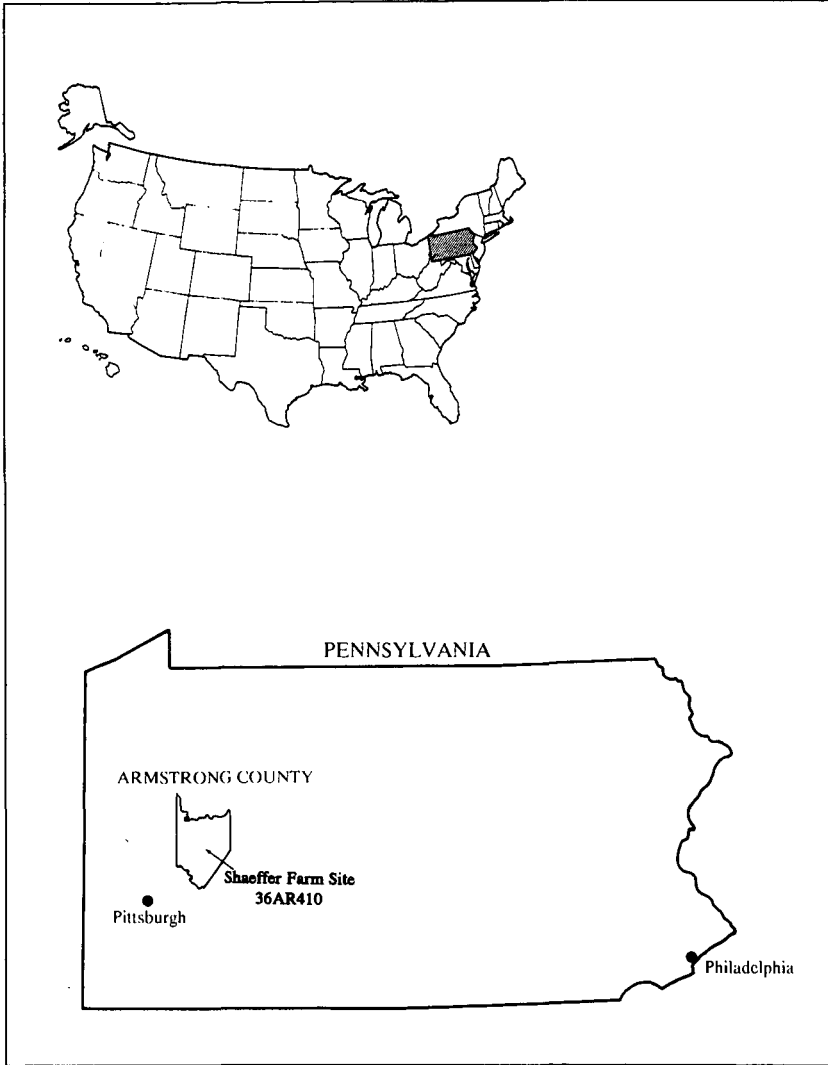


Figure 1. Location of the Shaeffer Farm site (36AR410), Valley Township, Armstrong County, PA.

history, especially given the paucity of historical archaeological research in the region (Petraglia et al. 1992b). Artifacts recovered from the initial testing dated the occupation of the site from c. 1830 to 1900.

Excavation of the site was carried out by Parsons Engineering-Science (Bedell et al. 1993). This paper is intended as a brief summary of the investigations. The first section of the paper

describes the site setting, followed by a discussion of the historical background, descriptions of the archaeological methods and the archaeological findings, analyses of recovered artifacts and faunal remains, and conclusions. This study provides much valuable information on the diet, material culture, market involvement, and social aspirations of upland farmers in 19th-century Pennsylvania.

Site Setting

The Shaeffer Farm site was located 335 m (1100 ft) above sea level in a small, steep valley, on a moderate (19%) slope overlooking a small stream (FIG. 2). The site extended from the bank of the stream 40 m (130 ft) up the slope to an overgrown dirt road. Archaeological investigations were confined to the 80-foot-wide (24.3 m) pipeline corridor, hence the north-south dimensions of the site are not known. No structures were apparent beyond the pipeline corridor, with the exception of the stone-lined spring set into the bank of the stream 20 m (66 ft) northwest of the house.

The focal point of the Shaeffer Farm site was a foundation made of uncut, dry-laid stone blocks. The foundation measured approximately 8 m (27 ft) north-south by 3.75 m (12 ft) east-west. The foundation was about 7 m (23 ft) from the stream bank, and the house probably faced downslope, toward this stream; the road upslope from the house is probably a more recent logging road and is not associated with the house site.

The setting of the Shaeffer Farm site has implications for the use of predictive site location models to guide archaeological survey. The Shaeffer house is not shown on any 19th-century map of the region, nor are the two nearby roads. Its location could not, therefore, be predicted from map research. Because of the area's 19% grade, the site's location would also have been considered a low probability area in most topographically-based site location models. The discovery of this significant site in such an unpromising location underscores the importance of including surface reconnaissance and testing of low-probability areas in all survey designs.

Historical Background

The Shaeffer Farm site is located on a 100-acre parcel purchased from land speculators in 1830 by George B. Shaeffer for \$56.50 (Armstrong County Deed Book 6: 445). The Shaeffer family owned and occupied the property until 1864, and from that time until its abandonment around 1900 the site was owned by absentee landlords and occupied by tenants.

In 1830 the hill country east of Kittanning, where the site is located, was very sparsely settled. In that year, Kittanning Township, which included what are now the Valley, Rayburn, Boggs, and Pine townships and the borough of Kittanning, contained 1,632 inhabitants, perhaps 10 per square mile. By 1860 the area, still rural, held 6,280 persons, a 384% increase. The Shaeffers must have experienced many of the patterns of frontier life even though other parts of western Pennsylvania had been settled for 50 years. Shaeffer appears in the 1830 U.S. census for the area and was assessed for this property in 1831 (Smith 1883: 131). According to the census, Shaeffer's household contained ten other persons: his wife, aged 30-40; two sons, aged 20-30 and 15-20; and seven daughters, two under 5, two aged 5-10, one 10-15, and two 15-20. In the 1840 census Shaeffer identified his birthplace as Pennsylvania.

In 1848 George Shaeffer retired and entered into an agreement with his son Charles that survives in the county courthouse (Armstrong County Deed Book 17: 131). This agreement, of a very common type, enabled Charles to take possession of the farm as long as he cultivated the land and gave one third of all the grain produced to his parents for the remainder of their lives. After their decease, the tract

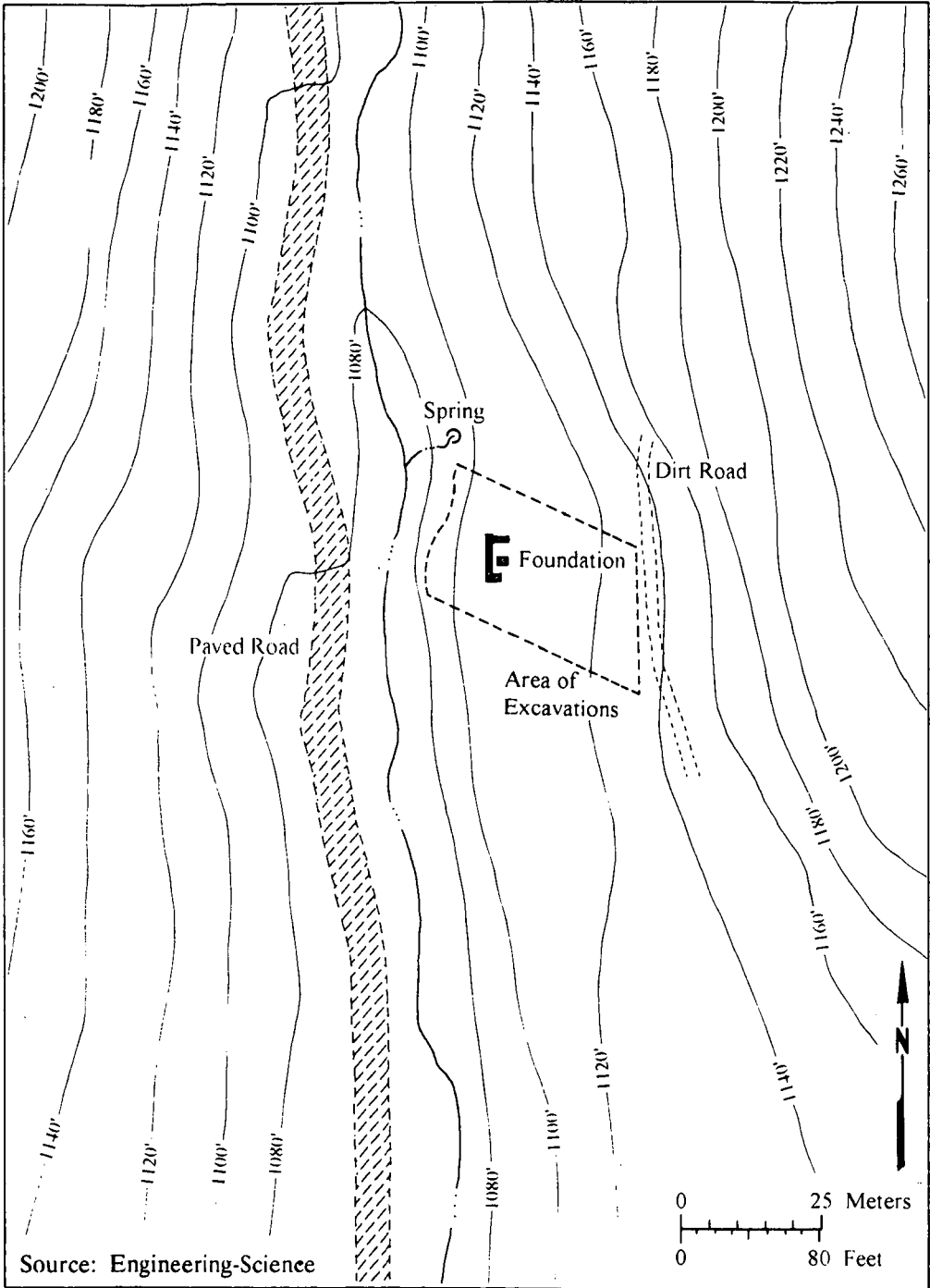


Figure 2. Site setting.

was to be his when he paid each of his siblings \$525.

The 1850 census records George and Charles living in separate but adjacent houses. George gave his age as 65, thus he was born about 1785 and retired when he was 63. He entered his profession as blacksmith. His son Charles was 37 at that time and he shared his house with his wife Mary, 38, and five daughters, aged 6 months to 11 years. Charles did not continue his father's blacksmithing business; at that time and thereafter he described his profession as farmer.

George Shaeffer probably died sometime before 1860, since he is not recorded in that census. Charles and Mary still had five children living at home, the oldest now 20. The 1860 census included, for the first time, questions about the wealth of Americans in both real estate and personal property. While the responses are not completely reliable, they provide a rough way to measure the Shaeffers' wealth against that of their neighbors. Charles Shaeffer told the census taker he was worth \$1000, \$500 each in real estate and personal property. Data from the same census indicate that in Valley Township, the mean wealth of the 247 male heads of household was \$1485 and the median was \$600. Among the 72 property-owning men listing their occupation as farmer, the mean wealth was \$2877 and the median was \$2200. The Shaeffers, although they were better off than many landless laborers in the district, were in the 15th percentile of wealth for landed farmers, and we should probably place them at the bottom of Armstrong County's middle class.

In 1864 the Shaeffers sold 30 acres of their property, including site 36AR410, to George A. Wesler for \$300 (Armstrong County Deed Book 28: 69).

Wesler is not listed in the 1871 tax assessments, but Shaeffer is assessed for the remaining 70 acres. The 1876 assessments list the owner of the 30 acres as the Hannah Wesler heirs and value the land at \$270 (Valley Township Tax Assessments). No Weslers appear in the 1870 census for Valley Township, so it is likely that they were absentee landlords. After the Weslers, the property was owned by Mary Elizabeth Runyan. Runyan was a common name in Armstrong County but no Runyans were recorded in either the 1880 or 1900 census for Valley Township, so the Shaeffer Farm site probably continued to be occupied by tenants.

The division of the Shaeffer property presents some problems of interpretation. By 1850 the elder and the younger generations of Shaeffers were already living in separate houses. It seems likely that when he took over the farm from his father, Charles built a new house for himself and his family, a common event. The house at the Shaeffer Farm site must be part of the original settlement, since artifacts from the historical site date it to the 1830s. The second house may be the one identified on the 1861 Hopkins and Hopkins map and the 1876 *Beach Atlas of Armstrong County* as the residence of C. Shaeffer, about 32 m (0.2 mi) north of 36AR410. (These maps show no house near the current location of 36AR410.) From 1848 until both the elder Shaeffers died (some time between 1850 and 1860), the Shaeffer farm probably housed George and his wife in their retirement. From then until 1864 we have no information; the house may have been rented, or it may have been unoccupied. The people who owned the house between 1864 and its abandonment around 1900 did not live in Valley Township; therefore, during that period therefore, the house was probably occupied by tenants.

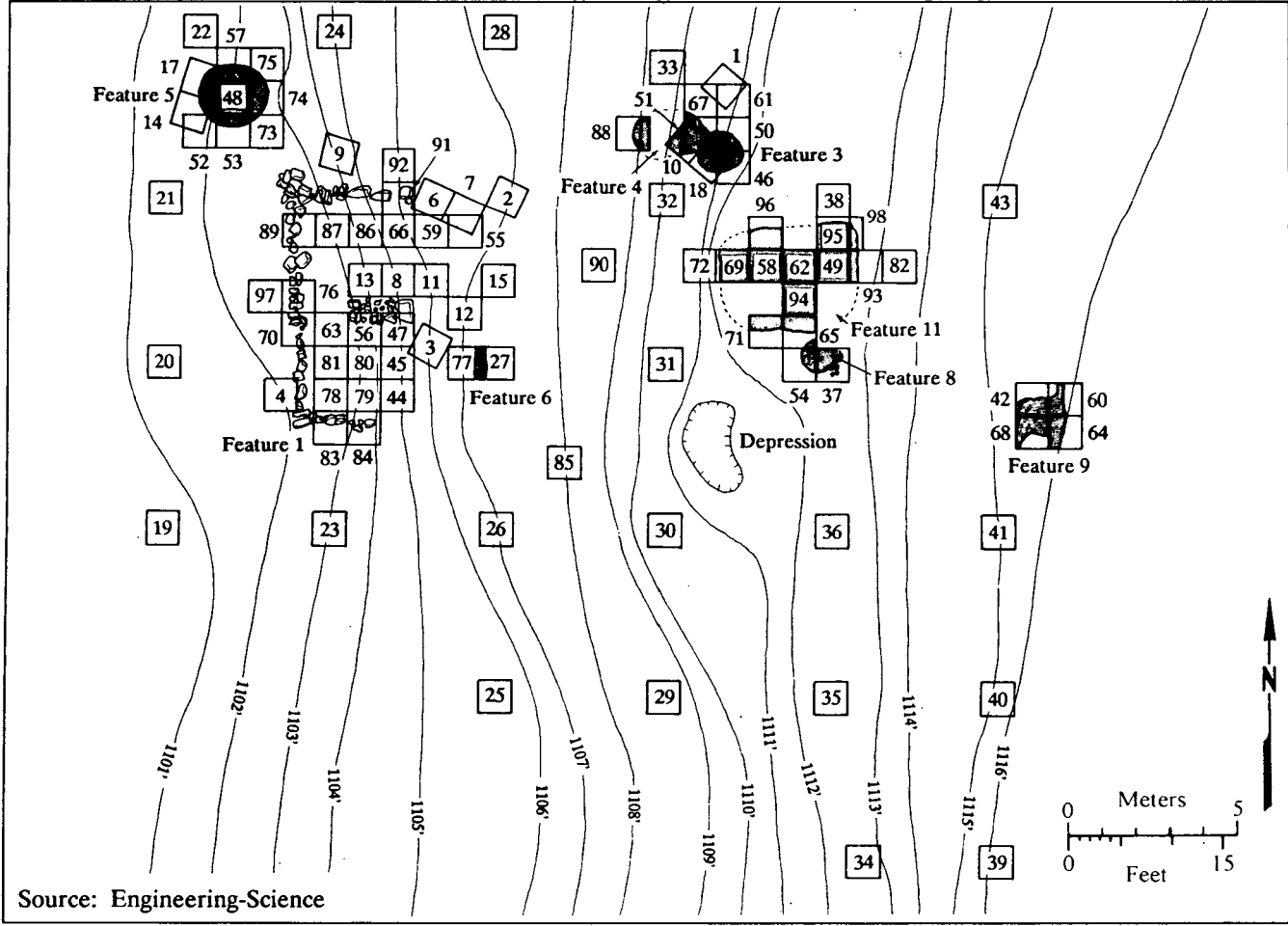


Figure 3. Plan of excavations at the Shaeffer Farm site.

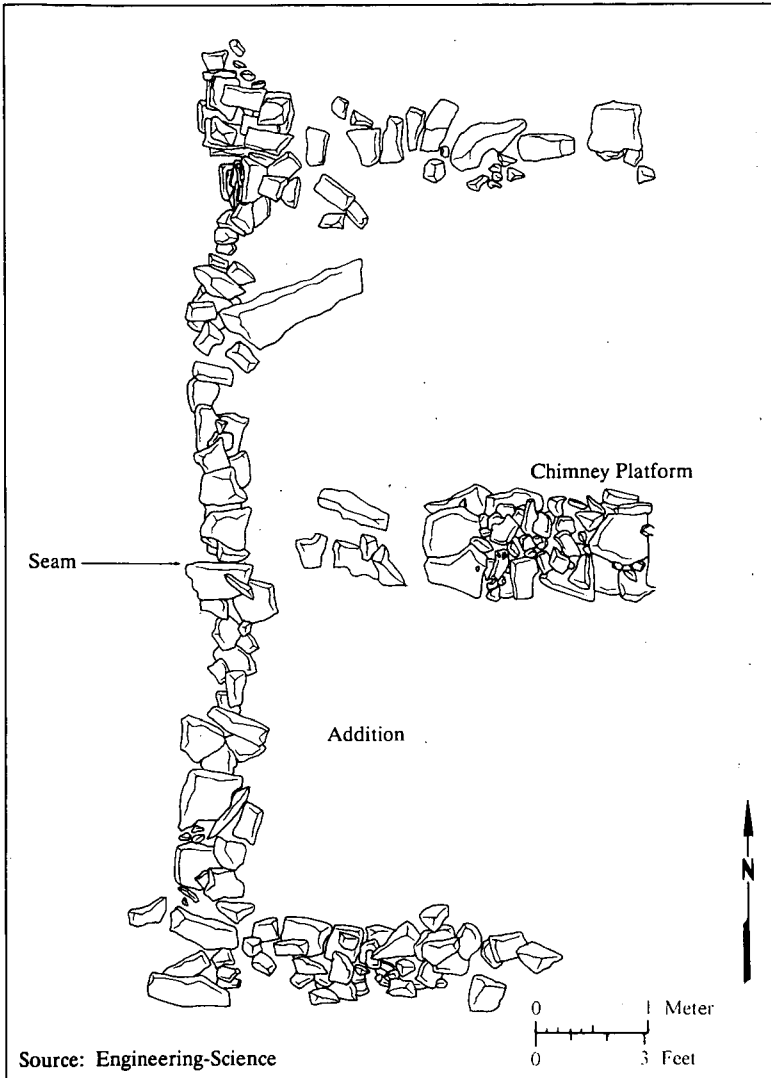


Figure 4. Plan of the house foundation.

In 19th-century Armstrong County, tenants were much poorer than property owners. According to the 1860 U.S. Census for Valley Township, the mean wealth of male heads of household who did not own real estate was only \$116 and the median wealth was \$100, both figures are about 1/20 of the wealth reported by property-owning farmers. No non-property owner reported wealth equal to Charles Shaeffer's \$1000.

In its history, therefore, the house was home two different classes of occupants, the middle-class Shaeffers and the unknown tenants who, according to census data, were probably quite poor.

Methods and Procedures

At the Shaeffer Farm site 97 units, each measuring 1 sq m, were excavated,

comprising 14% of the site area within the corridor. In order to search for features, 25 of these units were arranged in a grid across the site; the remainder were excavated over the foundations and the other features discovered (FIG. 3). Units and features were excavated in natural stratigraphic levels, and all soil was screened through 1/4-in mesh to recover artifacts. Profile drawings were made and photographs taken of all units and features. A complete artifact inventory was prepared and coded for computer analysis. An analysis of the faunal remains was carried out to obtain information on the residents diet, stock-raising practices, and butchering techniques. Cross-mending was performed on the recovered ceramic and glass artifacts to obtain minimum vessel counts and spatial information.

Archaeological Findings

Site Stratigraphy

Although the stratigraphic profile at the Shaeffer Farm site was separable into two, and in some places three, visible layers, the layers were not temporally distinct. Material from the whole 70-year span of occupation on the site was mixed together in all the strata, and there was only a slight trend toward the recovery of older material in strata B and C. Crossmends between potsherds from different strata confirmed the high degree of mixing. Interpretation of the site was complicated since non-diagnostic artifacts could be assigned to the Shaeffer (1830–1864) or tenant (1864–1900) occupations only if they were recovered from one of the datable features.

Feature 1, House Foundation

The dry-laid foundation of the house was constructed from natural,

tabular sandstone blocks. The architectural style of the residence was difficult to infer from the shape of the remaining foundation (FIG. 4). The only obvious parts of the structure were the west (downslope) wall and an internal east-west wall located in the approximate center of the structure. The west wall was approximately 27 ft (8 m) long and 1–2 ft (0.3–0.6 m) wide. The central wall was just over 3 ft (0.9 m) wide. No trace remained of the east (upslope) wall, and the north and south walls had collapsed and were difficult to define in the surrounding rubble. The only trace of a builder's trench, identified on the south side of the central wall, had been disturbed by groundhog tunneling. The upper strata over and around the house appeared to have been disturbed, perhaps by loggers.

Despite the confused state of the soil around the foundations, full-scale horizontal excavation did prove to be valuable and revealed some features of the structure. The central wall survived only as a platform, separated from the west wall by a rubble-filled space more than 3 ft (0.9 m) wide. The central wall was also the most massive part of the foundation and it was the only part of the foundation set in a trench. It seemed too massive, in fact, to have been a simple wall foundation and was likely a chimney base. Excavation west of the west wall revealed a seam in that wall, corresponding exactly to the central east-west wall (FIG. 5). To the north of the seam the wall was built of many small, flat rocks put together carefully, and to the south it was constructed of larger stone blocks. The west wall was built in two stages, representing an original one-room structure and a one-room addition. This extension effectively "moved" the chimney from the end of the house to the center. The space between the chimney

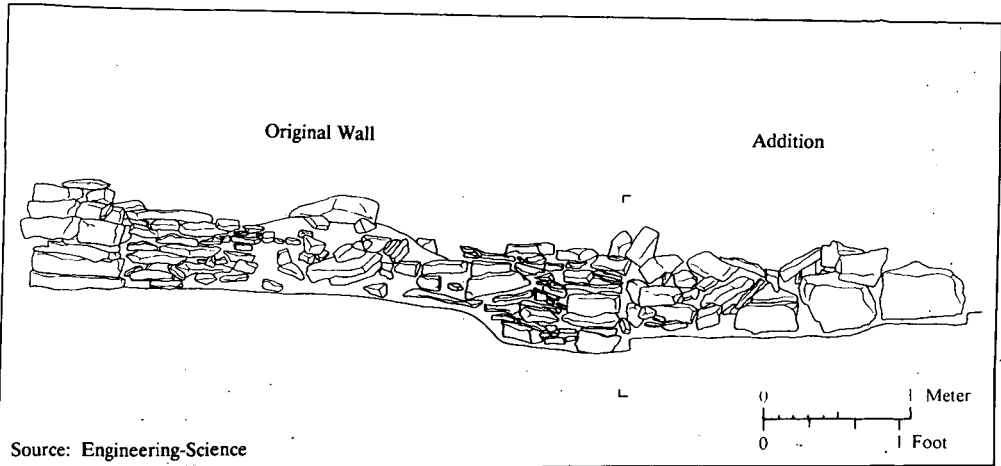


Figure 5. Profile of the west wall of the Shaeffer house (Source: Engineering-Science).

platform and the west wall may once have been occupied by a more flimsy and now missing partition wall, although the sill could have spanned the space.

A combination of archaeological and historical data suggests that the foundations at the Shaeffer Farm site once supported a hewn-log house. Contemporary descriptions and surviving buildings indicate that logs were the preferred material for small dwellings in newly settled areas of western Pennsylvania (Fletcher 1950: 373; Stotz 1966). Log houses did not require very substantial foundations and, in fact, were often supported on small brick piers or a single course of thin stones (Bealer and Ellis 1978; Glassie 1968; Hutslar 1992). Such fragile foundations could easily have disappeared from the upslope side of the Shaeffer house. Since very little mortar was found around the house, it probably had a clay-mortared stone chimney (Fletcher 1950: 376; Hutslar 1992).

The Shaeffer house probably measured approximately 14 × 27 ft (4.2 m × 8.1 m), a story and a half tall, with a

ladder or simple stair leading to a loft and a split board floor. The large quantity of window glass recovered from around the house indicates that it had at least two and possibly four windows; window glass was found in the earliest contexts on the site, suggesting the glass windows were either original or added soon after construction. For such a house to acquire a one-room addition was common, since new settlers in an area often started out with a small building and expanded it later as their families grew (Martin 1942: 119). A 19th-century log house that still survives in Washington County, Pennsylvania, suggests the pattern of the Shaeffer house. The Washington County house originally had only a single room, but later a second room was added on to the chimney end, leaving the house with two rooms and a central chimney (Washington County History and Landmarks Foundation 1975: 27).

Because of the soil disturbance around the house and the absence of clear builder's trenches, the construction of the two rooms cannot be closely dated. Since almost all the

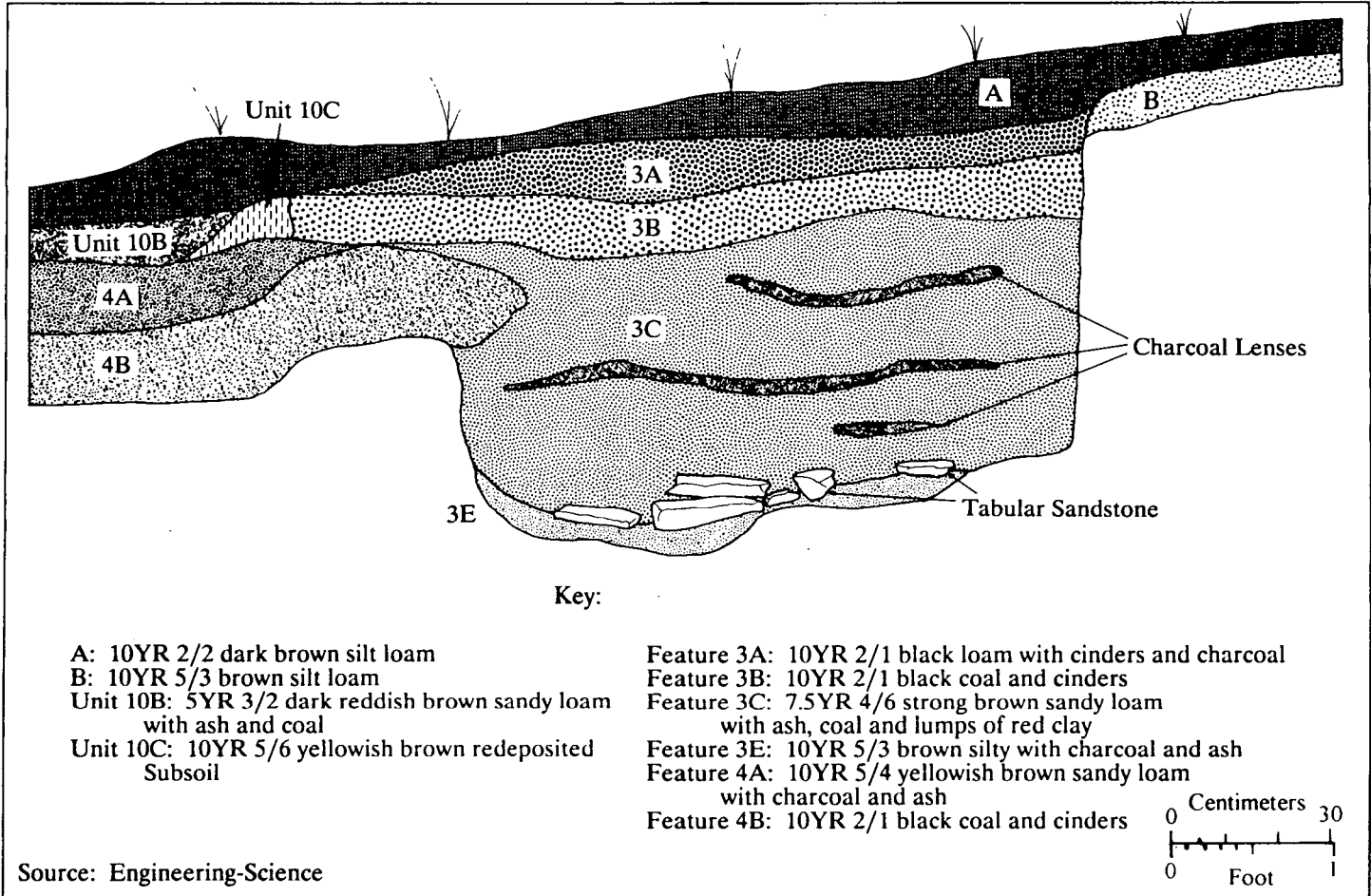


Figure 6. Cross-section of Feature 3, facing northeast.

nails found around the house were machine-cut, not wire, however, both the original house and the addition were probably built before 1885. No artifacts were found under the wall of either room or in the soil between the lower stones, indicating that the two rooms were built within a few years of each other, before much cultural debris could accumulate. The house probably had two rooms, each approximately 14 sq ft (4.2 sq m), for most of its history.

Feature 3

Feature 3 was a round pit, 1.2 m (3.9 ft) across and 80–90 cm (2.6–2.9 ft) deep (FIG. 6). The sides were straight, giving the pit a cylindrical shape. The bottom was lined with tabular sandstone blocks, and the fill consisted of layer after layer of coal cinders and wood ash. The wood ash layers contained small lumps of burned clay. The pit was located about 7 m (23 ft) east (upslope) of the house. The regular shape and lined floor of the pit suggest that it was dug for some purpose other than dumping coal ash, but that purpose is unknown. An ironstone bowl found in the cinder fill of the pit has a maker's mark of a type used by the Homer Laughlin China Company in East Liverpool, Ohio, in the period 1877–1900 (Gates and Ormerod 1982: 131). The feature must therefore have been filled during the tenant period. Feature 3 intersected with another shallow pit, Feature 4, which contained similar ashy fill.

Features 5, 8, and 9

Many of the artifacts recovered from the site came from three pits, Features 5, 8, and 9. Feature 5 was a roughly circular pit, about 1.8 m (5.9 ft) across and up to 40 cm (1.3 ft) deep. The

pit fill consisted of several layers of loose, dark brown loam with pockets of black and white ash. All the strata were full of domestic debris dating to c. 1875. Recovered objects include a complete shell-edged ironstone plate and part of another, an ironstone pitcher, an oval ironstone dish, a broken redware jar, a stoneware inkwell, and a large quantity of pig bones, including five mandibles. The pig bones were remarkably well preserved and played an important part in the faunal analysis (described below).

Features 8 and 9 were both small, irregular features containing material dating to the 1830–1850 period. Feature 8 was a rough treehole or eroded spot about 10 cm (0.1 ft) deep and 1 m (3.3 ft) across, filled with dark, yellowish-brown, silty loam very similar to the natural subsoil. Feature 9 was a rough, shallow pit and an associated shallow ditch, also possibly a tree hole. The pit was approximately square, about 1.2 m (3.9 ft) across, and had a very rough floor up to 15 cm (0.5 ft) deep. A shallow ditch about 25 cm (0.8 ft) wide cut across the pit from north to south (paralleling the slope). The fill in both the pit and the ditch was brown silty loam mixed with charcoal and gravel.

Feature 11

Feature 11 was the only clear evidence of an outbuilding found on the site. It consisted of a level shelf, up to 1 m (3.3 ft) deep and approximately 3 m (9.8 ft) square, that had been cut into the slope behind the house (FIG. 7). That shelf had then been filled in with redeposited subsoil. On top of the feature, a layer of coal ash containing artifacts dating to the last phase of the site's occupation had accumulated. Crossmends between the various strata

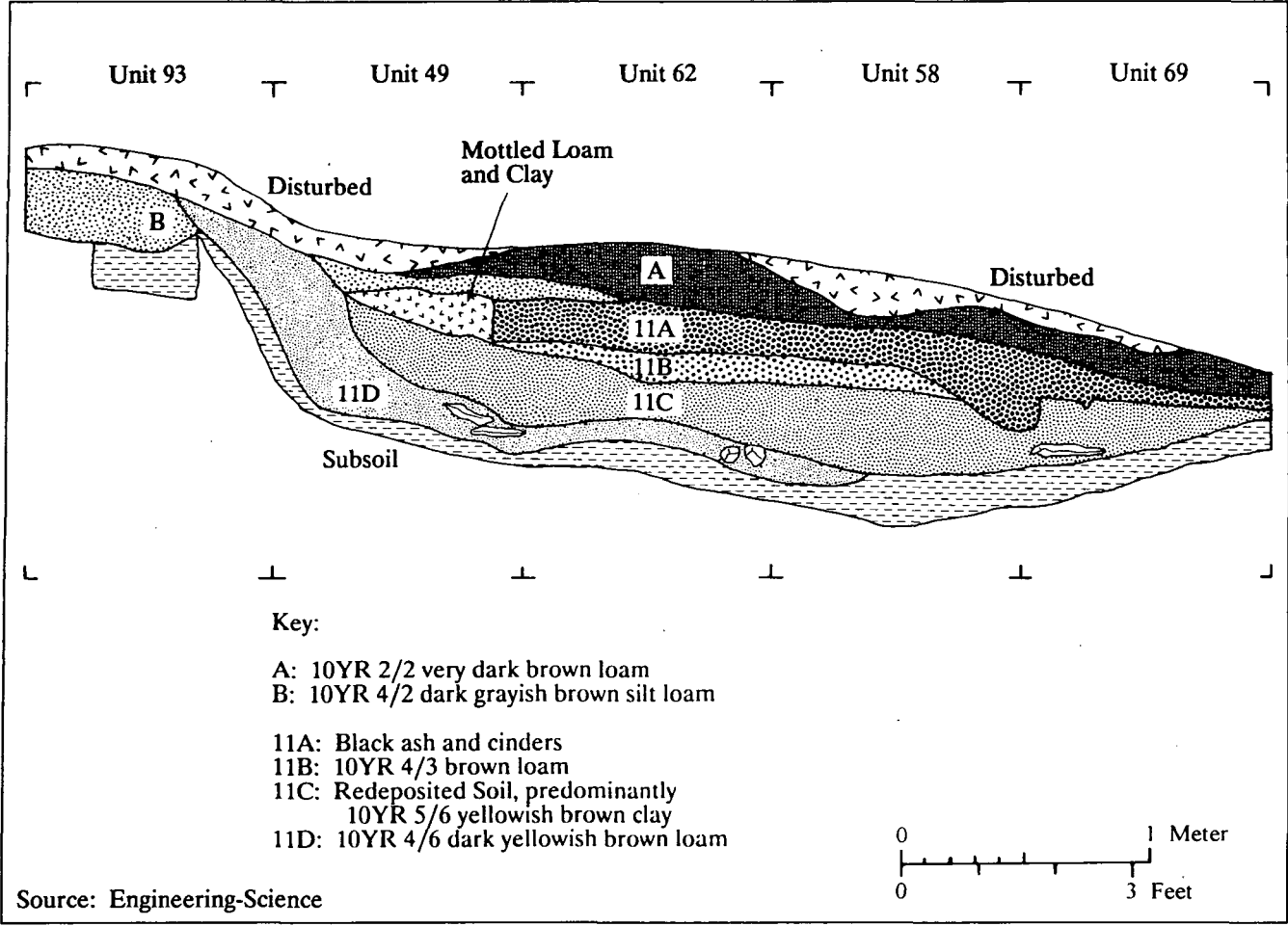


Figure 7. Cross-section of Feature 11, facing south.

Table 1. Artifact groups.

<i>Group</i>	<i>Number</i>	<i>Percent</i>
Architectural	3780	43
Domestic	3635	41
Faunal	735	8
Domestic/industrial	474	5
Personal	128	1
Floral	11	<1
Arms	5	<1
Prehistoric	3	<1
Agricultural	2	<1
Unrecognizable	7	<1
Total	8780	

showed that the filling had been done late in the site's history. The simplest explanation for the feature is that it represents at least two successive structures. The shelf was originally cut to make a space for a small building or perhaps for a piece of equipment such as a cider press (Fletcher 1950; Lemon 1967). After that structure was abandoned and the shelf began to silt up (11 D), it was filled in (11 C and B) to level it with the rest of the slope, most likely to form the foundation of the second structure.

Artifact Analysis

Functional and Temporal Analysis

During the archaeological investigations of the Shaeffer Farm site a total of 8,780 artifacts was recovered (TAB. 1). The largest groups of artifacts were architectural materials ($n=3,780$) and domestic objects ($n=3,635$). The beginning date of the site, c. 1830, was derived from certain of the earlier artifacts recovered, including fish scale-molded pearlware, white clay tobacco pipe fragments, and a French gunflint. The site must have been occupied into the 1890s because ironstone vessels were recovered bearing a maker's mark used

in the period 1892–1910 by the D. E. McNicol Pottery Company (Gates and Ormerod 1982: 186). The absence of artifacts common on all 20th-century sites, especially machine-molded glass bottles and jars, indicates that the site was abandoned around 1900 or soon thereafter.

Ceramic Analysis

Table 2 shows the minimum vessel counts for the ceramics recovered from the Shaeffer Farm site. Pieces of at least 220 vessels were recovered from the site. The main groups were redware, pearlware, whiteware, and ironstone. Most of the redware was strictly utilitarian, but a few sherds had traces of trailed slip decoration. Two nearly intact jars, of the type described in collector's guides as "apple butter pots," were recovered along with several other bowls and pots. The stoneware consisted largely of otherwise unidentifiable hollow-ware. None of the stoneware or redware vessels bore stamps, maker's marks, or any distinctive decoration. The pearlware was largely hand-painted in blue or polychrome, with a Miller Scaling Analysis value, using the 1838 values, of 1.8

Table 2. Minimum ceramic vessel counts.

	<i>Pearl-ware</i>	<i>White-ware</i>	<i>Iron-stone</i>	<i>Red-ware</i>	<i>Stone-ware</i>	<i>Other</i>	<i>Total</i>
Plate	5	15	18	—	—	—	38
Saucer	—	5	7	—	—	1	13
Platter	—	—	1	—	—	—	1
Flatware	5	8	6	—	—	1	20
Teacup	4	9	5	—	—	1	19
Cup	—	1	10	—	—	—	11
Bowl	2	2	6	—	2	—	12
Bowl/pot	—	—	—	11	—	—	11
Chamber pot	1	—	—	—	—	—	1
Nappy	—	—	1	—	—	1	2
Jar	—	—	—	3	1	—	4
Crock	—	—	—	—	2	—	2
Jug	—	—	—	1	—	—	1
Pitcher/teapot	—	—	3	—	—	—	3
Inkwell	—	—	—	—	1	—	1
Hollowware	9	12	8	7	10	5	51
Unrecognizable	3	13	6	6	1	1	30
Total	29	65	71	28	17	10	220

(Miller 1991). The assemblage included three recognizable sets, two containing at least three vessels and one at least four. Two of the sets were probably tea sets, but the third included two bowls as well as a teacup.

The most common decorated form among the whiteware vessels was the shell-edged plate. No two of the whiteware examples from the site had exactly the same edge pattern; taking pearlware, whiteware, and ironstone together the site yielded 24 different edge designs. Two sets of hand-painted dishes could be recognized in the whiteware collection. One of these was rather large, containing at least eight vessels painted in a thick-line style collectors call "peasant paint." This style was popular in the period 1835–1860, especially for tea sets, and since all of the recognizable vessels from the Shaeffer Farm site were saucers or teacups, they most likely comprised a tea set (Majewski and O'Brien 1987:

159). The Miller value of the whiteware from 36AR410 is 1.4, using the 1859 values.

The fragments of ironstone recovered from the Shaeffer Farm site were largely undecorated (58 of 71 vessels), reflecting the style of the post-1850 period. Several nearly complete undecorated vessels were recovered from Features 3 and 5, contexts associated with the tenants. A number of the ironstone vessels bore stamped makers' marks that dated occupation of the site to after 1875; these include the marks of the German firm Villeroy & Boche and those of two East Liverpool, Ohio, potters, Homer Laughlin and D. E. McNicol. It seems that after 1875 the better dishes were largely white ironstone, making the tenants, in this respect, typical members of their class. The undecorated ironstone included a full range of vessel forms, including a number of serving dishes and at least seven saucers.

Table 3. Ceramic vessel functions at the Shaeffer Farm site and 12 other 19th-century sites.*

Site	Dining	Drinking	Food prep./ storage	Medicinal	Other
Shaeffer Farm site	52(40%)	45(35%)	30(23%)	1(1%)	1(1%)
18AN807	27(42%)	26(41%)	11(17%)	0(0%)	0(0%)
Dickson II	22(45%)	10(20%)	13(27%)	2(4%)	2(4%)
Heisler	108(65%)	24(14%)	28(17%)	7(4%)	0(0%)
Black Lucy's Garden	53(47%)	43(38%)	17(15%)	0(0%)	0(0%)
Skunk Hollow A	53(50%)	28(26%)	18(17%)	5(5%)	2(2%)
Skunk Hollow B	103(54%)	37(20%)	40(21%)	7(4%)	0(0%)
Skunk Hollow C	21(41%)	11(22%)	16(31%)	5(10%)	1(2%)
Millwood Planter	37(76%)	6(12%)	6(12%)	0(0%)	0(0%)
Millwood Tenant	9(39%)	8(35%)	6(26%)	0(0%)	0(0%)
Cannon's Point Slave	80(62%)	26(20%)	9(7%)	4(3%)	11(9%)
Cannon's Point Overseer	78(57%)	42(31%)	6(4%)	3(2%)	8(6%)
Cannon's Point Planter	161(52%)	83(27%)	39(13%)	9(3%)	19(6%)

*Sites: 18AN807, tenant, 1885–1915, eastern Maryland (Walker et al. 1992); Dickson II, black tenant, 1850–1915, Delaware (Catts, Hodny, and Custer 1989); Heisler, white tenant, 1850–1880 and black owner, 1880–1920, Delaware (Catts, Hodny, and Custer 1989); Black Lucy's Garden, free black woman, 1815–1845, Massachusetts (Baker 1978); Skunk Hollow, black owners, 1865–1900, New Jersey (Geismar 1982); Millwood Plantation, 1850–1900, South Carolina (Orser 1988); Cannon's Point, 1794–1860, Georgia (Otto 1984).

The functional breakdown of the ceramic vessels is shown in Table 3. Because no comparable data are available from western Pennsylvania, Table 3 compares the Shaeffer Farm site data to published 19th-century sites from the eastern United States. The percentages of vessel types have been found to vary significantly from site to site, and some claims have been made for regional or ethnic patterns. Archaeologists are not certain what these variations and patterns mean, however (Catts and Custer 1990).

Chi-square tests on the vessel function percentages from the Shaeffer Farm site show that the proportions are more similar to those from 18AN807, Black Lucy's Garden, and the Millwood tenancy, and differ the most from the Heisler, Millwood planter,

and Cannon's Point collections. The high percentage of drinking vessels recovered from the Shaeffer Farm site is particularly noteworthy. Chi-square tests on the numbers of dining, drinking, and food preparation or storage wares recovered show significant (at the 0.01 level) differences between the Shaeffer Farm site assemblage and the Heisler, Skunk Hollow B, Millwood Planter, and all Cannon's Point assemblages. The percentage of drinking vessels at the Shaeffer Farm site is high in vessels datable to both the Shaeffer and tenant periods, but the difference from the norm is greater in the earlier period. Although the sample of sites is small and differences in excavation or mending technique could be responsible for much of the variation in the data, the Shaeffers' household spending ap-

parently was more focused on teaware, and less on dinnerware, than was typical for their contemporaries.

Analysis of Other Artifacts

The domestic artifacts recovered from Shaeffer Farm included 498 pieces of household glass, including 223 fragments of mold-blown bottles and 175 pieces of lamp chimney glass. The small amount of bottle glass is surprising for a site that was occupied into the 1890s and argues for abandonment around 1900. No definite examples of automatically manufactured container glass, a process introduced in 1903 (Lorrain 1968: 43), were found.

Decorative, pressed glass bowls and dishes were found in contexts associated with both occupations. Fancy glass was one area in which the tenants outdistanced the Shaeffers in quantity and decorative richness of their possessions. Among the vessels datable by context to the tenant period are two matching pressed-glass covered bowls with 6 in diameters, a beaded, mold-blown lamp base, and a variety of other decoratively molded vessels. Other glass items include fragments of several patent medicine bottles and two mold-blown flasks bearing different American eagle designs.

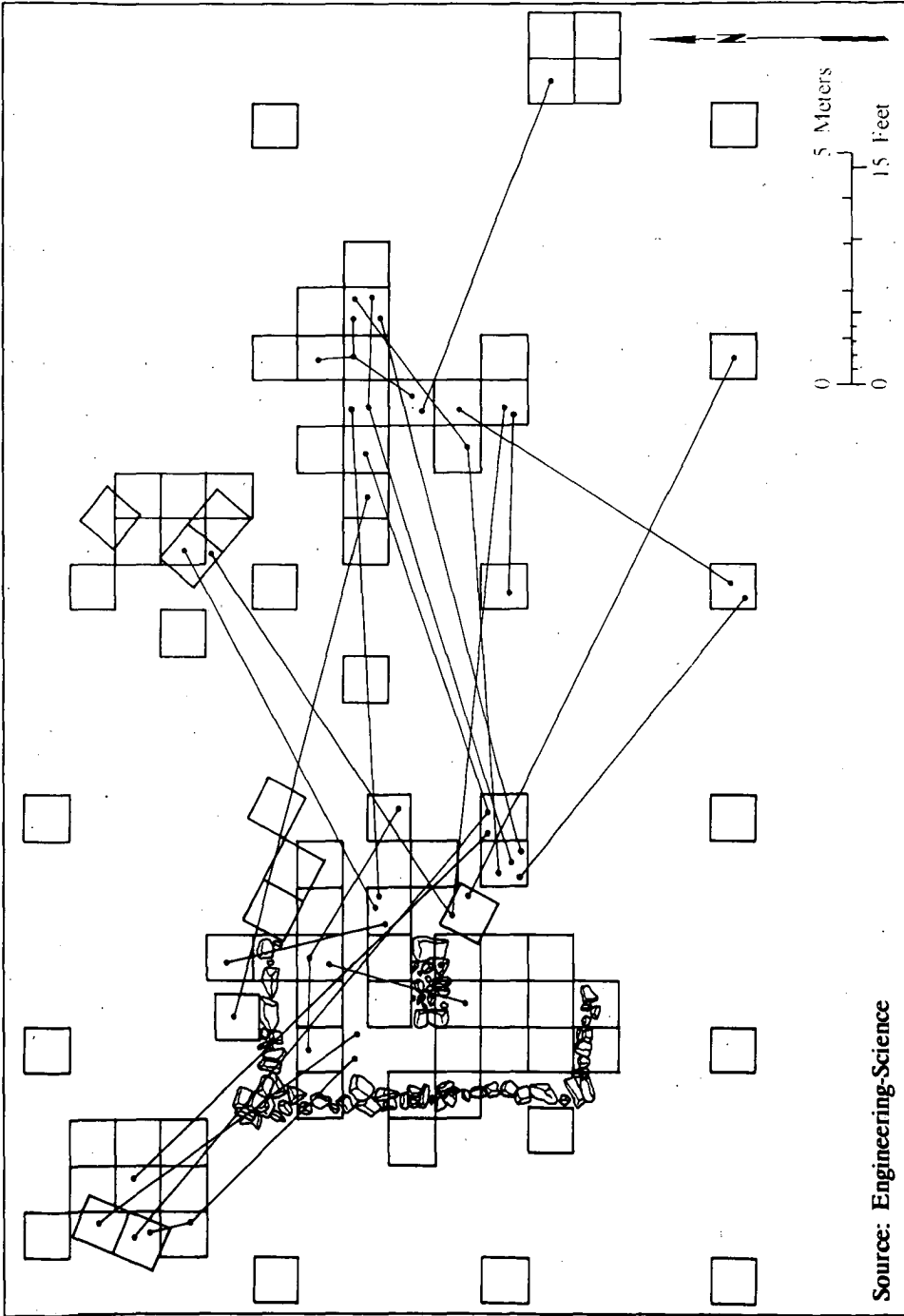
The site yielded a collection of 44 buttons comprised of types common in the 19th century: 17 glass, 16 porcelain, 8 brass, 1 iron, and 1 bone. Only two (both brass) date to the Shaeffer period, while at least 23 probably belonged to the tenants. Two glass beads, a fine-toothed bone comb, and what appears to be a bone gaming piece were found in contexts associated with the Shaeffer occupation. Tenant-period contexts yielded a miniature porcelain teapot and fragments of six different porcelain dolls or figurines.

Crossmending

In addition to the minimum vessel count, crossmending of ceramic and glass fragments provided important spatial and stratigraphic information. Mends between the various strata of the site, and within Feature 11, were important in establishing that the vertical stratigraphy of the site did not imply a clear temporal seriation. The horizontal distribution of the crossmends helps to establish the spatial patterning of the site. Figure 8 shows the ceramic and glass crossmends between non-adjacent units.

The obvious feature of the diagram is the number of mends connecting units adjacent to the house with units farther away. Of the 20 mends shown in Figure 8, 13 (65%) are this type. Units 3, 11, 27, and 77, all located around the back wall of the house, perhaps not far from the back door, account for 11. Most of the mending pieces were found in the main trash disposal areas, around Features 3, 5, and 11, and Unit 30. Fragments that appear to be from the same vessels, but which do not actually mend, reinforce this pattern. For example, one of the lines connecting Units 77 and 93 represents two pieces of a redware jar. Eleven other pieces that might be from the same jar were recovered, four from Unit 77 and the others from Units 93, 94, and 82, all in the Feature 11 area. Press-molded glass from Unit 11 matches glass from Units 49 and 62, and fragments of a hand-painted whiteware saucer were found behind the house in Units 27 and 77, and in Feature 9.

The pattern of the crossmends clearly shows that the artifacts recovered from the features came from in or near the house. It is even possible that the household trash was first tossed out the back door (primary deposition)



Source: Engineering-Science

Figure 8. Crossmends.

Table 4. Minimum number of individuals (MNI) for the fauna from the Shaeffer Farm site. Feature 5's MNIs are calculated separately from those of the rest of the assemblage.

<i>Species</i>	<i>Feature 5</i>	<i>Remainder</i>
<i>Sus scrofa</i> (pig)	3	7
<i>Capra hircus/Ovis aries</i> (goat/sheep)	1	1
<i>Bos taurus</i> (cow)	1	2
<i>Marmota monax</i> (groundhog)	1	-
<i>Sylvilagus floridanus</i> (cottontail)	-	1
<i>Homo sapiens sapiens</i> (human)	-	1
Aves, small (bird)	-	1
Aves, medium (bird)	1	2
Aves, large (bird)	1	-

and then later moved away from the house to the trash pits (secondary deposition). During the removal process some of the smaller pieces were missed and remained behind. Another possibility is that the bulk of the household garbage was carried directly from the house to the trash disposal areas but the floor sweepings were simply pushed out the door. The pattern applies to artifacts datable to both the Shaeffer and tenant periods.

Faunal Analysis

The analysis of the faunal remains from the Shaeffer Farm site provides important information about the dietary habits, butchery practices, and stock-raising methods of the residents. As part of the faunal analysis, information on taxon, age, and skeletal part representation was collected. In addition, human butchery marks were coded and tooth eruption scales and epiphyseal fusion data were used for aging. These detailed variables were taken in order to examine the influence of both cultural and taphonomic processes that alter the faunal record prior to and after deposition (e.g., Reitz 1987).

A total of 720 bones was recovered, 561 (78%) were identifiable. A total of 184 (26%) exhibited evidence of human processing and 104 (14%) were burned. Definitive postdepositional modifications included root marking on many of the bones and rodent gnaw marks on three bones. In addition, differential body element survival and evidence of burning indicates that natural factors biased faunal preservation.

The assemblage exhibited some diversity in animal species, including both domestic and wild taxa. Bones of the domestic pig (*Sus scrofa*) dominated in the assemblage from all periods of the site, verifying a pattern found at a number of 19th-century rural sites (Reitz 1987). The recovered bones came from at least 10 individuals, 3 from Feature 5 and 7 from the remainder of the site (TAB. 4). Because nearly all parts of the skeleton are represented the residents must have been working with complete carcasses (TAB. 5). In all likelihood, they were raising their own pigs. All but one of the specimens were adolescent; five were killed at the age of about a year and one at six months. This pattern suggests a fall slaughter of most of the year's new pigs, a practice documentary sources suggest was common among

Table 5. Number of identifiable specimens (NISP) and minimum number of elements (MNE) for the *Sus scrofa* and *Bos taurus* samples. Values from the Feature 5 collection are calculated separately from those of the rest of the assemblage.

Body Part	Sus scrofa/pig			
	NISP	Feature 5 MNE	NISP	Remainder MNE
Cranium	55	3	15	6
Mandible*	12	5	11	4
Vertebra	20	13	15	8
Rib	36	15	50	8
Scapula	2	1	17	6
Humerus	3	3	6	4
Radius	-	-	2	2
Ulna	-	-	3	3
Innominate	4	2	11	5
Femur	3	3	5	3
Tibia	3	2	2	1
Podial	7	7	4	4
Metapodial	18	17	6	5
Phalanx	24	23	2	2
Total	187	94	149	61

Body Part	Bos taurus/cow			
	NISP	Feature 5 MNE	NISP	Remainder MNE
Cranium	-	-	2	2
Mandible	-	-	1	1
Vertebra	-	-	-	-
Rib	18	2	9	2
Scapula	-	-	3	1
Humerus	1	1	-	-
Radius	-	-	-	-
Ulna	-	-	-	-
Innominate	-	-	-	-
Femur	-	-	-	-
Tibia	-	-	-	-
Podial	1	1	1	1
Metapodial	-	-	-	-
Phalanx	2	2	-	-
Total	22	6	16	7

* Note that each hemimandible is assigned an MNE of 1.

Pennsylvania Germans (Fletcher 1950: 403). Since quantities of pig bones were recovered from Features 8 and 9 as well as Feature 5, hog raising seems to have been an important facet of farm life throughout the occupation of the site.

The residents appear to have eaten all the parts of the pig, including both expensive (hams, roasts) and inexpensive (heads, feet) portions.

Feature 5, which yielded 187 fragments of pig bone, preserves the remains

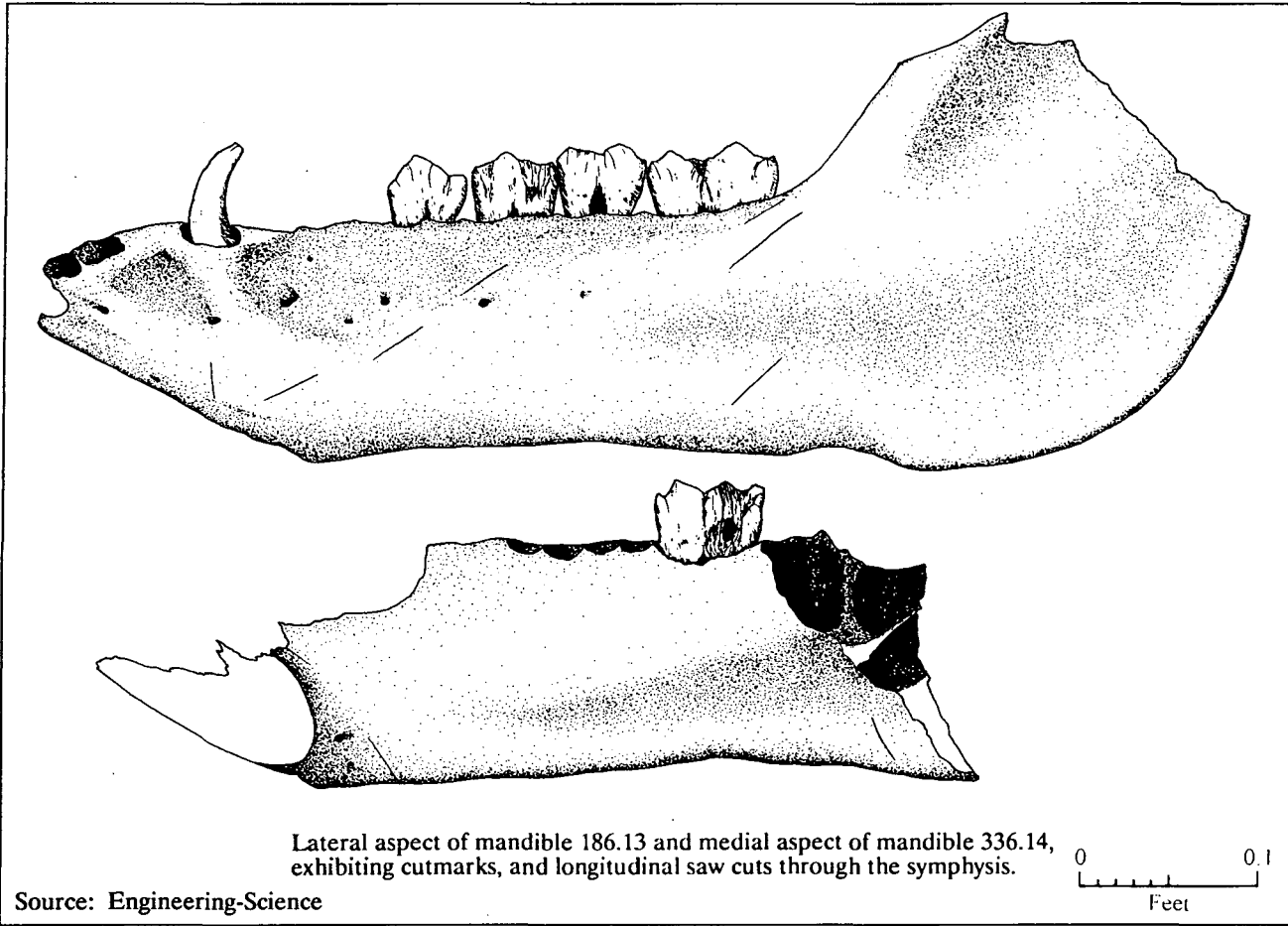


Figure 9. Lateral aspect of a pig mandible (top) and medial aspect of a second pig mandible, showing cutmarks and longitudinal saw cuts through the symphysis.

of one particular fall slaughtering in the 1870s. At least three pigs were killed at that time, an indication of the scale of operations on this small farm. The bone breakage patterns and the cutmark locations proved to be particularly valuable for assessing butchery techniques and carcass processing. Faunal data indicate that pig butchery was a two-step process. First, sawing removed major body segments, and then more detailed meat and organ removal was carried out by slicing and chopping with knives (FIG. 9). The entire head was processed: the snout sawn off, the brain removed, the tongue and cheek muscles cut out; the feet were also sawn off. Waste, it seems, was kept to a minimum, and the whole pig was either eaten or sold.

Bones of cows and sheep/goats also were recovered. The small number of sheep/goat (*Ovis/Capra*) bones argues that these animals were not an important part of the residents' diets and almost certainly not raised on the site. Cow (*Bos taurus*) bones were more common, showing that beef was an important dietary item in both the Shaeffer and tenant periods. The range of body parts represented was much less varied than that for pigs, however, suggesting that the residents purchased their beef rather than raising it (TAB. 5). Bones representing both expensive and inexpensive cuts of beef were recovered, although the small size of the sample makes it difficult to make firm conclusions about the residents' purchasing habits.

Chicken bones were recovered from Features 5, 8, and 9 suggesting poultry raising during both phases of the occupation. The butchered bones of a groundhog (*Marmota monax*) were recovered from Feature 5, clear evidence of hunting and game consumption during the tenant period. Bones of

at least one cottontail (*Sylvilagus floridanus*) were recovered from the A stratum in two units, further evidence that the residents supplemented their farming with hunting. The only evidence of fish or seafood consumption was a single oyster shell recovered from Feature 8.

One human tooth was recovered from Feature 9. This badly decayed molar must have been removed to relieve a severe toothache and then thrown out with the rest of the trash.

Conclusions

Markets, Status, and Consumer Behavior

Information on the lives of small, upland farmers like George and Charles Shaeffer is particularly valuable because it bears on an old and lively historical controversy. Historians sharply dispute the economic nature of small-time farming in the pre-Civil War U.S. One school, dominated by neoclassically-trained economic historians, believes that American farmers, even small farmers in backcountry areas, were capitalists whose economic decisions were greatly influenced by market forces. Other historians, some of them Marxists and many of them influenced by cultural anthropology, believe that American farmers were not capitalists but subsistence farmers who valued independence over consumption and preferred to produce their own goods. Backcountry farmers, according to the latter view, made whatever they could for themselves and obtained much of what they could not produce from their neighbors. Trade between neighbors took the form of reciprocal exchanges of goods or labor in which profit was not an issue. Instead, tradition, family

loyalty, and neighborliness regulated economic decisions (Henretta 1978; Kulikoff 1989; Rothenberg 1981; Sellers 1991: 7–15).

This debate is less about the percentage of the crop that was sold, a measurable quantity, than about attitudes. No one disputes that backcountry farmers provided most of their own food, fuel, and furniture, built their own houses, and in some cases made their own clothes. On the other hand, no one believes they were totally self-sufficient. Even Charles Sellers (1991: 15), one of the strongest proponents of rural self-sufficiency, admits that farmers sold produce to pay taxes “and to procure a limited range of high-utility commodities.” The question is whether farmers made economic decisions with regard to maximizing their profits and increasing their purchases of consumer goods or with regard to maintaining their economic independence and preserving strong relations with their neighbors.

Historical archaeologists, although they seldom refer to this debate directly, usually emphasize market involvement (Klein 1991). The most common archaeological artifacts—ceramics, glass, metals—were predominantly obtained through the market. Food, clothing, and firewood, which backcountry farmers could provide for themselves, are less visible in the archaeological record. Many archaeological analyses, especially attempts to determine status from assemblages of ceramics and other consumer goods (e.g., Garrow 1987; Leedecker et al. 1987; Spencer-Wood 1987), assume that consumer goods purchased in the market are an accurate measure of the overall standard of living enjoyed by the people who used them. If, however, the purchase of consumer goods was not a high priority for the people being stud-

ied, and if instead they were more interested in helping their families or in having time to spend in communal projects such as barn raisings and quilting bees, consumer goods are not an accurate measure of wealth and these analyses collapse.

Measuring the status of 19th-century Americans from consumer goods, whether they are backcountry farmers or urban workers, is also complicated by the problem that the purchase of such items was a very small part of total household expenditures (Friedlander 1991; Klein 1991). Edgar Martin (1942) calculated that in 1860 working class Americans spent only 2–3% of their income on “household articles” while food, housing, clothing, and heat accounted for 93% of expenditures. Simplistic attempts to derive status information from household artifacts have, therefore, little validity.

Of the main components of household expenditure, only housing is well represented in the archaeological record. Some historians regard housing as the most sensitive indicator of class in 19th-century America (Soltow 1992: 131), and the analysis of the Shaeffer house provides interesting information about its occupants and their changing fortunes. The ceramics, glass, and other artifacts can best be used, not for information on status, but for an understanding of lifestyle.

The presence of certain artifacts implies that their owners practiced certain social behaviors. Information on the behavior of the residents, besides its intrinsic interest, can show the extent to which they participated in the broad changes taking place in 19th-century America. These social connections provide a new approach to the question, with which we began, of market involvement and the economic attitudes of small farmers.

Housing and Status

The house at the Shaeffer Farm site was originally built as a one-room log cabin and was later enlarged to two rooms. Even after enlargement, the 378-sq ft (34.02 sq m) house was small by 19th-century standards. Catts and Custer (1990: 227), discussing 19th-century Delaware, found that 450 sq ft (40.5 sq m) formed a convenient dividing line between the houses of the poor, who were primarily tenants, and the houses of the middle class. The Shaeffer house did, however, have some refinements, including windows (Soltow 1980), that separated it from the poorest dwellings.

A great variety of activities, including cooking, eating, and sleeping, were carried out in the crowded confines of the house. According to Herman (1992: 184), houses of similar size in southern Delaware in this period typically contained three to four beds, one or two chests, six to eight chairs, two tables, one cupboard, one loom, two spinning wheels, and a mirror. This structure was adequate for the small-farming Shaeffers for at least their first 10 years on the property, even though the family contained up to 11 members. By 1848, however, they had built a second house farther up the valley, and it was in this new house that Charles Shaeffer resided after his father's death. We have no information on the new house Charles Shaeffer built, but it does not seem rash to assume that it was at least larger and probably nicer than the original cabin. The houses of the property-owning class in western Pennsylvania, as in all frontier areas, tended to get larger and more impressive over time (Buck and Buck 1939; Harper 1991). Soltow (1980), working from the 1798 housing census and the 1790 census for

Mifflin County, Pennsylvania, calculated that persons who had been residents of the county for eight years had houses worth an average of 35% more than those who had not. As frontier areas were transformed into settled farmland, the residents' standard of living rose, leading to very rapid changes in their housing; Miller and Hurry (1983) have shown that the same is true of consumer goods.

The Shaeffers' log cabin was not abandoned or torn down, but continued in use. For a few years it probably housed George Shaeffer and his wife after their retirement. After the property was sold in 1864 the house, no longer suitable for a propertied farmer, was occupied by a tenant. The house remained physically the same, but standards of living and expectations of comfort were rising, so the house slowly declined in status.

Artifacts and Lifestyle: The Shaeffers

Although they lived in frontier conditions, 11 people in a 14 × 27 ft (4.2 m × 8.1 m) log house, the Shaeffers had some material comforts. Among the artifacts datable to the period of their occupation are a bone comb, a fancy pressed glass dish, floral painted pearlware plates, bowls and teacups, and transfer-printed dishes. The Shaeffers owned at least five different matching sets of dishes. Ceramic dishes and especially plates were not part of traditional English or German material culture and were not widely used until the second half of the 18th century (Deetz 1972). Ceramic plates were certainly useful, but they were not essential; wooden plates could serve the purpose perfectly well, and George Shaeffer's grandfather may never have used anything else. The recovery

of floral decorated and transfer-printed plates extends the point. In the 1840s hand-painted plates were nearly twice as expensive, and transfer-printed plates more than twice as expensive, as the undecorated variety (Miller 1991). Transfer-printed dishes were the height of middle-class fashion in this period (Majewski and O'Brien 1987), and by spending their money on decorative dishes the Shaeffers were exercising a taste for the latest consumer goods that is difficult to reconcile with a desire for real self-sufficiency.

One consumer habit in which the Shaeffers almost certainly indulged was tea drinking. Tea was imported and, although it was not particularly expensive, it was an extra expense, and it was almost always served with sugar, another purchased luxury. Despite its cost, tea drinking had become very common by 1800 when, studies suggest, half or more of American households had tea drinking equipment (Walsh 1992). The appeal of tea drinking derived partly from its status as a social refinement; tea drinking was not just a way of slaking thirst, it was a symbol of social aspirations. As Walsh (1992: 239) has written, it was "the primary way in which the poor could participate in the rising culture of respectability."

The importance of tea drinking as a status symbol is confirmed by comparing the teacups and saucers from the Shaeffer Farm site to the other tablewares. Of the five recognizable sets of dishes from Shaeffer-period contexts, four were probably tea sets, including the two largest and most heavily decorated sets. The Miller Scaling Analysis value for whiteware and pearlware teacups and saucers is 2.0, compared to 1.5 for other tablewares. The heavy investment the Shaeffers made in tea-drinking equipment

agrees with findings from most other sites described in the literature (Klein 1991; Spencer-Wood and Heberling 1987). Nineteenth-century Americans of all classes and regions spent more heavily on tea sets than on other household ceramics, because tea drinking was a more important focus of status aspirations than other household activities.

The presence of hand-painted teacups, transfer-printed plates, and the pressed glass dish does not prove, but certainly suggests, that the Shaeffers aspired to middle-class status and to some degree of what contemporaries called "respectability" (Ryan 1981: 135, 203). True, dishes were fairly cheap and became ever cheaper during the 19th century, but their small economic significance should not blind us to the social changes they represent. Farmers whose goal was to maintain a separate and free existence outside the market system and to isolate their traditional communities from the rest of the society need not ever have purchased teacups, transfer-printed plates, or pressed glass dishes, which are manifestly not "high utility commodities." That the Shaeffers did shows that they shared at least some of the consumer attitudes of broader society (Ryan 1981: 198–210). In the Victorian age it was not possible to aspire both to self-sufficiency and to respectability, and the artifacts from 36AR410 suggest that the Shaeffers chose respectability. The Shaeffers supplied many of their immediate material needs, but still depended on Eastern, and even English society, for social and moral guidance. Their ties to the marketplace were strong enough to make them desire fashionable things that could be bought only from the store. Even if the large majority of the Shaeffers' economic activity was out-

side the marketplace, the lifestyle choices represented by the consumer goods they bought still helped them to define and display their place in the world.

Artifacts and Lifestyle: The Tenants

Comparing the artifacts of the tenants to those from the Shaeffer period illustrates the complexity of the relationship between artifacts, status, and industrialization in 19th-century America. The tenants, although probably less wealthy compared to their contemporaries than the Shaeffers had been, owned certain objects that would have been beyond the Shaeffers' reach. Porcelain dolls are the most obvious example. Until the 1840s china dolls were true luxury items, owned only by the very wealthy. The price began to decline, and by the 1870s they had come within the reach of ordinary working people (Coleman 1968). The Shaeffer Farm site yielded pieces of at least six different dolls, showing the variety available to even rather poor children by 1900.

Ceramic analysis underscores this point. The tenants' dishes definitely were somewhat less expensive than those of the Shaeffers, but the difference was not particularly significant. The tablewares from Features 8 and 9, which date to the Shaeffer period, produce a Miller Scaling Analysis value of 1.9, while those from Feature 5, which dates to the tenant period, give a value of 1.75. Furthermore, the difference can be accounted for by falling ceramic prices, not a decline in the quality of the dishes. Using 1850 prices, the Feature 5 ceramics yield the same scaling value (1.9) as those from Features 8 and 9.

In terms of quantity, although no precise comparison is possible, the

tenants' cupboard seems to have been equipped about as well as that of the Shaeffers. Of the 220 ceramic vessels recovered from the site, 64 can be assigned to the Shaeffer period by type or context and 60 to the tenant period. At the Shaeffer Farm site the falling price of manufactured consumer goods in the later 19th century obscured the class difference between the two occupations.

Teacups from tenant-period contexts show that the tenants also participated in that ritual of respectability. In fact, their children must have had play tea parties, since one of the artifacts recovered from within the house foundations was a miniature porcelain teapot. Teawares for both adults and children have also been found on sites occupied by other, even poorer people in the 19th century (Baker 1978; Geismar 1982).

One change the tenants made was the switch from wood to coal heat. The tenants may have mined their own coal, since private coal banks were known throughout the Appalachian coal region (Martin 1984). By 1870 coal mining in western Pennsylvania was already dominated by large concerns (Klein and Hogeboom 1980: 303), however, and it seems more likely that the tenants were buying their fuel. This change represents another level of market dependence, since the residents were now obtaining heating and cooking fuel through the industrialized regional economy. The change was presumably made for economic reasons, since timber for firewood was still plentiful in the region. Although coal may have provided more heat for less money it created a new problem of its own: the disposal of the coal ash. The large piles of ash on the site must have been both unattractive and unpleasant.

The artifactual evidence from the Shaeffer Farm site argues against an obsessive focus on the status associations of artifacts. It reinforces the contention, made by others, that the largest differences between the artifactual assemblages at North American sites are between sites of different periods, not different classes (Deetz 1972; Klein 1991). Even though we have strong reasons for suspecting that the tenants were poorer than the Shaeffers, the artifacts from the Shaeffer Farm site present no clear evidence of economic or social difference. Great economic inequality has certainly existed within the British Colonies and the United States throughout all periods (Soltow 1992; Walsh 1992), but that inequality is not always reflected in everyday objects. Studies of probate inventories have found a great deal of similarity in the possessions of the wealthy and the poor in certain regions (Friedlander 1991; Herman 1987: 42). Clear artifactual signs of status are hard to discern, but signs of technological and economic change are everywhere.

Analysis of the faunal remains also provided no clear evidence of status differences. As far as could be determined from the bones found on the site, the diets of the Shaeffers and the tenants were quite similar. In both periods the residents of the site ate all parts of the pigs they raised, raised and ate chickens, and purchased both expensive and inexpensive cuts of beef. In this case the lack of measurable status does not derive from technological progress, but from traditional rural consumption patterns. Farmers who raised stock for their own consumption, whether well-off or poor, usually ate all the parts of the animals they butchered, from heads and feet to hams and roasts (Coleman et al. 1984:

180; Fletcher 1950: 403). Therefore, although some archaeologists have detected status differences in the faunal remains from urban and plantation sites (Garrow 1987; Otto 1974), no such differences would be expected in upland farms, and none were found at the Shaeffer Farm site.

Compared to their wealthier contemporaries, the tenants at the Shaeffer Farm site certainly had fewer and less diverse possessions. The houses of middle-class people were much larger than the 378 sq ft (34.02 sq m), story-and-a-half structure at 36AR410 (Martin 1942: 107-147; Soltow 1992: 131). The most salient developments between the Shaeffer and tenant periods at the site, however, reflect the general impact of increasing industrialization and the specific impact of technological improvements such as the kerosene lamp rather than status differences. The patent medicine bottles, which are found in the trash of both rich and poor, represent a change in both technology and attitudes, as Americans abandoned their traditional herbal remedies for those provided by medical "science." The replacement of wood with coal as the main household fuel connects Shaeffer Farm with the Pennsylvania industrial complex of coal mines, steel mills, and railroads. Industrialization redefined the experience of all Americans, and even the ordinary citizens of Teddy Roosevelt's generation saw and did things the richest of George Washington's compatriots could scarcely have imagined.

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