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A Functional Study of the Kershaw House Site in Camden, South Carolina

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by

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Prepared by the
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LIST OF ABBREVIATIONS

CCD	Charleston County Deeds
COS, Records	Camden Orphan Society Records
CW	Cornwallis Papers
GP	Nathanael Greene Papers
KP	Thomas F. Kirkland Papers
MD	Samuel Mathis Diary

ACKNOWLEDGEMENTS

A number of individuals and organizations contributed to the successful completion of the archeological report of the excavations conducted at the site of the Kershaw house in Camden. This work was conducted under the sponsorship of the Camden Historical Commission. The analysis of the site and materials recovered there was carried out at the Institute of Archeology and Anthropology at the University of South Carolina. Several individuals of the Institute's staff played a critical role in this work. William T. Langhorne, Jr. served as the author's research assistant and supervised much of the analysis. He also contributed the discriminant analysis section of this report. Edwin McDowell and Nancy Winstanley aided in sorting out and tabulating the artifacts and in mapping their distributions on the site. John House and Stanley South read and commented on portions of the manuscript. Susan Jackson proofread the manuscript and oversaw final production of the finished report. The perspective drawing of the Kershaw house site is the work of Darby Erd and the line drawings were done by Albert O. Jackson and Debra A. Darlington. Gordon Brown is responsible for the photographs that appear in this report.

In addition, the author wishes to thank the following persons for their assistance in the Kershaw house report: Mrs. W. A. (Hope) Boykin, Administrator of Historic Camden; E. L. Inabinett of the South Caroliniana Library of the University of South Carolina; Robert L. Stephenson, Director of the Institute of Archeology and Anthropology; and Robert Strickland of the Lancaster Regional Campus of the University of South Carolina.

INTRODUCTION

For a period of five years archeological investigations were carried out at the presumed site of the Kershaw house, an eighteenth century structure that was situated just east of the colonial town of Camden, South Carolina. This work was carried out under the auspices of the Camden Historical Commission with grants received from various individuals and funding agencies. It resulted in the complete excavation of a fairly extensive area containing the remains of several structures and generated an enormous collection of artifacts. Despite the publication of several preliminary reports and articles (Calmes 1968; Strickland 1971, 1976), no comprehensive study has been written covering any portion of this research. Subsequent excavations were carried out at this location in the fall of 1974 preparatory to the reconstruction of a palisade wall and have been reported separately (Lewis 1975a). With the exception of the investigation of two deep wells, this project brought to a close archeological work at the Kershaw house. This report will attempt to review all archeological research associated with the Kershaw house prior to 1974. It will summarize the excavations and analyze the cultural features and materials in order to answer broad questions concerning the form and function of the historic occupation there.

Archeological excavations at the Kershaw house site were conducted with two general goals in mind: first, to locate and identify the principal structure and its outbuildings, and second, to define the spatial limits of the eighteenth century occupation associated with the household (Calmes 1968: 15; Strickland 1971: 66). The information gathered as a result of this work was intended to aid in the interpretation of the site and in the reconstruction of selected features on it. Within the framework of these descriptive goals it is possible to pose questions regarding other aspects of the Kershaw house as a cultural entity. This structure, as the residence of a prominent individual on the colonial South Carolina frontier, may be expected to have functioned in certain ways relative to the community and the region within which it was situated. The content and pattern of the archeological record should, in turn, reflect these relationships. Drawing on analogy based upon documentary, ethnographic, and archeological sources, it should be possible to construct and examine postulates concerning the function of this structure and those activities associated with it. In this manner it will be possible to study the Kershaw house not only as an architectural entity but, moreover, as a geographical focus of social, economic, and political activities that relate to and must be understood in the larger context of the frontier sociocultural system within which it existed.

PHYSIOGRAPHIC SETTING

The site of the Kershaw house is on Magazine Hill in the southern portion of the present City of Camden, South Carolina. This site lies east of Market Street and south of Bull Street on the east side of a line drawn southward from the intersection of Bull and Lyttleton Streets (Fig. 1). Magazine Hill forms a portion of the Wateree River terrace lying just above the floodplain of Pine Tree Creek near its confluence with the Wateree. This terrace is characterized by Marlboro sandy loam soils commonly having a two layer profile consisting of brownish-grey sandy loam grading into yellowish-brown to red sandy clay. Marlboro sandy loam is well-suited to agriculture. It is well, but not excessively, drained and its high moisture content prevents crops from suffering badly from drought even in dry seasons (Latimer, et al. 1922: 45-46).

The eighteenth century vegetation of the Magazine Hill area is revealed by a 1734 survey plat of Fredericksburg Township, an early geographical unit that included the future site of Camden (Fig. 2). This plat indicates that hardwoods, primarily water oak (Quercus nigra) and sycamore (Platanus occidentalis), are associated with the Wateree River floodplain, while pines are prevalent above the terrace (Kirkland and Kennedy 1905: 10, Fig. 1). It is likely that the oak-hickory-pine mixed forest characteristic of much of the South Carolina Piedmont and Coastal Plain (Küchler 1964) extended as far inland as the river terrace while the pines, presumably representing a fire climax situation (Oosting 1956: 289-290; Shelford 1963: 86), occupied the drier soils of the Sand Hills above the terrace (Craddock and Ellerbe 1966; Frothingham and Nelson 1944: 21).

The suitability of the Marlboro sandy loam soils to agriculture is witnessed by the fact that for at least the last century, Magazine Hill has been under cultivation (Kirkland and Kennedy 1905: 277). It was planted in cotton at the time of the earliest archeological investigations in 1967 and is presently in grass. There is no evidence of a recent occupation of this area apart from two small frame structures situated just south of Bull Street. Although associated with the farming activities on Magazine Hill, these structures lay well outside the immediate vicinity of the Kershaw house site.*

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*The terms "Kershaw house" and "Kershaw house site" are used here only to refer to the traditional location of the Kershaw house and to the archeological remains exposed and materials recovered there. The actual identification of the site as that of the Kershaw house will be addressed later in this report.

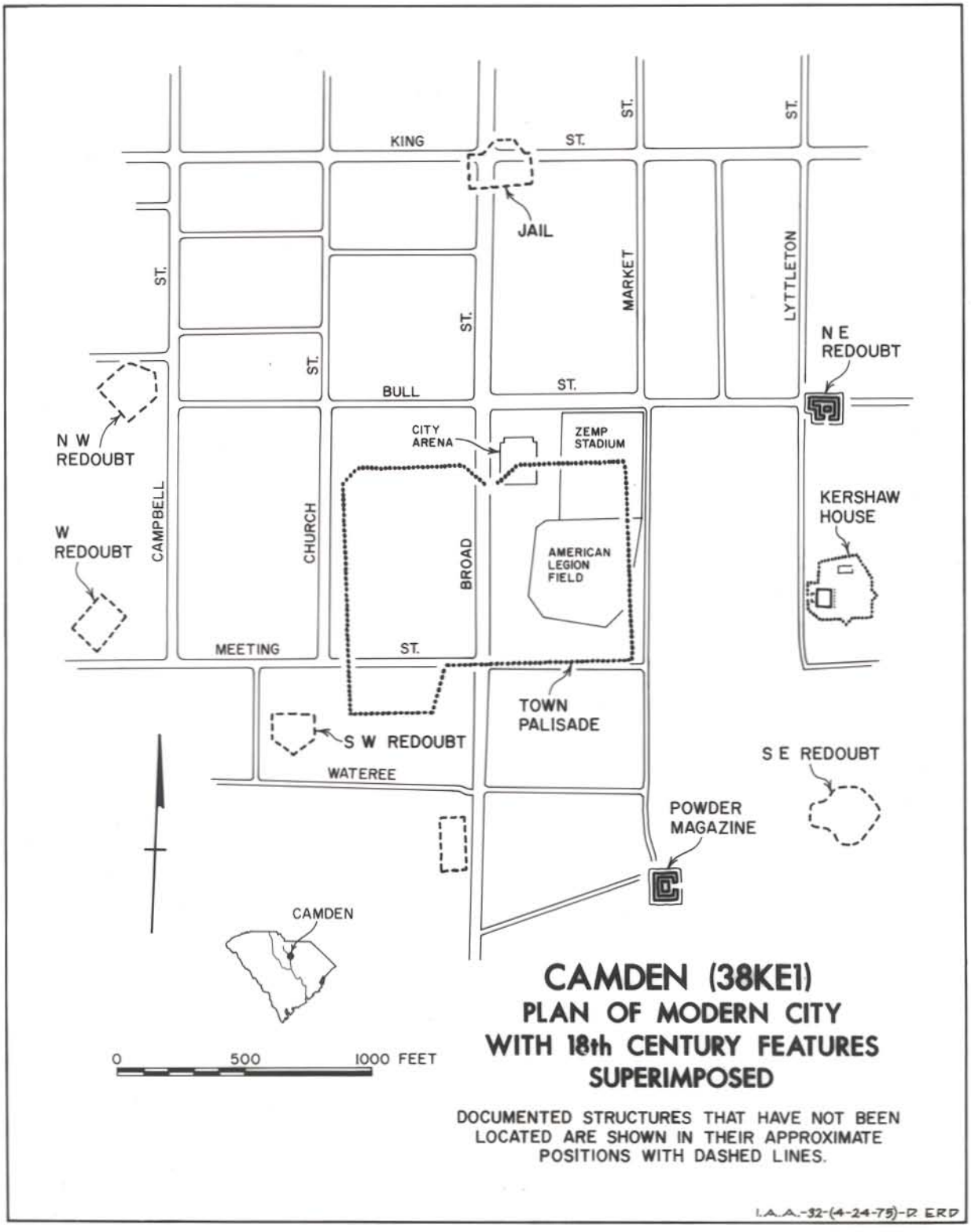
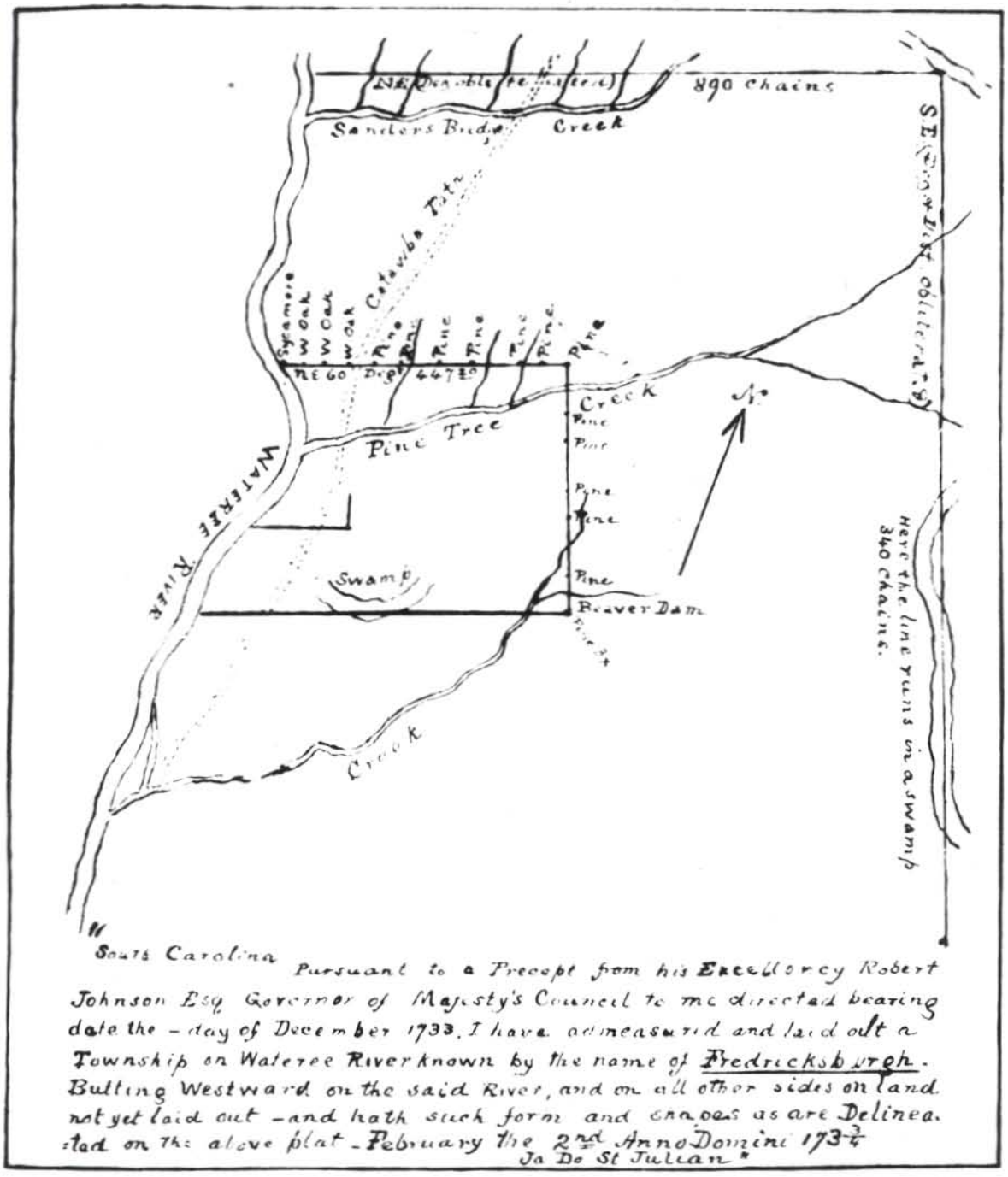


FIGURE 1: Camden, Plan of the Modern City With Eighteenth Century Features Superimposed.



FREDRICKSBURGH TOWNSHIP.

Copied from old Plat in office of Secretary of State, Columbia, S.C.

FIGURE 2: Fredericksburg Township in 1734. Copy of the Original Survey Plat. (Source: Kirkland and Kennedy 1905: 10.)

In order to properly discuss the historical background of the Kershaw house, it is necessary to first review the development of Camden, South Carolina, the settlement in which it was constructed. At the beginning of the eighteenth century, settlement in the young colony was confined to the coastal area and its economy, based on plantation agriculture, centered around the port of Charleston (Sellers 1934: 5). In addition to serving as the economic and political nucleus of the colony, Charleston also formed the hub of the Indian trade network in the Southeast (Crane 1956: 108).

The inland expansion of the colony began in the 1730's, at which time a series of townships was surveyed to encourage the settlement of frontier lands adjacent to the major rivers linking the Piedmont to the coast (Fig. 3). Fredericksburg Township on the Wateree River, like many of the others, was not immediately occupied. It was not until the following decade that settlement began in Fredericksburg with the influx of Irish Quakers who established plantations along the Wateree River near its confluence with Pine Tree Creek. They built a meeting house on the Catawba Path, a major land artery linking Charleston to the upper Wateree drainage (Kirkland and Kennedy 1905: 9-10).*

In the subsequent period, population in Fredericksburg increased and a single settlement there began to take on an economic role as a focus of agricultural activity. This transformation involved the establishment of saw and grist mills, warehouses, an inn and a store (Schultz 1972: 16). This development was clearly associated with the settlement's rise as an inland trading center funnelling such locally-produced commodities as flour, butter, cheese, hemp, flax, and flax seed to Charleston. By 1760 the Fredericksburg settlement, now called Pine Tree Hill (Mills 1972: 586), was a major transshipment point for goods moving into the interior from Charleston, as well as for backcountry wheat destined for coastal or overseas markets (Ernst and Merrens 1973: 561-562). The following decade saw Pine Tree Hill grow as an inland center for redistribution of goods and small scale industrial activities, surpassing other such settlements on the South Carolina frontier (Schulz 1972: 23; Mills 1972: 589).** In 1768 Pine Tree Hill was renamed Camden (Kirkland and Kennedy 1905: 94).

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*In the initial phase of colonization in the South Carolina Piedmont, the distribution of settlement appears to have been linked to the network of trails established earlier for the Indian trade. The necessity of focusing the transportation network around a central point linking it to the markets of the mother country (see Rees 1975: 334) permitted the adoption of this trail system which provided access to the port of Charleston from the interior. For a further discussion of this phenomenon in colonial South Carolina see Lewis (1976: 21).

**For a more extensive discussion of the role of such economic centers in relation to the phenomenon of frontier colonization in general, see Casagrande, Thompson and Young (1964) and Lewis (1975b, 1976).

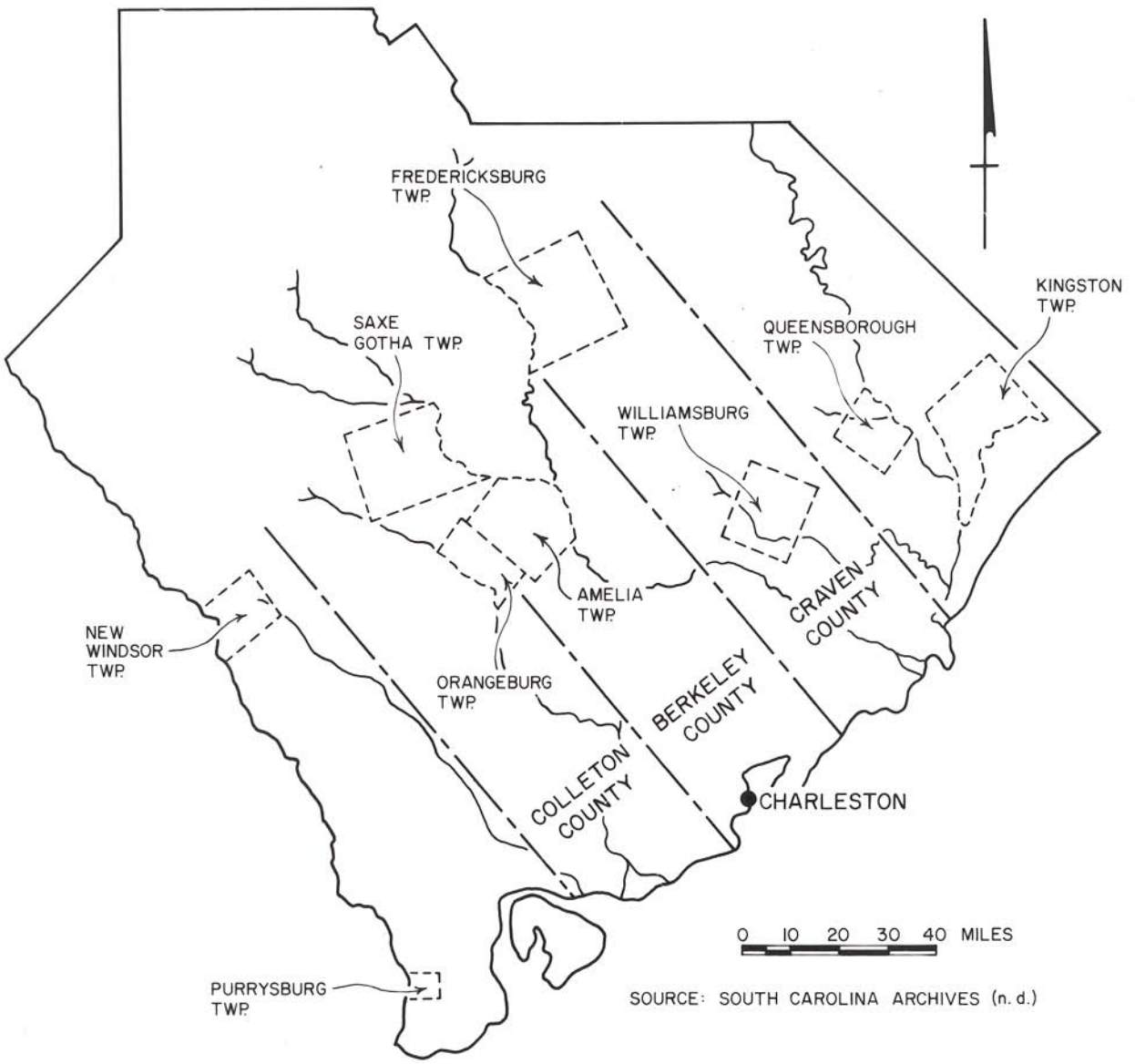

FIGURE 3: South Carolina Counties and Townships in 1730.

The development of Pine Tree Hill and later Camden as a multifunction center is closely tied with the activities of Joseph Kershaw who came there in 1758 as an agent of the Charleston firm of Ancrum, Lance, and Loocock to establish a store and mill. Kershaw's business ventures enjoyed great success and soon his firm had opened stores at the heads of navigation of the Congaree and Pee Dee Rivers (Sellers 1934: 89). Kershaw also engaged in extensive land dealing involving plantations, commercial property in Pine Tree Hill, and lots in Charleston (Schulz 1972: 33-34). By the time of the American Revolution his central position in the commercial system of the frontier had allowed him to accumulate a great deal of wealth (Kirkland and Kennedy 1905: 377).

In the 1770's Joseph Kershaw erected a large frame house as a residence for his family in Camden. It was constructed on the east side of Lyttleton Street on a parcel of 14 lots (587-600), 12 of which were purchased by Kershaw in 1776 and 1777. Because the property had previously belonged to Kershaw and his business associates, however, it is uncertain if the date of the transfer actually preceeded the beginning of construction (National Heritage Corporation 1976: 15).

Kirkland and Kennedy (1905: 274) describe the house as "...a large, and, for the times, very elegant mansion of many rooms and passages, three stories high with spacious attics."* A painting made of the building in the early nineteenth century shows it to have been a square, five bay structure with a hipped roof. Its facade was set off by a two-stage pedimented portico (Fig. 4).

The interior plan of the house is impossible to ascertain precisely on the basis of exterior views alone, however, a nineteenth century account describes the house as being characterized by "long halls" with "doors opening right and left" (Unnamed Newspaper 1912). This suggestion of a central hallway together with the position of the chimneys in the center of each side of the structure indicates a plan of the "Lowland South plantation" type (Newton 1971: 12). Houses with this plan are characterized by a wide central hallway running from the front of the house to the back with a stairway near the rear. Two large rooms open from either side of the hallway and the fireplaces, with their accompanying chimneys, are positioned in the center of the longitudinal wall dividing each pair of rooms (Fig. 5). This plan is essentially that of the "square house" developed in Britain after the middle of the seventeenth century (Braun 1973: 89) and is typical of many Georgian mansions built in North America during the second half of the eighteenth century (Waterman 1945: 166; Noël Hume 1969: 127). It persisted, with minor variation, until about 1830 (Kelly 1963: 17). The exterior of the Kershaw house appears to have been painted white, for it is described as "the great white house" in an early document (CCD/May 5, 1786/T-5: 120). Kirkland and Kennedy (1905: 274) state that the grounds around the house were landscaped with "tall poplars and other handsome trees and shrubs," however, it is uncertain if this had been accomplished before 1780.

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*Although the house contained only two and one-half stories it rested on an "English basement" at ground level. This basement would have raised the first story one floor off of the ground and thus created the illusion of an extra story.

FIGURE 4: Early Nineteenth Century Painting of the Kershaw House. This Picture is the Work of I. B. Alexander and is Believed to Have Been Done in the 1830s. (Source: South Caroliniana Library, University of South Carolina.)

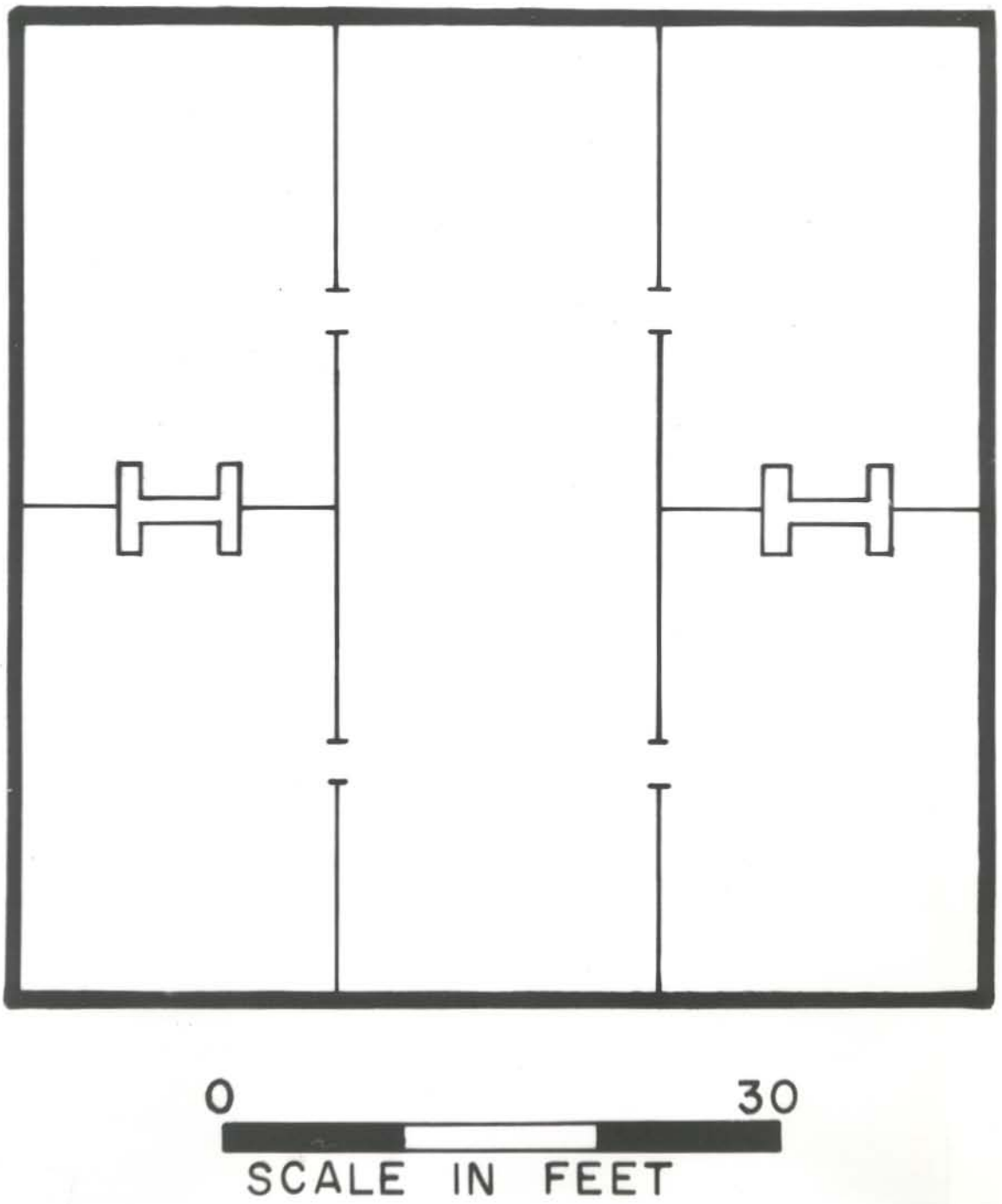

FIGURE 5: Lowland Plantation Structure Plan. (Source: Newton 1971: 12.)

A comparison of the Kershaw house with contemporary structures reveals a strong similarity between it and the William Washington house (Fig. 6) situated on South Battery and Church Streets in Charleston (Henry Boykin, personal communication). This house was built by Thomas Savage about 1768, at least several years prior to the construction of Joseph Kershaw's house in Camden. The house takes its name from Colonel William Augustine Washington of Revolutionary War fame who purchased it in 1786. It is a large, square, "double" house of frame construction, with piazzas in front and rear, standing atop a brick basement (Huger Smith and Huger Smith 1917: 190). Another Charleston house of similar appearance is the Miles Brewton house at 27 King Street, built about 1765 (Fig. 7). It is nearly identical to the William Washington house in size and form, however, it is of brick rather than frame construction (Huger Smith and Huger Smith 1917: 93). Given the social and economic ties Kershaw maintained with Charleston together with the central cultural role that city played as entrepot to the frontier, it would not seem incongruous for him to have chosen a Charleston house as the prototype for his frontier mansion.

The American Revolution came to South Carolina in force in 1780 with the British capture of Charleston in May. During the following month, detachments were dispatched into the interior to secure the frontier settlements and establish centers of supply and communications in support of the impending invasion of North Carolina (Tarleton 1967: 86). Those settlements that served as key positions in the network of frontier communications were occupied and fortified. They included Camden, Ninety-Six, and Augusta (Lee 1969: 164).

Joseph Kershaw's still unfinished house stood outside of the contiguous settlement of Camden. The British commander, Lieutenant General Lord Charles Cornwallis, took possession of the house as his headquarters and separately fortified it with a palisade wall containing two bastions. Although he later relinquished his command to Colonel Lord Francis Rawdon, the name Cornwallis became attached to the structure and it is often referred to in the literature as the Cornwallis house (Kirkland and Kennedy 1905: 274). The fortified Kershaw house formed a link in the string of redoubts and other fortified positions surrounding the palisaded town as illustrated in Figure 8, a map of the fortifications at Camden as they existed in 1781 (Greene to Continental Congress, May 12, 1781/GP/155/II:161). The plan shows two structures enclosed by the Kershaw house palisade, the house itself and what appears to be a smaller outbuilding situated to its rear and slightly to one side.

Although never under direct attack itself, Camden was twice approached by American armies and two major military engagements were fought nearby. Following the Battle of Hobkirk Hill in April 1781, and the subsequent capture of Fort Watson, a crucial link in the supply line to Charleston, the British found their position at Camden untenable. They burned the public buildings, many private houses, and much of their own supplies and retreated down the Santee River toward the coast (Ramsay 1968/II:247). The Kershaw house escaped the conflagration, however, and appears to have been one of the few structures remaining in Camden at the end of 1781 (Clark 1956/I/#236: 32).

FIGURE 6: The William Washington House, Charleston, South Carolina. (Source: Simons and Lapham 1927.)

FIGURE 7: The Miles Brewton House, Charleston, South Carolina. (Source: Simons and Lapham 1927.)

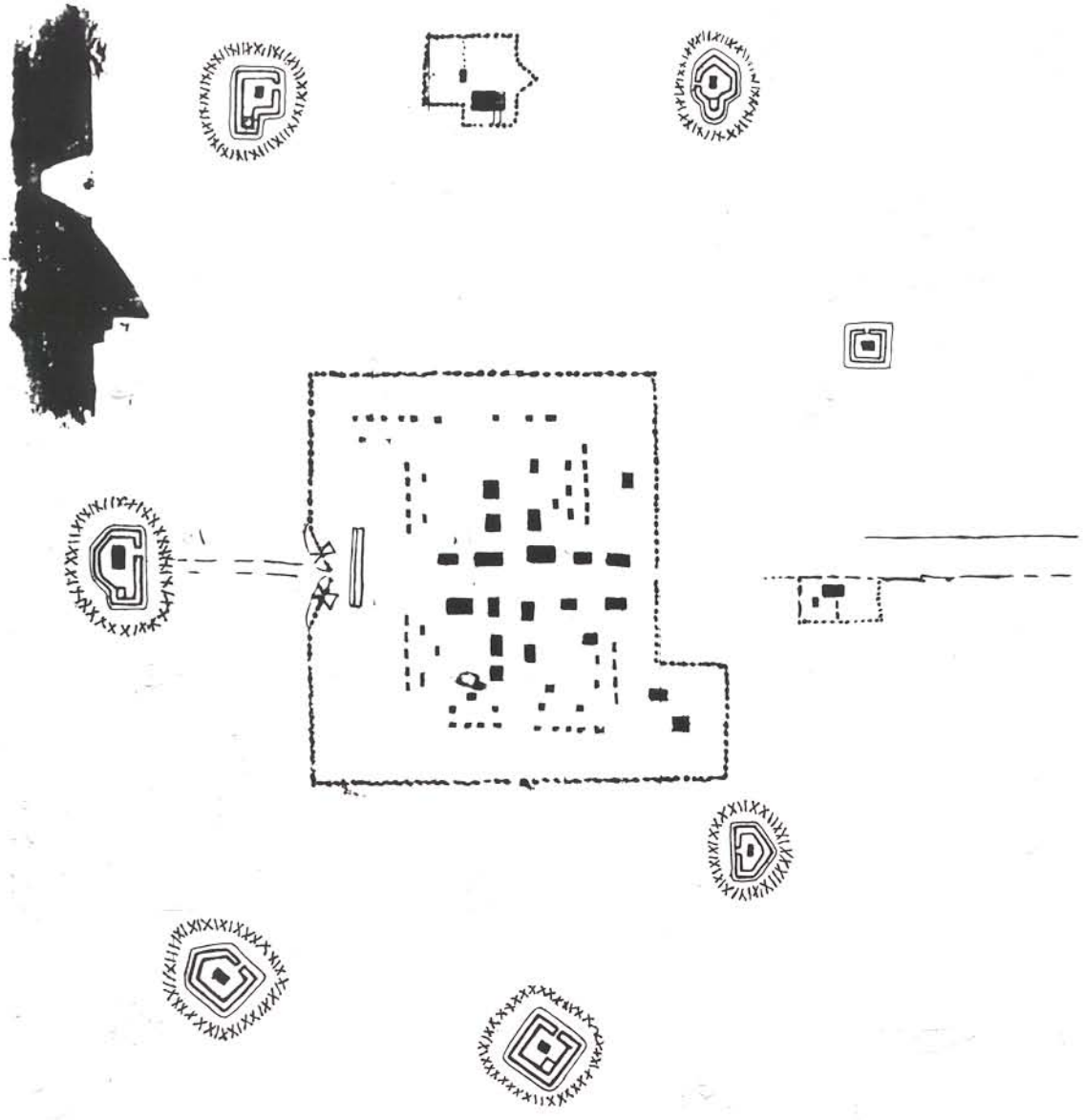

FIGURE 8: The Greene Map of Camden and its Fortifications, 1781. The Kershaw House and its Palisade Are Visible to the East of the Fortified Town. (Source: GP/CCP/155/II: 161.)

Following the British withdrawal the house was soon reoccupied by the Kershaw family (MD, May 31, 1781) who had been forced to retire to a family plantation in the vicinity during Camden's occupation (Mathis 1819: 14). Joseph Kershaw, who had been imprisoned by the British in Bermuda, returned at the end of the war (Kirkland and Kennedy 1905: 278). It is probable that the palisade wall around the house was removed at this time for an attempt was made both by the retreating British (Rawdon to Cornwallis, May 24, 1781/CW/30/11: 66) and the advancing Americans (Greene to Continental Congress, May 14, 1781/GP/155/II: 59) to dismantle the fortifications at Camden.

After the Revolution the house remained in the Kershaw family only a short time. Joseph Kershaw had suffered great financial losses as a result of the war and in 1786 he was forced to mortgage his house and the lots upon which it stood (CCD/May 5, 1786/T-5: 120). Kershaw died in 1791 and the house was sold at auction shortly thereafter. The Camden Orphan Society came into possession of the property in 1805 (COS, Records/June 22, July 4, 1805) and used the mansion as an orphan house, school, and Society meeting rooms (COS, Records/Sept. 11, 1811) until at least 1822 (Kirkland and Kennedy 1905: 278).

In 1830 Mrs. Anne Royall (1831: 41) passed through Camden on a tour of the South and found the building:

> ...fresh and entire, with the very same weather-boarding on it, and astonishing to tell instead of being dark or decayed was fair and whitish; the portico had been repaired and people were living in it. This house, the property of Mrs. English, is on the borders of the town....

By this time the original site of the old town of Camden had been almost completely abandoned as settlement moved northward to the higher ground above the river terrace where the present-day Camden stands. Writing in 1853, Mrs. Margaret Maxwell Martin stated that the house:

> ...stands on an elevated and extended plain at the extreme south end of the town, a locality deserted on account of its supposed insalubrity. This fine large, but dilapidated building is now tenantless and forsaken. The sounds of wassail and mirth have given place to the hootings of the owl and flapping of the bat (Teal 1961: 19).

Although the house itself was abandoned as a residence, another account of this period states that a man and his wife, presumably caretakers, lived in the backyard, probably in an outbuilding. The house is also described as having been surrounded by a fence at this time (Unnamed Newspaper 1912). Both the fence and the dilapidated condition of the house may be seen in Figure 9.

FIGURE 9: Photograph of the Kershaw House in the Decade Prior to the Civil War. (Source: South Caroliniana Library, University of South Carolina.)

FIGURE 10: Painting of a Military Review in Front of the Kershaw House During the Mexican War Period. (Source: Camden District Heritage Foundation.)

During the period prior to the American Civil War the wide grassy expanse in front of the Kershaw house was used for civil and military gatherings (Scribner's Monthly 1875: 618). The Marquis de Lafayette reviewed troops on this green in 1825 and soldiers were mustered there for the Mexican War in 1848 and the Civil War in 1861 (Kirkland and Kennedy 1905: 279). Militia companies were annually inspected there by the governor and the Kershaw house served as a reviewing stand for spectators (Unnamed Newspaper 1912). A military review in front of the Kershaw house may be seen in a contemporary painting (Fig. 10) executed during the Mexican War period.

Near the close of the Civil War, the relatively isolated Kershaw house was used as a temporary storehouse for Confederate supplies in order to prevent the destruction of the town depot and other public buildings by advancing Union forces under General W. T. Sherman (J. H. Devereux to K. Meroney, June 3, 1906/KP/3-15). As the federal troops of Howard's Corps entered Camden in February 1865, the Confederate troops attempted to destroy the house to prevent the capture of the supplies there. Their efforts may have been in vain, however, for Federal soldiers, under orders to destroy public property, are reported to have set fire to the old building, destroying it and its contents (K. S. Villepique, interview, May 29, 1906/KP/3-15).

THE ARCHEOLOGICAL INVESTIGATIONS AT THE KERSHAW HOUSE

Following its destruction at the close of the Civil War, the Kershaw house passed into relative oblivion under the onslaught of the farmer's plow. By the turn of the century all that remained to mark the location of the structure were scattered fragments of brick and molten glass (Kirkland and Kennedy 1905: 280). The precise location of the Kershaw house had been lost by the 1960's when the modern search for the structure began. Recent plowing had unearthed bricks on Magazine Hill, suggesting a structure in this vicinity. In 1965 a resistivity (geohm) survey was conducted in this area by the Applied Science Center for Archaeology of the University of Pennsylvania. Its results indicated a large central region of low resistance, suggesting the presence of a structural foundation (Ralph and Börstling 1965: 5-6). These findings led William B. Edwards, then State Archeologist, to conduct preliminary test excavations in this area, in 1965, with negative results (Calmes 1968: 14).

More extensive archeological work was begun in February 1968, when Alan Calmes, then Research Director for the Camden District Heritage Foundation and a graduate student in history, initiated exploratory excavations in the same area tested by Edwards. In order to maintain horizontal control over the suspected Kershaw house site, a grid was superimposed over the entire area (Fig. 11). All points were measured north and east along two axes from a single datum point located southwest of the site. A telephone pole then standing at the southwest corner of Bull and Lyttleton Streets served as a control point for Calmes' excavations. No attempt was made to establish vertical control over the site as a whole (Calmes 1968: 2).

Calmes excavated a 5.0 foot wide trench in a north-south direction hoping to intersect the walls of the house. This trench revealed a two layer soil profile consisting of "plow disturbed soil" about 0.75 foot in depth underlain by a "sterile soil" (Calmes 1968: 14).* The foundations of the structure as well as other intact cultural features were visible at the base of the upper layer and extended into the sterile zone (Fig. 12). Architectural features uncovered in this initial excavation included foundation footing ditches filled with brick and mortar rubble to a depth of 1.0-1.5 feet and a section of trench, 1.5 feet wide and 2.5 feet deep, filled with a mixture of sand and clay. A second exploratory trench oriented perpendicular to the first, uncovered portions of footing trenches as well as a section of intact brick wall two brick lengths thick and extending five courses beneath the top of the sterile soil.

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*Although Calmes' description of the soil stratigraphy at the Kershaw house is unclear, it is probable that his two layers correspond to the zones described by Strickland (1971: 66) at this site. Presumably Calmes' plow disturbed soil is the pale brown sandy loam found by Strickland to have contained all cultural material except that associated with subterranean features. This zone was formed by the vertical mixing of the upper 0.75 foot of soils as the result of plow cultivation. Calmes' sterile soil very likely encompasses the yellow-brown clayey sand and the underlying layer of red clay, both of which contained no artifacts.

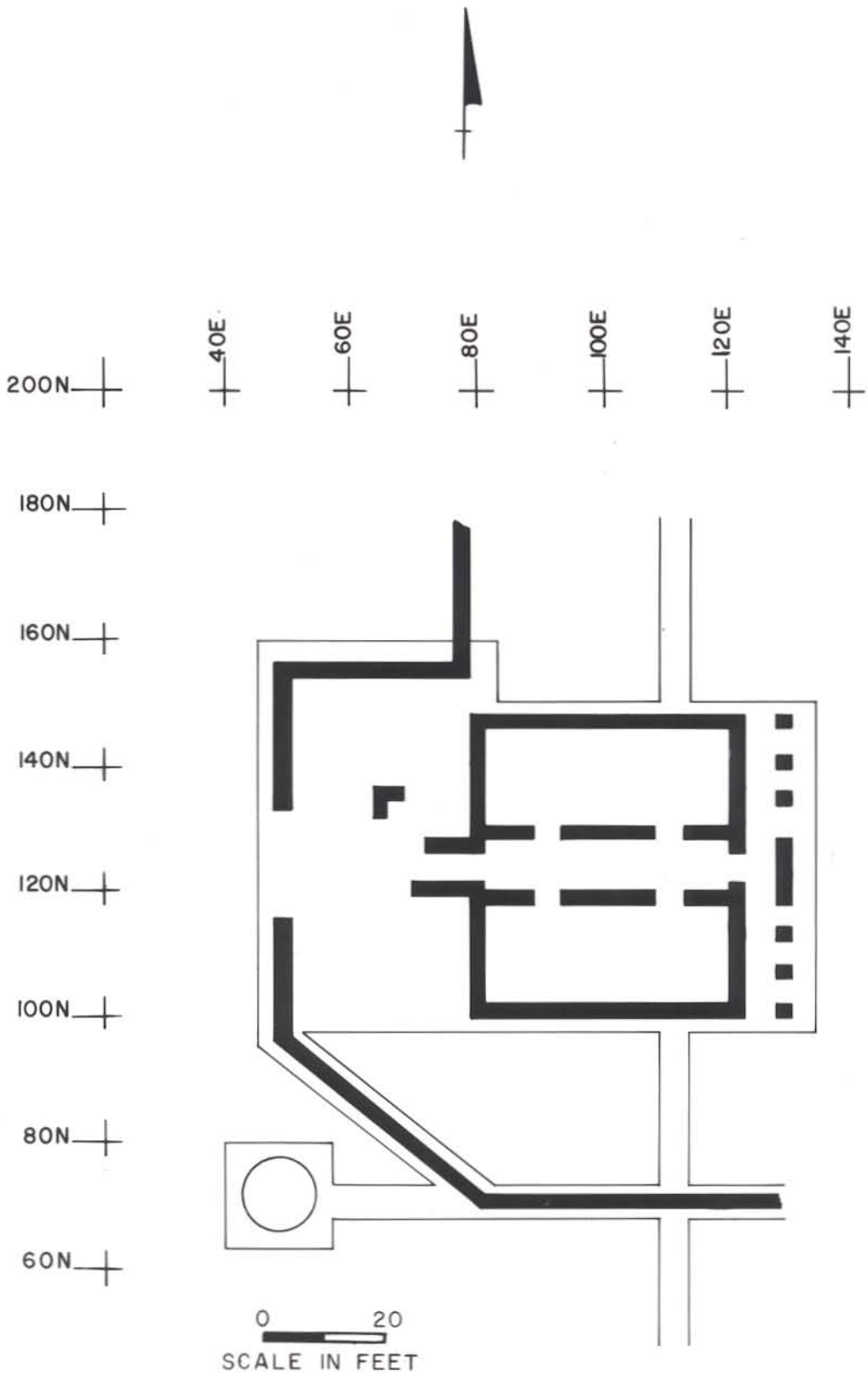

FIGURE 11: Plan of Calmes' 1968 Excavations at the Kershaw House Site.

FIGURE 12: Calmes' North-South Trench Through the Kershaw House Structure.

After defining the approximate limits of the structure by exploratory trenching, the area assumed to contain the remains of the Kershaw house was excavated in 10.0 x 10.0 foot squares and larger units of varying size to the level of the sterile soil. Features extending into the sterile soil were excavated separately. This work revealed the foundations of a rectangular structure aligned two degrees west of north, the same alignment maintained by the street plan of Camden. The structure lies just to the east of the right-of-way of the street and seems to have fronted upon Lyttleton Street which originally extended as far south as Mulberry Street (Fig. 1).

Calmes extended his excavations west and south of the building foundations in search of adjacent structural features. During the course of this work a linear feature extending along two sides of the structure was uncovered and a circular pit 12.0 feet in diameter lying just outside of its southwest angle was completely excavated (Fig. 11).

The close of the field season in 1968 marked the termination of archeological investigations at the Kershaw house site for a period of two years. The complete excavation of the presumed house foundations and the area adjacent to them had been completed, however, and the stage was now set for the expansion of future excavations into areas further removed from this structure.

In 1969 and 1970 the Camden Historical Commission asked the Institute of Archeology and Anthropology for archeological advice in planning future work at Historic Camden. The Institute had no one available to assign to the work; but Robert L. Stephenson and Stanley South advised several potential courses of action depending upon funds available. In early June of 1970 Robert N. Strickland visited the Institute and was recommended as one who might be able to pursue the Camden archeological work.

In late June 1970, Robert N. Strickland initiated excavations aimed at uncovering the yard area east of the house foundations. In doing so he hoped to delineate the trench of the palisade wall erected during the British occupation and discover evidence of outbuildings (Strickland 1971: 66). These general goals were to guide archeological work carried out at the Kershaw house site for the next four years.

Strickland attempted to maintain consistency with the earlier fieldwork by reconstructing Calmes' horizontal site grid tying the Kershaw house to the datum point at the corner of Bull and Lyttleton Streets. Unfortunately, measurement errors in Calmes' original survey made it impossible to reestablish precisely the original grid. While the north-south axis of Strickland's grid coincided with that of Calmes, a variance of slightly over 100 feet occurred between the east-west axes of each. The grid established in 1970 served as the horizontal control for all subsequent excavations at the Kershaw house site through 1973 (Fig. 13).

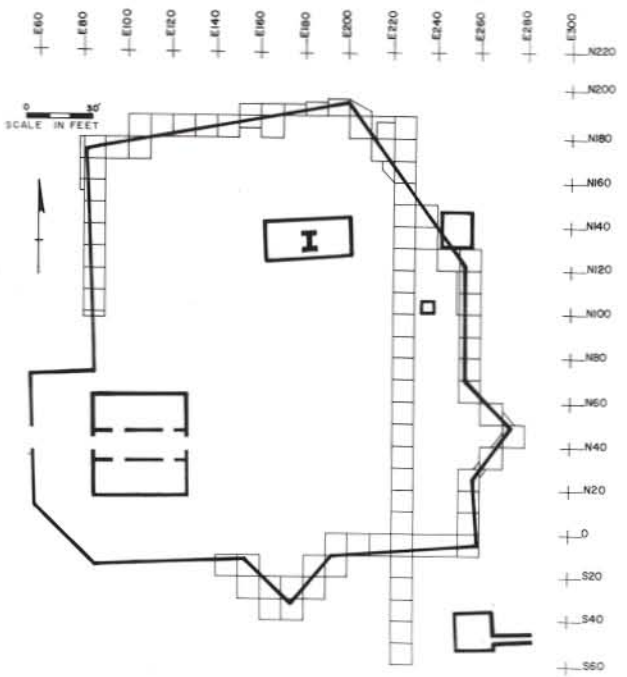

FIGURE 13: Plan of Strickland's 1970 Excavations at the Kershaw House Site.

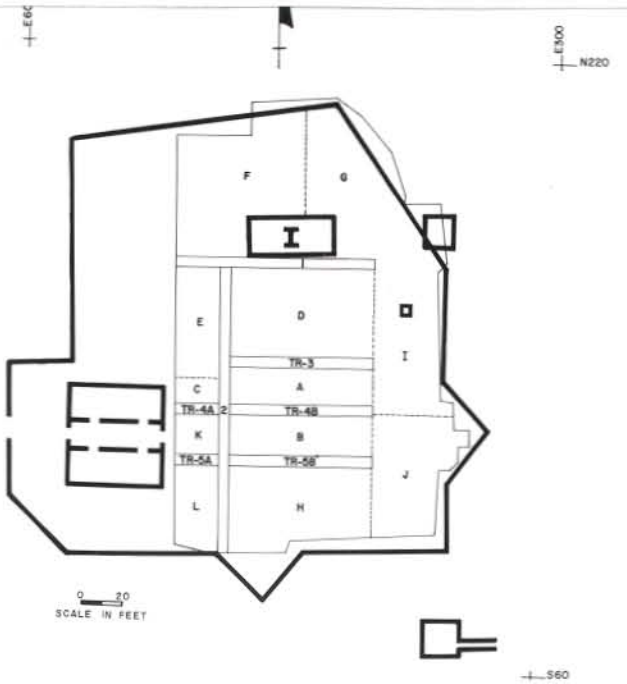

FIGURE 14: Plan of Strickland's 1971 Excavations at the Kershaw House Site.

During the 1970 field season, work was concentrated on locating and exposing the trench of the palisade wall, that documents indicate surrounded the Kershaw house and grounds. Based upon the coordinates of the newly-established site grid, Strickland first excavated two 10 x 10 foot test pits, S50 E220 and N180 E220,* near the expected locations of the palisade corners. These pits revealed a three level soil profile consisting of a plow zone of pale brown, sandy loam at the surface, underlain by a yellow-brown clayey sand and a red clay (Strickland 1971: 66). The two lower layers were sterile. Because no evidence of the palisade trench was visible in the yellow-brown subsoil of either pit, a series of contiguous intervening pits was excavated in hope of intersecting the wall. These pits formed a trench that revealed traces of linear features assumed to represent the north and south lines of the palisade trench. Once these points were located it was then possible to trace the line of the palisade until its entire extent was uncovered. This was accomplished by excavating a series of 10 x 10 foot pits aligned with the coordinates of the site grid (Strickland 1971: 15).

By the close of the field season in November, the palisade trench had been completely exposed, mapped, and covered with protective polyethylene. As part of its program of site interpretation, the Camden District Heritage Foundation restored the brick foundations of the Kershaw house at this time in anticipation of a reconstruction of the structure itself in the future. Palisade posts were placed at the corners of the wall just outside the actual trench to indicate the limits of this fortification. Limited landscaping of the site was also carried out following the cessation of archeological work in 1970. These operations obliterated all evidence of the previous season's archeological work by burying areas exposed by excavations and destroying the reference points for the site grid (Strickland 1976: 5).

Archeological investigations were resumed in late June 1971 under the direction of Robert Strickland. Because the previous year's work had been able to define the form and extent of the palisade surrounding the Kershaw house, the 1971 excavations were concentrated on investigating the area it enclosed. Due to the large size of this area and the limitations of time and resources, excavation by 10 x 10 foot units was abandoned in favor of techniques designed to expose larger areas of the site (Strickland 1976: 7). In order to reestablish horizontal control for the 1971 excavations, the palisade trench was again exposed and tentative grid points plotted. These points served as a guide for the layout of new excavation units. All points were tied to a new permanent datum point consisting of

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*All pits excavated by Strickland are designated by the coordinates of their south west corner. With the exception of the initial two pits, which were dug in arbitrary levels to ascertain stratigraphy at the site, all pits were excavated by natural layers. Vertical control was maintained through the use of a Bostrum level. The contents of all pits and other excavated features were screened through a sifter with a 1/4 x 1/4 inch hardware cloth mesh.

a pipe set in concrete just east of the Kershaw house foundations. Excavation units inside the area enclosed by the palisade consisted of four unevenly spaced 5.0 foot wide trenches extending west from the original north-south trench dug the year before. These trenches, in turn, were intersected by a north-south trench the same width extending about two-thirds of the way across the palisaded area. The trenches were designated 1-5. The areas lying between the trenches as well as several other areas set off arbitrary boundaries also formed excavation units and were designated A-L (Fig. 14).

Each trench or area was excavated as a single unit. The soil from the plow zone was removed and deposited at the periphery of the site. Because the primary purpose of the excavation was to expose and record intact features within the palisaded area, the plow zone soil was not sifted and only those artifacts observed in the process of soil removal were retained (Strickland 1976: 7). Upon completing the excavation of each unit, all features were cleaned, mapped and assigned a feature number. All features were excavated by natural stratigraphy and their contents sifted through 1/4 x 1/4 inch hardware cloth to recover all artifacts present.

Several complex features were uncovered during the course of the 1971 investigations. These include a square well (F-67), a rectangular structure (F-70) with a central hearth that apparently underwent several stages of construction, and a square brick foundation (F-92) partially intersecting the northeast diagonal of the palisade. In addition, 25 pits, one ditch, and numerous postholes were exposed. One 10 foot section of palisade trench near the northeast corner of the wall was removed to ascertain the depth and form of this feature (Strickland 1976: 12). Only a portion of the many features exposed during the 1971 field season were excavated by the time work ceased in mid-August and the completion of this task constituted one of the primary goals of the archeological investigations the following year.

Archeological excavations commenced again in May 1972, under Robert Strickland's direction. During the eight week field season, efforts were directed at completing the investigation of the palisaded area and beginning exploratory excavations beyond the limits of this area (Strickland 1976: 9).

Excavations within the palisaded area centered around the exploration of features exposed but not investigated during the previous year's work. Most of these were completed during the 1972 field season. The excavated area along the northeast diagonal of the palisade was enlarged to permit the investigation of a structural feature there, and this feature was completely excavated during this field season.

Exploratory excavations outside the palisaded area were undertaken in hopes of discovering features possibly related to, but not in the immediate vicinity of, the Kershaw house. Specifically, Strickland was interested in determining if the area contained mass burials of American soldiers who died while being held captive there, following the battle of Camden in 1780 (Kirkland and Kennedy 1905: 275). The proximity of

the Kershaw house site to those lots owned by John Bartlam, an English master potter who manufactured creamware and other earthenwares at Camden from as early as 1774 to 1780 (Lewis 1976: Appendix A). believe that evidence of Bartlam's pottery-making activities might be present in the vicinity of the house.

The areas north, east, and south of the Kershaw house were explored by excavating 11 intersecting slot trenches aligned with the site grid at 50 foot intervals (Fig. 15). The presence of massive piles of backdirt from previous excavations prevented completing excavation of all of the anticipated trenches, and gaps are evident in the trench network between Trenches 8 and 9 and Trenches 14 and 16. The east-west trenches (6-13) were 5.0 feet wide, while those running in a north-south direction (14 and 16-19) were 2.0 feet wide. All east-west trenches and those north-south trenches south of Trench 11 were excavated by hand; however, because of the presence of a heavy layer of overburden in the northeastern part of the site, the north-south trenches between Trenches 11 and 12 were dug by backhoe. Because the object of the exploratory trenching was the location of features, the soil removed in these excavations was not sifted to recover artifacts (Strickland 1976: 9).

The exploratory excavation outside the palisaded area yielded evidence of several structural features. The first is an east-west oriented brick wall uncovered in Trenches 18 and 19 northeast of the palisaded area, the exact position of which was not recorded. It was covered by a heavy layer of overburden and was not explored further. The second feature was located just outside the southeast corner of the palisade (Fig. 15). It consists of an 18 x 18 foot brick structure foundation (F-90) with an associated trench (F-91) extending at least 140 feet from its east wall. Intensive investigation of this structure was not attempted during the 1972 field season.

The final season of archeological investigations at the Kershaw house site took place over an eight week period beginning in May 1973. Again, Robert Strickland was in charge of the excavations. Because many of the large number of features exposed during previous years' work still remained unexcavated, the primary goal of the 1973 season was to complete this work rather than to expand the area of investigation.

Efforts were concentrated on the excavation of the structure foundation and associated trench (F90, F91) during the first few weeks of the field work. During this time four 10 foot sections of the trench were removed and the foundation partially excavated in quadrants. Following the close of the 1973 investigations the feature was covered with a protective framework of wood and polyethylene. Strickland returned for several weeks in the summer of 1975 to complete work on this feature, after which it was stabilized by filling with sterile sand (Strickland 1976: 2).

The remaining four weeks of the 1973 season were devoted to the excavation of features within the palisaded area. This work involved the completion of the square well and the removal of two 10 foot sections of palisade trench as well as the excavation of numerous smaller features.

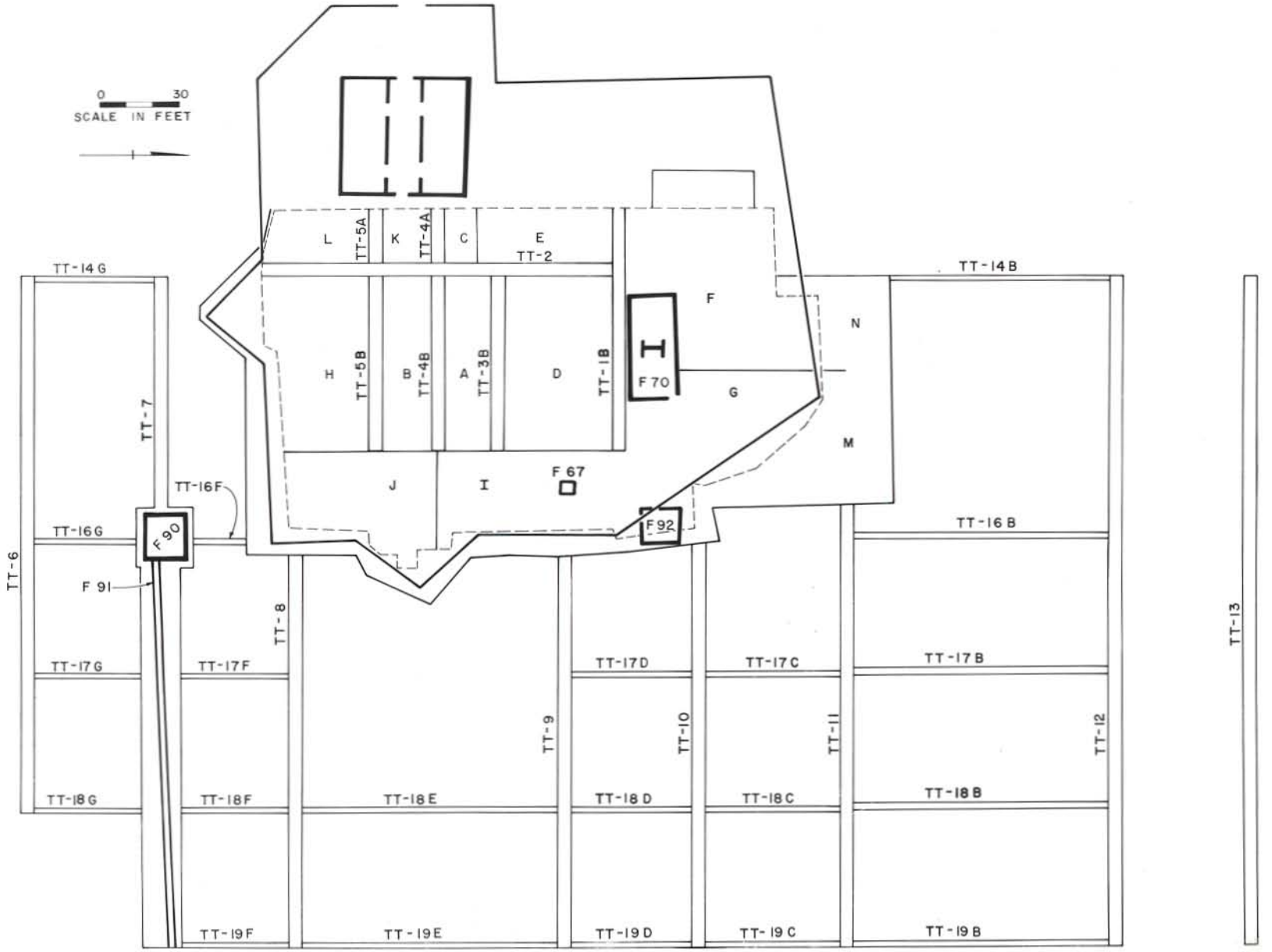

FIGURE 15: Plan of Strickland's 1972 Excavations at the Kershaw House Site.

Following the close of archeological investigations, all structural features not protected were covered with fill to prevent deterioration from exposure. The entire site was then landscaped and planted in grass.

In summary, archeological investigations were conducted at the assumed site of the Kershaw house from 1968 to 1973 in order to establish the location of the house itself and other cultural features associated with it. These excavations uncovered the foundations of a large structure and several smaller ones, numerous pits and postholes, and a palisade trench enclosing the area immediately adjacent to the structures (Fig. 16). Additional exploratory excavations outside the palisaded area revealed the existence of few features here and suggested a clustered settlement around the large house. With the close of archeological work at the end of the 1973 season all exploratory investigations of the Kershaw house site ceased. The excavation of the palisade trench preparatory to the reconstruction of the well in 1974 (see Lewis 1975a: 22-30) did, however, uncover evidence of an additional well associated with the north line of the palisade trench. The excavated features associated with the Kershaw house represent the intact remains of the site's early occupation. In the following sections of this report an attempt will be made to analyze the form, content, and distribution of these features in order to answer questions concerning the nature of the site as an entity in time and space.

FIGURE 16: Base Map of Archeological Features Uncovered in the Kershaw House Yard.

THE IDENTIFICATION OF THE KERSHAW HOUSE: ITS POSITION IN SPACE AND TIME

Introduction

The extensive archeological excavations at the Kershaw house site were conducted under the assumption that the material remains of a particular structure associated with certain documented activities were situated there, and that the data recovered in the course of the investigations would yield information relating to that structure and those activities. Before attempting to explore the form and nature of historic occupations on Magazine Hill, it is necessary to validate this initial assumption; that is, to demonstrate on the basis of archeological evidence that the site is that of Joseph Kershaw's mansion.

In order to confirm the existence of a particular past historical phenomenon, such as an individual house, archeological evidence capable of identifying this phenomenon in time and space must be available. This evidence must have the ability to verify statements from other sources that spell out the criteria that set the phenomenon apart. In the case of the Kershaw house the criteria for identification are documentary statements. In order to demonstrate their applicability to the archeological site under consideration, it is necessary to construct a number of hypotheses based upon information contained in documentary statements and to then examine these hypotheses in terms of the archeological record. With regard to the identification of the Kershaw house, several document-based hypotheses are amenable to archeological analysis. They may be summarized as follows:

1) The Kershaw house should be located on Magazine Hill on the property owned by Joseph Kershaw lying east of Lyttleton Street and south of Bull.

2) The *terminus post quem* date for the occupation of the site should be no earlier than the 1770's, reflecting the completion of the Kershaw house at this time. The site's *terminus ante quem* date should occur on or before the 1865 destruction date of the house.

3) The architecture of the structural remains should conform to the descriptive accounts of the Kershaw house as well as other buildings comparable in form.

4) Evidence should exist for the Revolutionary War palisade erected in 1780 as well as for the British military occupation in general.

5) The remains of at least one contemporary outbuilding should be associated with the house.

6) Because the Kershaw house was burned, the archeological record should contain evidence of such a conflagration.

In the remainder of this section each of the hypotheses regarding the identification of the Kershaw house will be examined in terms of the archeological data obtained from the site. The results of this analysis should determine if the site represents the remains of this historic structure.

The Location of the Kershaw House

Documentary evidence and local tradition suggest that Joseph Kershaw's mansion was built on Magazine Hill just east of the eighteenth century settlement of Camden. It was situated on the east side of Lyttleton Street on a block of lots purchased by Kershaw in 1776-1777. If the archeological remains represent this structure then it is imperative that they be situated in this area.

The location of the site of the excavated structure relative to the Kershaw property may be ascertained by superimposing a layout of the town lots on a plan of the site of Camden (Fig. 17). This comparison indicates that the archeological structure lies on Lot 589. This lot is situated within the block of lots owned by Kershaw as predicted by the first hypothesis.

The Terminus Post Quem and Terminus Ante Quem Dates for the Kershaw House

Documentary evidence indicates that the Kershaw house was constructed in the late 1770's and remained intact until 1865 when it was burned. The structure was occupied from the time of its construction at least through 1830 and lay abandoned at least 12 years prior to its destruction. If we assume that the archeological output of an inhabited structure differs from that of an abandoned structure, then it should be possible to discern each type of occupation by the archeological record it produced. Likewise, it is feasible to define the temporal limits of such occupations by examining the chronological ranges of the artifacts associated with each. Although the Kershaw house was in existence for a period of approximately 90 years, its occupation as a living area is likely to have produced the greatest and most constant output of material that accumulated to form the archeological record. In contrast, the period of abandonment and occassional use for public activities would probably have generated a much reduced archeological byproduct. For this reason it is assumed that the *terminus post quem* and *terminus ante quem* dates derived from an analysis of the archeological materials recovered from the site of this house are likely to reflect the limits of its living area occupation.

The beginning and termination dates of a site's occupation may be determined through an examination of those categories of artifacts of which the use ranges are known. Several types of temporally significant artifacts were recovered during the investigations at the Kershaw house. Perhaps the

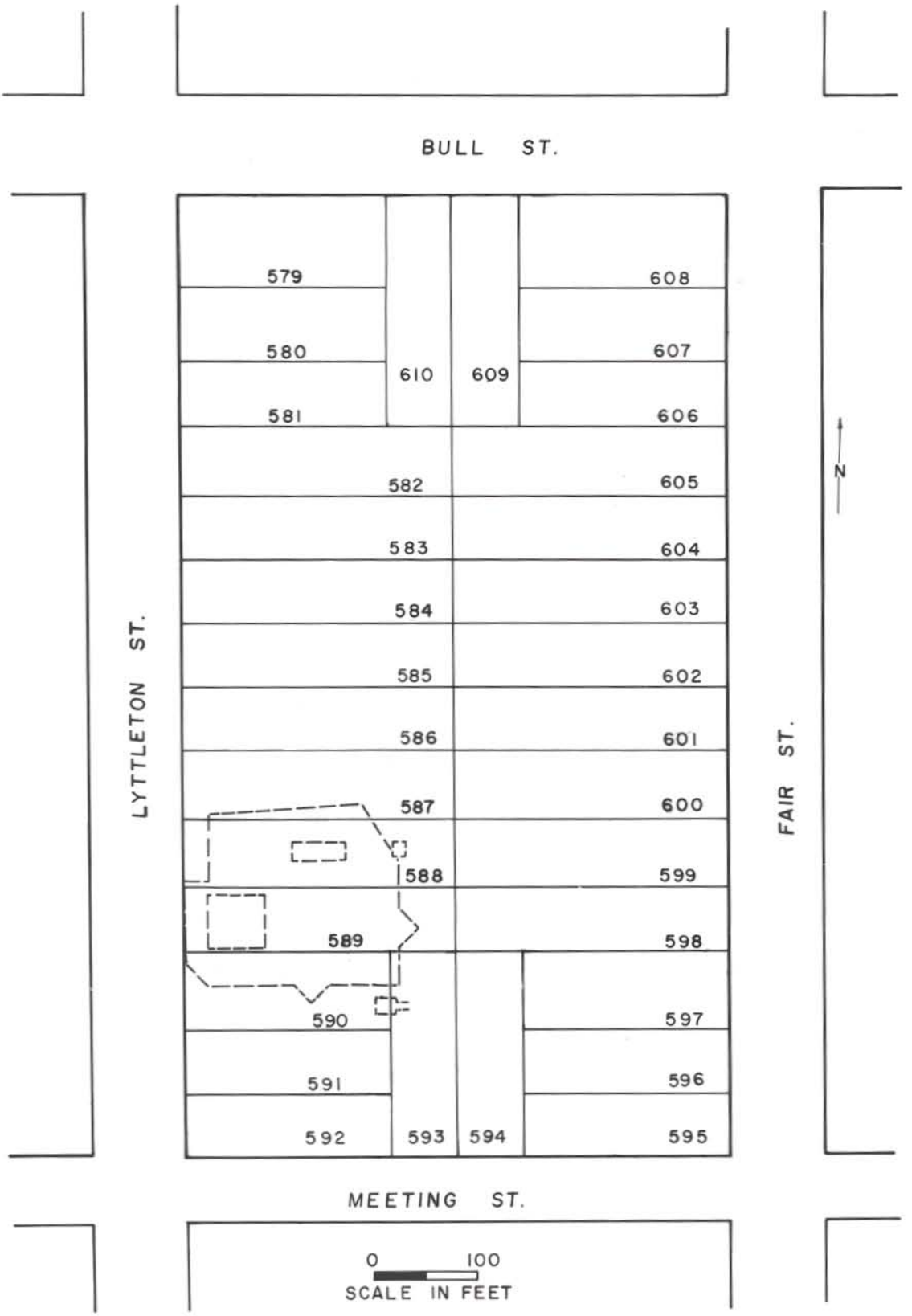

FIGURE 17: Plan of the Kershaw House Site With Camden Town Lot Layout Superimposed.

most important of these is ceramics. By observing the temporal ranges of the ceramic types present, it is possible to ascertain *minimal* beginning and ending dates for the site by recording the latest date of the use range of the type terminating earliest and the introduction date of the type introduced latest. The use date ranges of the ceramic types recovered from the Kershaw house are shown in Figure 18. Based on these ranges a minimal *terminus post quem* date of 1775 is obtained while the *terminus ante quem* is at least as late as 1820. The former agrees with the documented date for the beginning of the Kershaw house occupation; however, the latter falls a decade short of the date of the latest record of the house being used as a habitation. The last date obtained from the ceramic use ranges may well be early because it is based on the beginning date of ironstone-whiteware, a ceramic type with an extremely long use span (Noël Hume 1970: 131). Unlike the eighteenth century, the nineteenth was not characterized by the frequent change in the ceramics industry that would have produced short, tightly datable use ranges for types and thus make possible the accurate dating of ceramic deposits.

An estimate of the actual range of the Kershaw house occupation may be based on the site's mean date. This date is calculated on the basis of the manufacturing dates of the individual ceramic types and their frequency of occurrence in a particular archeological context. In general, mean ceramic dates have been shown to accurately reflect the median historic dates of documented archeological sites (South 1972: 75). If we assume that the archeological output of the Kershaw house occupation remained roughly constant from the time of its construction until the date of its abandonment, then the span of time prior to its median occupation date should be equal to that time between the median date and the cessation of the occupation. Utilizing South's (1972) mean dating technique, a date of 1807 is obtained for the Kershaw house as a unit (see Appendix A). This date is 32 years later than 1775, the suggested *terminus post quem* date. The addition of 32 years to the assumed median date of the site's occupation places the *terminus ante quem* for the site at 1839, almost a decade after the last documented date for its habitation.

This range is supported by the presence of a number of other artifacts normally associated with a domestic occupation but with temporal use ranges less precise than those of ceramic types. These artifacts and their approximate ranges are summarized in Table 1 below.

The post-1839 occupation of the Kershaw house, although not likely to be represented by an archeological output of comparable volume as that generated by the occupation preceeding it, should be characterized by a small quantity of material dating from this late period. Unlike the artifacts associated with the main occupation, these need not constitute the byproducts of domestic activities because they may have accumulated as the result of a variety of sporadically-occurring activities that took place during the last 25 years of the structure's existence. Items falling into this category from the Kershaw house would include those listed above whose ranges extend past 1839 as well as those artifacts that came into use after this date but prior to 1865. The latter include bottles with embossed side panels, which appeared in the early 1860's (Lorrain 1968: 40; Jones 1971b: 10); horseshoes of Noël Hume's Type 7 (1970: 238), which are found in mid-nineteenth century archeological contexts; and a brass nipple wrench designed to fit U.S. rifle muskets subsequent to and including the Model 1855 (Allin 1862: 17).

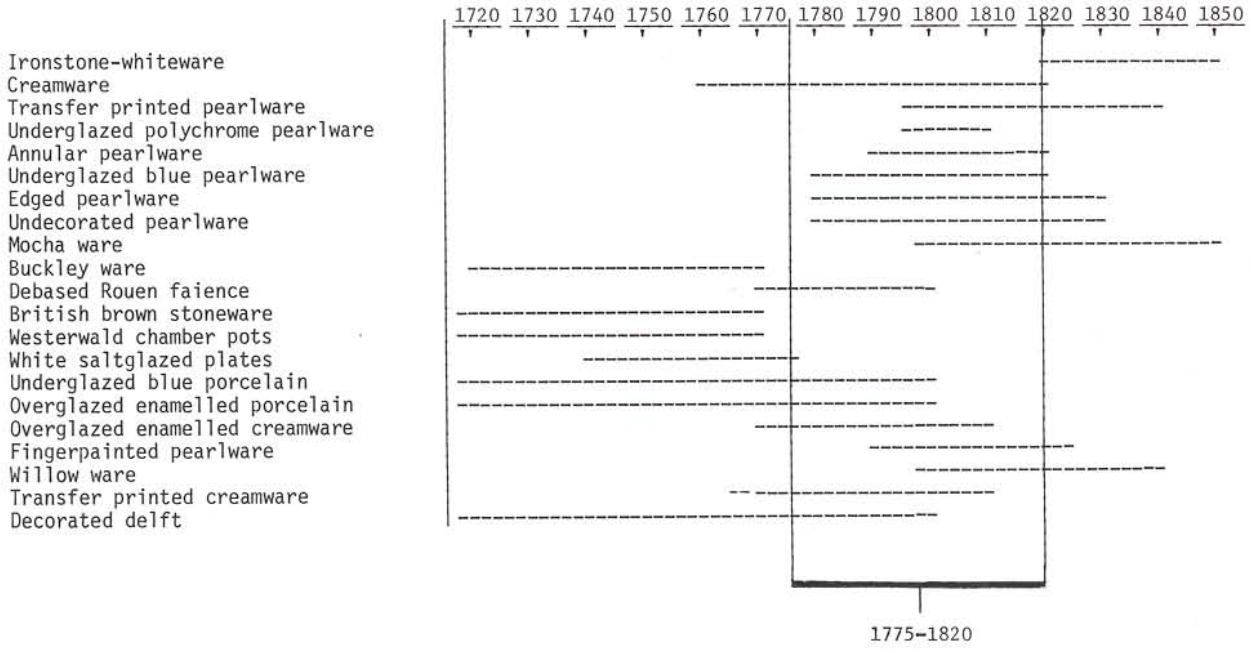

FIGURE 18: Date Ranges for Ceramic Types Recovered From the Kershaw House.

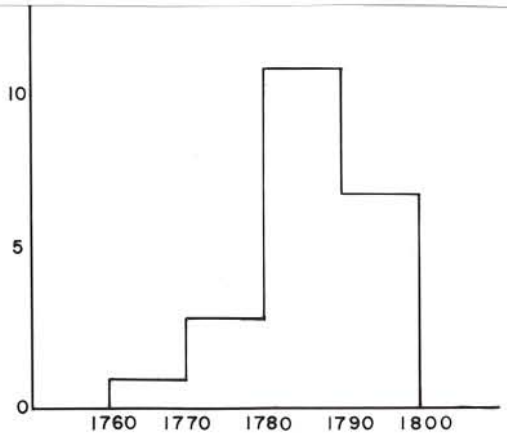

FIGURE 19: Frequency Distribution of Mean Ceramic Dates by Ten-Year Intervals.

TABLE 1

TEMPORAL RANGES OF NON-CERAMIC ARTIFACTS FROM THE KERSHAW HOUSE

Artifact	Range	Reference
Bottle base w/ glass tipped pontil mark	-1870	Jones (1971a:68, 1971b:8)
Bottle base w/ sand tipped pontil mark	-late 1800's	Jones (1971a:69)
Bottle base w/ quatrefoil pontil mark	1720-early 1800's	Jones (1971a:66)
Bottle base w/ Ricketts mold	1821-early 1900's	Jones (1971a:67)
Bottle base w/ rod pontil mark	-1870	Jones (1971a:71)
Bottle mouths w/ tooled lips	1830-early 1900's	Jones (1971b:10)
Stemware w/ opaque, white single spiral twist in stem	1750-1780	Haynes (1948:211)
Stemware, Type 24	1780-1805	Noël Hume (1970: 191)
Buttons, Type 24 - three piece iron	1837-1865	South (1964:122)
Short stemmed anthropomorphic tobacco pipe	1770-1840	South (1965a:53)
Short stemmed ribbed tobacco pipe	1820-1840	Noël Hume (1970: 302)

The intensity and temporal range of the area to the east of the Kershaw house, an area presumably encompassing all or part of its toft,* may be estimated by considering the mean ceramic dates of the archeological features occurring there. Twenty-two datable features were uncovered at the Kershaw house site. The range of their mean ceramic dates stretches from 1770 to 1797 with a collective site mean date of 1787, suggesting that the deposition of cultural material in the toft took place over a much shorter period than that for the structure itself. Because these dates represent only the temporal means of spatially discrete artifact depositions, they do not take into consideration the ranges over which the depositions may have accumulated, ranges that are likely to overlap one another as well as the extremes of the mean date range. The presence of features apparently predating the 1775 construction date of the Kershaw house may indicate the use of the site prior to the completion of the structure. The *terminus ante quem* date for the toft area may extend into the early nineteenth century, however, it is not likely to postdate the 1813 introduction date of ironstone (South 1972), a ceramic type conspicuously absent from these features.

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*The term "toft" is used here to refer to the immediate site of a principal structure and its outbuildings. It is both a spatial and functional unit in that it designates the area within which those activities most closely associated with the function of the structure take place. As such, the toft is not confined to a specific size or form and may vary considerably according to the nature of the structure with which it is associated.

The intensity of the toft occupation through time may be estimated by observing the frequency distribution of the feature mean dates at ten year intervals. Figure 19 reveals that the number of feature mean dates per ten year period declined slightly after 1775, rose again after 1780 to a peak between 1785 and 1790, and then declined abruptly during the last decade of the eighteenth century. The range of occupation indicated by the mean date distribution corresponds roughly with the Kershaw family's occupation of the house, beginning in the 1770's and terminating on or before 1805 when the property was sold to the Camden Orphan Society. The apparent decline in deposition in the toft after 1790 may reflect a reduction in the use of this area during this time, perhaps associated with a change in function or partial abandonment of the site following the death of Joseph Kershaw in 1791. The termination of deposition in the toft area after the turn of the century indicates that activities producing an observable byproduct there had ceased by this time. This abandonment of the toft is presumably related to a change in overall site function associated with its use as an orphan house.

In summary, the archeological evidence recovered from the remains of the structure identified as the Kershaw house indicate a substantial occupation falling roughly between 1775 and 1839. Only a small amount of material postdates this time and very likely represents deposition associated with the sporadic use of the building prior to its destruction in 1865.

The Form of the Kershaw House

The third hypothesis predicts that if the archeological remains under consideration are those of the Kershaw house, they will exhibit certain similarities to the structure described in documentary sources. Because no documents exist relating to the plan of the house, the only aspect of its form that is visible archeologically, it is necessary to base the analysis of the archeological structure's form on other descriptive information that will permit comparison with other structures for which such plans are known.

On the basis of elevation views, it is possible to observe certain similarities between a photograph of the Kershaw house and two contemporary Charleston structures, the Miles Brewton house and the William Washington house. Both houses are nearly square, measuring just under 50 feet wide and around 45 feet deep. Each is five bays wide and exhibits the same window configuration as is visible in the pictures of the Kershaw house. Like the Kershaw house, both have a front portico three bays wide. Although not shown in the front view of the Kershaw house, it very likely contained a rear porch as do the Charleston houses. Both Charleston houses employ the typical "lowland plantation" layout in their first floor plans. It is predicted that the Kershaw house foundation plan will conform to this layout.

Calmes' excavations at the Kershaw house site revealed the brick foundations of a structure 47 x 43 feet in size. Its two brick thickness is capable of supporting a two story frame house with basement (Noël Hume 1969: 128). The structure was divided into three sections. The two on either side measured 16.3 feet wide and the one in the center 10 feet in width (Fig. 20). About two-thirds of the way along the length of each side section Calmes uncovered the remains of a brick double hearth base (Fig. 21). These double fireplaces would have been situated in a wall dividing each of the sections into two rooms. The floors of the two rooms facing the front of the structure were found to have been cut 1.5 feet deeper than those of the rear rooms. The center section extends unimpeded throughout the structure and appears to represent a central hallway.

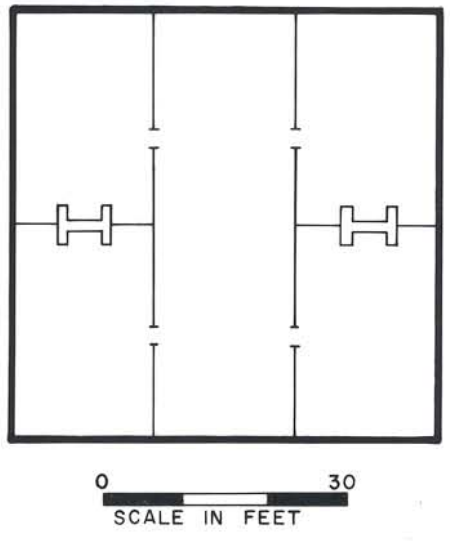
The archeological investigations also uncovered a number of smaller architectural features associated with the Kershaw house foundations. These comprise two types of features, postholes dug presumably to anchor vertical members, and pits, some of which appear to have been excavated for the deposition of cultural material. The northwest room of the structure was found to contain two large pits, one measuring 4.5 feet in diameter and the other 1.5 x 2.5 feet (Fig. 23). Both are approximately 3.5 feet deep. Only the westernmost pit contained cultural material and yielded a mean ceramic date of 1802. Six postholes were also uncovered in this room, arranged in two rows on an east-west axis (Fig. 23). They measure about 1.0 foot in diameter and extend from 2.0 to 3.5 feet below the level of the floor. No artifacts were recovered from these features. The depth of these postholes suggests that they contained substantial vertical posts, perhaps to provide support for the first floor room above or to divide the basement room into smaller units. On the outside of the west wall of the northwest room a refuse pit approximately 7.0 feet in diameter is situated. It was excavated to a depth of 1.75 feet and its ceramic contents yield a date of 1799.

The southwest room of the structure was found to contain a single circular pit 6.5 feet in diameter and 3.5 feet deep. Its contents yield a mean ceramic date of 1804. A smaller pit measuring 2.0 x 3.0 x 2.0 feet deep is located in the southeast room (Fig. 23).

Six 1.0 foot diameter pits as deep as 0.25 foot are situated in the central basement hallway, arranged in two parallel east-west rows (Fig. 23). All were filled with charred wood. Their arrangement suggests the positioning of vertical supports perhaps to subdivide the hallway or to buttress the floor above. The shallow nature of their footing, however, suggests a less substantial construction than that in the northwest room.

A series of five shallow pits ranging from 1.0 to 5.0 feet in diameter is situated east of the house foundation (Fig. 23). None of these features was found to contain cultural material and their functions are unclear.

The remains of two L-shaped piers located 14 feet west of the foundation and 25 feet apart provide evidence of a front porch facing Lyttleton Street. Portions of two brick porch support walls 1.0 foot thick extend outward from the foundation in line with the walls of the central hallway (Fig. 22).



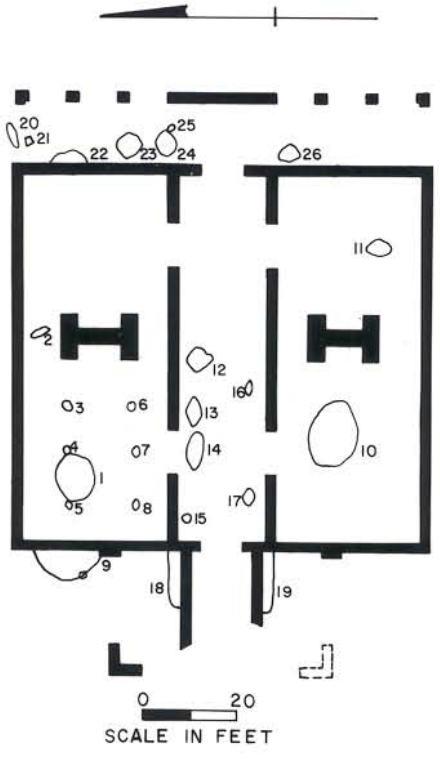


FIGURE 20: Comparison of the Archeological Plan of the Kershaw House and the Lowland Plantation Plan.

FIGURE 21: Fireplace Footings in the Kershaw House.

FIGURE 22: Brick Foundations Beneath the Kershaw House Porch.

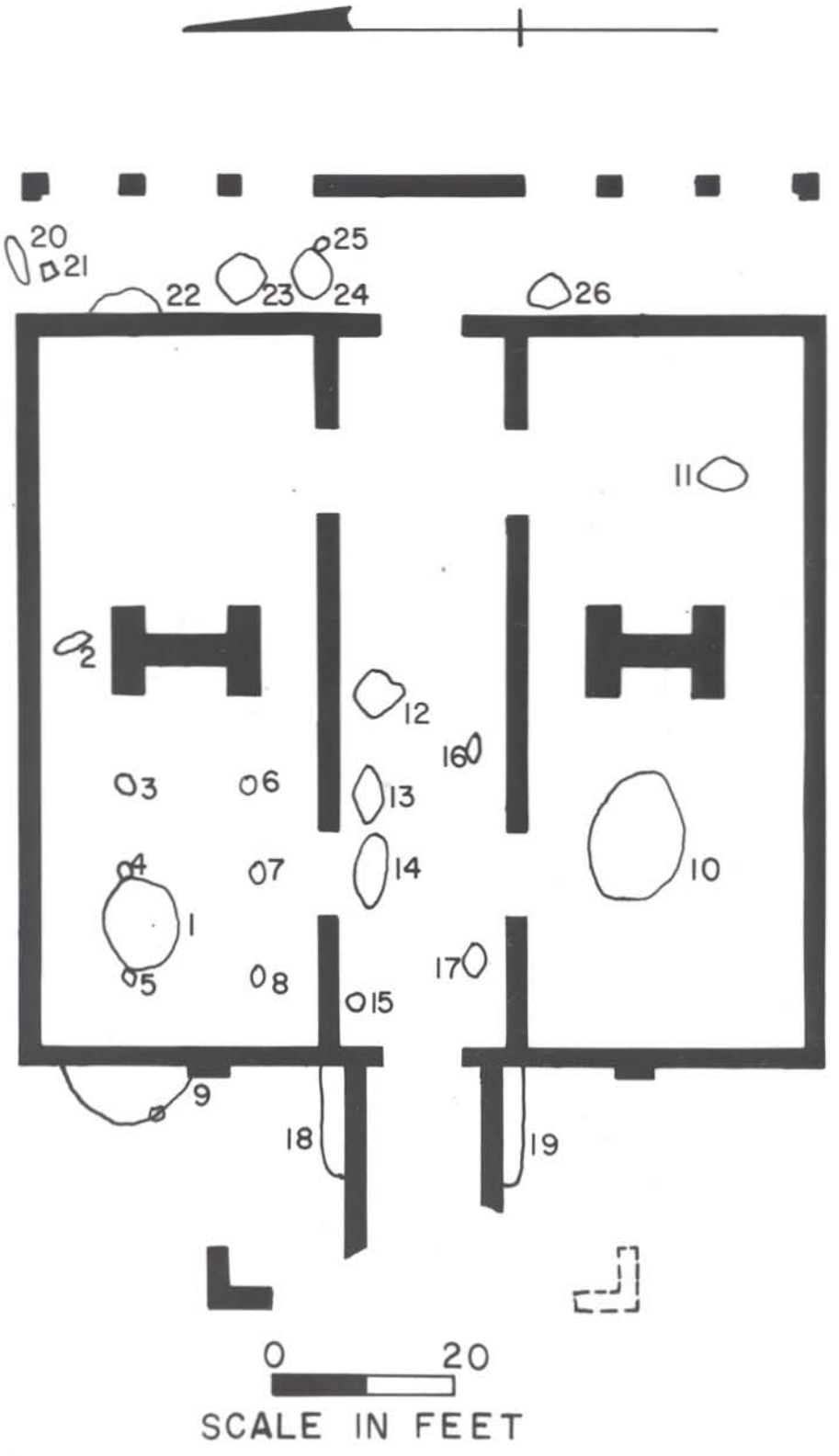


FIGURE 23: Plan of Archeological Features Associated With the Kershaw House.

The northernmost wall has been partially destroyed by plowing and was found to extend only about 7.0 feet from the structure while the southern wall remains intact to a length of 10 feet. A narrow ditch parallels the outer face of each wall for a distance of nearly 8.0 feet. These seem to represent footing trenches for the support walls (Calmes 1968: 16). Because of the absence of artifacts from these features, however, it is not possible to establish the date of the walls' construction.

The remains of a row of brick piers were uncovered that paralleled the east wall of the house foundation at a distance of 8.0 feet. Three roughly square piers are arranged in a row to either side of a rectangular pier (Fig. 22). The placement of these supports indicates the presence of a rear porch that extended across the entire width of the house. A stairway is likely to have been supported by the rectangular center pier and presumably extended outward into the yard. Excavations to the rear of the house, however, uncovered no evidence of a stairway footing. Although archeological evidence indicates that a rear porch was at one time present on the Kershaw house, the absence of a porch in the photograph of that structure (Fig. 9) suggests that it was removed prior to the building's destruction.

The architectural similarities between the excavated structure on Magazine Hill and the documented Kershaw house are obvious from the above discussion. The agreement of size, form, and interior layout indicates that, on the basis of architectural attributes, this structure may be identified as that built by Joseph Kershaw in Camden.

Evidence of the British Military Occupation

A fourth identifying characteristic of the Kershaw house is the presence of military features associated with the 1780-1781 British occupation, especially the fortification wall erected around the house and yard area when the house served as military headquarters for the Camden garrison.

Essentially the archeological remains at the Kershaw house should exhibit two types of evidence for the military presence indicated in documentary sources. The first type consists of evidence for the palisade wall. This wall should enclose the Kershaw house area and be characterized archeologically by the presence of a narrow footing ditch. This feature should be about 3.0 feet deep, as this is the recommended depth for palisade walls according to eighteenth century fortification manuals (Muller 1968: 227). The shape of the palisade should conform basically to that shown on the 1781 Greene map of the Camden fortifications. The plan of the palisade should also conform to basic tenets of contemporary fortification. Discussing irregular fortification on an elevated position, Muller (1968: 157-158) states that the fortification should remain as level as possible while occupying the highest ground. Thus, a fortification might be expected to roughly follow the contours of the ground upon which it is constructed while enclosing the area of highest elevation. The shape of the fortification may also be influenced by the desire to maximize the ability to detect and

repel an attacking enemy force. Muller's (1968: 141-142) proposition was that a greater angle in the shape of a fortification is more easily defensible than a smaller angle. For this reason it may be expected that angles larger than 90° would be employed to join the various faces of the palisade whenever possible and, conversely, angles less than 90° would be avoided.

The second type of evidence would be isolated features containing military and military-related artifacts. During the year-long occupation of the Kershaw house as a headquarters building, it is likely that an accumulation of items discarded and lost in the course of military activities would occur along with the deposition of other refuse of the period. The destruction of household goods by the British or their sympathizers took place at the time of the British retreat from Camden (Kirkland and Kennedy 1905: 277), and would have resulted in an additional accumulation of a large amount of discarded material at that time. It seems likely that artifact deposits resulting from such activities will, if present, also yield evidence of a military presence at the Kershaw house.

Excavations by Calmes and Strickland uncovered evidence of a narrow footing trench surrounding the Kershaw house and the area to the north, east, and south of the structure. Cross-sections of this trench indicate that it was excavated to a depth of 2.0 to 2.5 feet below the base of the plow zone. The base of the palisade trench appears to have been left flat in some places while in others the outside edge has been dug slightly deeper, perhaps to aid in the placement of the palisade stakes. The trench was filled with compact, mottled red sandy clay. The absence of remains of palisade stakes, together with a feature having a 1785 mean ceramic date superimposed on the filled trench (Lewis 1975a: 32) suggests that the palisade was deliberately removed and the trench filled soon after the reoccupation of the house by the Kershaw family.

The shape of the palisade wall surrounding the Kershaw house is shown in Figure 13. It illustrates a wall enclosing a roughly rectangular area with its northeast and southwest corners cut off and triangular bastions placed in its east and south faces. The section of wall directly in front of the house protrudes about 30 feet beyond the line of the west line of the palisade.

A comparison of this plan with that shown at the location of the Kershaw house on the Greene map (Fig. 8) indicates a general similarity between the two. Both are roughly rectangular with the structure located near the southwest corner, and both share the protrusion of the palisade to the west of the house as well as the bastion on the south wall line. The northeast angle in the wall and the east bastion are not shown on the Greene map. The discrepancies noted above may be the result of the partial destruction of the palisade at the time the map was made, the absence of detail on a small scale map, or error on the part of the cartographer. The presence of minor distortions in the plan of the town fortifications (see Lewis 1976: 48) suggests that the portrayal of the military features, while basically correct, contains minor errors relative to their shape and location. For this reason it is not unlikely that the map feature and that uncovered archeologically are the same.

An examination of the palisade's form reveals that it conformed to basic tenets of contemporary fortification design. The irregular shape of the palisade permitted the enclosure of the highest point of ground with a wall that followed the general contours of the surrounding terrain. The employment of diagonal wall sections in the northeast and southwest corners increased the angles of those corners to provide a more easily defensible position. Defense would also have been the reason for including bastions in the south and east faces. Bastions were used as strong points protruding from the wall forming angles from which enfilading fire could be directed on an attacking force. Bastions could be situated either at the corners of a fort or in the center of its sides (Muller 1968: 197, 210; Vauban 1968: 156). The placement of bastions in the center of the two longest faces of the Kershaw house fortification is logical in that it would have strengthened these inherently weak positions. It is possible also that the extension in the west wall directly in front of the house served to create a defensive angle on what otherwise would have been the longest face of the fortification.

The absence of evidence for other fortification features, such as a ditch outside of the palisade or banquettes on the inside to allow defending troops to fire over the wall, indicates that the Kershaw house site, though certainly a defensible position, was not as heavily fortified as the redoubts positioned around the town (Fig. 8).* Like the town itself, the Kershaw house was fortified only with a palisade and would very likely have relied upon the stronger positions for support in the event of a sustained attack.

Strickland's excavations in the area east of the Kershaw house revealed the presence of several sealed features containing evidence of a military presence at the site (Fig. 23). Unlike the palisade surrounding the house, none of these features is military in the sense that it is associated with a particular military activity. On the contrary, all but three are pits containing both military and nonmilitary items. The remaining features are associated with structural remains and, like the pits, appear to be accumulations of discard. Because of the nature of their deposition, it is unclear if the military features represent materials disposed of during the 1780-1781 British occupation of the site or accumulations containing a mixture of post-British Kershaw family discard and redeposited military items. In order to determine their temporal affiliation, mean ceramic dates may be computed for each feature containing military artifacts (Table 2).

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*For a discussion of the northeast and southwest redoubts at Camden and the elements of their construction see Calmes (1968: 17-19, 20-21, Figs. 11-13,15) and Strickland (1971: 57-64).

TABLE 2

MEAN CERAMIC DATES OF FEATURES CONTAINING MILITARY ARTIFACTS

Feature Number	Description	Mean Ceramic Date of Contents
58	Pit	1782
66	Pit	1786
67B	Well	1786
69	Pit	n too low to compute
70G	Foundation robbers' trench	1795
73	Pit	n too low to compute
75	Pit	n too low to compute
78	Pit	1792
88	Pit	1784
91	Drainage trench	1782
96	Pit	n too low to compute
97	Pit	1781

Of the eight datable features, only one appears to have its greatest deposition associated with the period of the military occupation. Five features fall within the five year period following 1781 and two have mean dates in the 1790's. The distribution of these dates suggests that nearly all of the features had their greatest deposition in the period shortly after the British occupation. Presumably most of the features represent the redeposition of military items during the early part of the Kershaw reoccupation of the house and may be associated with repair and remodeling activities that were conducted at this time. Similar activities may have accounted for the appearance of military items in the late contexts.

Only one military item of those recovered may be definitely attributed to a particular unit. This is a whitemetal button with a raised border and the number "7" in the center of its face which was worn by a member of the British Seventh Regiment of Foot. This unit participated in the seige of Charleston in May 1780, and arrived in Camden in September of that year. The Seventh left Camden almost immediately and was decimated at the Battle of Cowpens in North Carolina on January 17, 1781 (Tarleton 1967: 158, 218). The presence of the American army is represented by several whitemetal "U.S.A." buttons, a type in common use by Continental troops after 1780 (Johnson 1948: 52).

In summary, archeological investigations at the Kershaw house site revealed the remains of a defensive palisade similar to that described in documentary sources. Although it did not form a strong defensive work, it was constructed in accordance with contemporary fortification practices so as to take best advantage of the terrain and provide effective defensive fire on all sides. In addition to this architectural feature, evidence of a military presence appears in refuse deposits contemporary with the military occupation.

Outbuildings on the Kershaw House Grounds

Documentary sources are nearly silent regarding the existence of outbuildings associated with the Kershaw house. The only reference to such structures appears in the twentieth century newspaper account of the caretakers living in the backyard. Unfortunately the source does not describe their dwelling nor indicate its age or location relative to the house. It does, however, suggest that outbuildings were maintained at least through the structure's existence. Although not mentioned in documentary accounts of the Kershaw house, outbuildings almost certainly were associated with it from the time of its earliest occupation. Outbuildings were an integral part of an eighteenth century high status dwelling, be it a farm, plantation, or town residence.* Such structures might include kitchens, stables, carriage houses, and other buildings related to the activities of the occupance type of which they were a part. Because only one such structure is historically documented at the Kershaw house, this hypothesis may be substantiated archeologically by demonstrating the existence of a single outbuilding in the archeological record.

Excavations within the palisaded area at the Kershaw house site uncovered a great number of features, several of which undoubtedly represent the remains of outbuilding structures. At least four such structures may be readily identified (Fig. 14). The first is a rectangular structure with a brick foundation that appears to have been rebuilt at least once. It exhibits the plan of a "saddlebag" type house (Newton 1971: 7-8), a structure consisting of two rooms divided by a central wall and double fireplace (F-70). Doors are located at the front and rear of each room near the end opposite the central fireplace. Two other structures resting on brick foundations were revealed by the archeological excavations. One is the square structure constructed directly over the line of the northeast diagonal of the palisade (F-92). Like the saddlebag structure it was built directly on the ground surface. The other, however, was constructed over the brick cellar that has remained intact. It is located southeast of the palisaded area (F-90). The fourth structure was only partially explored and consists of a small, square building of wood construction (F-10). It is situated just outside the south line of the palisade with a porch or lean-to supported by three posts extending across the palisade wall trench (see Lewis 1975a: 27-30). The saddlebag structural plan is most often associated with dwellings suggesting that the Kershaw house outbuilding may have once served in this capacity. It is not, however, possible to assign functions to the other outbuildings at the Kershaw house site on the basis of architectural form alone.

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*A discussion of these three types of settlement as functional occupance types is crucial to the analysis of the Kershaw house site as a sociocultural entity, and will be presented in the following section of this report dealing with formal and functional aspects of the site's past occupation.

Because this hypothesis requires only that outbuilding structures be shown to have existed at this site, it is sufficient to demonstrate that their remains are present in the archeological record. It is not necessary to investigate the functional roles of such structures at this time. A complete description and discussion of the functional nature of each will be presented in a subsequent section of this report dealing with the Kershaw house as an integrated socioeconomic entity.

Evidence for the Destruction of the Kershaw House

Although it is uncertain who held the torch, documentary sources agree that the Kershaw house was destroyed by fire in February 1865, while serving as a storehouse for Confederate supplies. Archeological evidence of the building's destruction by fire will consist of the presence of materials that have been altered by burning. These should consist of the by-products of the destruction of flammables, mainly ash and charcoal. Other materials with melting points low enough to be deformed by heat, such as glass and metals, should be present in their distorted form. Many other substances, like ceramics, brick, and stone, normally unaltered by intense heat, may exhibit evidence of scorching, breakage, or discoloration due to their exposure to fire.

The presence of burned debris at the Kershaw house site was first reported by Kirkland and Kennedy (1905: 280) who described melted glass and brick rubble as all that remained of the Kershaw house. An examination of the archeological material recovered during recent excavations at the Kershaw house reveals further evidence of debris that would have accumulated as the result of fire. Artifacts included burned brick and ceramics, melted glass, slag, deformed and melted metals, charcoal, and burned wood. Photographs taken during the excavations (Fig. 24) show a heavy layer of charcoal and burned debris covering undisturbed portions of the structure's interior, indicating that extensive burning took place throughout the building. Based on the archeological evidence, it is likely that the structure identified as the Kershaw house was destroyed by fire.

Summary

An examination of the archeological evidence recovered from the assumed site of the Kershaw house has revealed that the physical remains of the structure there share significant similarities with the building described in documentary sources. Located on a block of lots purchased by Joseph Kershaw in the 1770's, the house has an archeological *terminus post quem* date of 1775, the approximate construction date of Kershaw's mansion there. The excavated structure conforms closely to the assumed plan of the Kershaw house, as well as to other comparative examples. The site contains the remains of a palisade such as that erected around the Kershaw house by the British Army during its occupation in 1780.

FIGURE 24: Photograph Showing Layers of Burned Debris in the Kershaw House.

This fortification adheres to tenets of eighteenth century military architecture and was designed to take best advantage of the sloping terrain on which the structure is situated. Several outbuildings were constructed in the immediate vicinity of the house remains. The most recent substantial occupation of the structure appears to have occurred in the third decade of the nineteenth century, suggesting a *terminus ante quem* date of 1839. Scattered artifacts attest to a sporadic use of the structure from the time of its abandonment until its destruction in 1865. Finally, archeological evidence indicates that this building, like the Kershaw house, was destroyed by fire. On the basis of the agreement between the archeological hypotheses based upon documentary statements, and the actual form of the archeological record, it is possible to infer that the excavated structure on Magazine Hill is the Kershaw house.

The archeological evidence has served to identify the structural remains as those of a particular building to which documentary sources have attributed certain formal and functional characteristics. Documentary data are, however, vague or silent on the specific nature of its occupation, making it difficult to proceed beyond the verification of the site's identity on the basis of this form of evidence. A further investigation of the site's form and function must rely upon an analysis of the archeological record alone. The identification of the structure should be seen as a first step toward such a functional study of the nature of past human occupations at the Kershaw house site.

FORM AND FUNCTION AT THE KERSHAW HOUSE SITE: MODELS FOR SETTLEMENT

Introduction

Although documentary information tells us much about the appearance of the Kershaw house and certain purposes to which it was put by various owners, a great deal of mystery still veils the nature of the day-to-day activities that took place there. Documents shed only a dim light on the actual functions of the structure, in an anthropological sense, within the social and economic system of the settlement of which it was a part. The inadequacy of documentary sources in answering questions regarding the role of the Kershaw house necessitates the consideration of another form of evidence, the archeological record.

In order to investigate the functions of a particular locus of activity within a past community, it is necessary to develop models describing and explaining the relationship between particular types of sites and their associated activities. Models may be constructed from observations obtained from well documented sociocultural contexts assumed to be comparable to that which may have existed at the type of site under consideration. Through the use of analogy it is possible to predict those activities that will be present at a site with a particular function, as well as the spatial distribution of those activities at the site. Each model, then may be summarized in terms of a set of activities and their spatial relationships associated with sites of a particular function.

The archeological record is the by-product of past human activities. In order to examine a model of past behavior through the archeological record, it is necessary to be aware of those processes by which the archeological record was formed. An understanding of these processes should permit us to deduce the form and content of the archeological record produced by the past activities associated with each alternative model. The degree to which the archeological data adhere to these sets of predictions, or test implications, will determine how well the hypothesized model reflects past reality at the site.

Because the function of the Kershaw house is uncertain, it is necessary to propose several alternate models of the role it played in the sociocultural milieu of late eighteenth and early nineteenth century Camden. An examination of the archeological data from the Kershaw house site in terms of test implications of each model will determine which model the data fit best, thus indicating the most probable function of the Kershaw house within the town of Camden.

Although it is very likely that the function of the Kershaw house will correspond to one of the models, one must also consider the alternate hypothesis that its function is unique and cannot be explained through the use of a model of known settlement use. If an examination of the archeological record indicates this to be the case, it will then be necessary to utilize the information gained from the Kershaw house site as the basis for constructing a new model to explain the phenomena revealed here.

This discussion will present three models: (1) the plantation, (2) the farm, and (3) the town residence, each of which deals with a particular function that may be assigned to the Kershaw house. The applicability of each model will be determined on the basis of an examination of the data gathered during the five years of archeological investigations at the site. Accurately defining the function of the Kershaw house will not only add greatly to the limited knowledge presently available about this structure, but more significantly, it will help to clarify its relationship to the early town of Camden.

The Plantation Model

Joseph Kershaw's dominant role in the economic development of the South Carolina backcountry involved him in the buying and selling of plantations in addition to his many other commercial ventures (Schulz 1972: 24). Indeed, it was to one such plantation five miles south of Camden that his family retreated during the British occupation of the town (Mathis 1819: 14). Although never referred to as a plantation, his house occupied a position geographically peripheral to the settlement of Camden and its situation amid a large tract of land held either by Kershaw alone or in partnership with others (Kirkland and Kennedy 1905: 13) would have permitted the structure to serve as the center of a large agricultural operation. In order to explore the potential role of the Kershaw house as a plantation, however, it is necessary first to define the plantation as an institution and determine what its major components are, what types of activities might be associated with them, and what its function is within the larger sociocultural system.

Like the farm and the manor, the plantation maintains a role centered around the production of agricultural subsistence commodities. It differs from these other forms in that its economic position is directly tied to the expansion of a "world economy" (see Wallerstein 1974: 7). This economic system may be viewed as a network of functional relationships among individuals, groups, and institutions that expands around a central core occupied by the market system (Thompson 1959: 29). The existence of an expanding world economy is dependent upon exchange between a core state and its peripheral areas. Such exchange is characterized by a "vertical specialization" involving the movement of raw materials produced in the peripheral areas to the core state and the movement of manufactured goods and services in the opposite direction (Gould 1972: 235-236).

On the frontier of colonial economic expansion, institutions arise to procure and process raw materials. The agricultural institution that, historically, has possessed the greatest efficiency in production is the plantation (Thompson 1959: 30). Sidney Mintz (1959: 43) has defined the plantation as "...a capitalistic type of agricultural organization in which a considerable number of unfree laborers were employed under unified direction and control in the production of a staple crop." The plantation is characterized by 1) a relatively large population and territorial size, 2) an emphasis on the production of specialized cash crops, 3) a use of

labor beyond the limits of the owner-family, and 4) a dependence on the authority principle as the basis for collective action (Pan American Union 1959: 190). These characteristics reflect the manner in which agricultural activities are organized to facilitate production. The plantation should be not only a center for agricultural activities, but must also provide an arrangement for accomplishing agricultural tasks on a large scale. This arrangement is reflected in the form of the plantation in the antebellum United States; and this form will serve as the basis for the plantation model.

The necessity of managing a large labor force engaged in specialized agricultural work directly influenced the occupance form* of the plantation. Prunty (1955: 490) has pointed out that, on the antebellum plantation, management controlled all cultivating power and was the sole element in determining the manner of its employment. This is reflected spatially in the general layout of a plantation.

> The owner's or manager's house customarily was situated near a cluster of service buildings and slave quarters. Such houses were grouped compactly in rows along short roads, forming a square or, more frequently, a rectangle of buildings.... Together these buildings formed a nucleated plantation village, a settlement type noteworthy because of the large area within which it was distributed (Prunty 1955: 465-466).

Although the plantation itself might be areally extensive, its occupied area was compact. The actual layout of buildings within this area varied but seems generally to have followed a similar pattern. Watterman and Barrows (1969: xiv) have noted that eighteenth century plantations in the Southeast, particularly those in South Carolina, Virginia, and Maryland, centered around a main house and its dependencies. Throughout the eighteenth century these structures exhibited a basic Georgian symmetry in their arrangement, with the house and its forecourt flanked by the dependencies which were sometimes attached by passages to the main house (Kimball 1966: 79). In the last quarter of the century the dependencies shifted from a position on either side of the forecourt to one in line with the orientation of the house (Fig. 25). Dependencies

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*The term "occupance form" here refers to settlement types as defined by their spatial patterning and function. It implies a dependent relationship of form to function through which change in occupance form may be seen as the result of a modification in the role played by the settlement. For this reason it is possible for a settlement to be characterized by more than one occupance form during its existence.

apparently did not possess definite functions in every plantation and served variously as offices, kitchens, overseers' quarters, libraries, servants' quarters, as well as housing for other support activities related to the main house (Waterman 1945: 61, 259, 341).*

Farm buildings associated with the plantation seem to have been situated apart from the main house complex and the house did not form an integral part of the farm building layout. Rather, such structures usually constituted a separate unit arranged in a row or rectangle to the side of the main house (Waterman and Barrows 1969; Phillips 1929: 332).

The slave quarters were generally situated near the agricultural buildings to one side of the main house. They were commonly arranged in rows facing a cleared square at one end of which the main house and its dependencies stood. Quarters varied in size and method of construction from one room huts to larger buildings of log, frame, or brick (Rawick 1972: 70-71, 77).

In general, the entire plantation complex was not situated directly on a main road linking settlements, but rather would have been placed along a branch road leading into the plantation lands (Phillips 1929: 335). The complex was usually adjacent to the earliest cultivated land. The exhaustive effect of continuous cropping of cotton, especially on Piedmont soils (Hall 1940: 2), required a continual clearing of new land for planting (Dodd 1921: 25), resulting in a constant expansion of cultivated lands accompanied by a general movement away from the site of the original plantation settlement (Olmstead 1957: 53).

Mt. Vernon, in Fairfax County, Virginia, a plantation that had assumed its final form by the 1770's (Architects' Emergency Committee 1970: 70-73),** clearly illustrates the layout of the plantation settlement pattern. The geometric layout of the structures at Mr. Vernon is clearly visible (Fig. 26), with the main house and dependencies situated at the center of a

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*The pattern of plantation settlement outlined here is derived from the layout of structures on the following plantations: Tryon's plantation, Brunswick Town, North Carolina (Sauthier 1769); the Price house, Spartanburg County, South Carolina (South 1970); The Hermitage, Savannah, Georgia; Mt. Vernon and Gunston Hall, Fairfax County, Virginia; Bremo, Fluvanna County, Virginia; Lower Brandon, Prince George County, Virginia (Architects' Emergency Committee 1970: 23, 70-71, 95, 107); Amphill and Stratford, Westmoreland County, Virginia; Carters Grove, James City County, Virginia; Westover, Charles City County, Virginia; Mount Airy and Menokin, Richmond County, Virginia; Blandfield, Essex County, Virginia; (Waterman and Barrows 1969: 179-183); and Rosewell, Glouscester County, Virginia (Noël Hume 1962: 161-162; Waterman and Barrows 1969: 181).

**Although it may appear irregular to choose as an example a plantation that has achieved such notoriety as has the estate of George Washington, the amount of architectural information generated as the result of this intense interest has made it possible to construct an accurate picture of the plantations' form and structure.

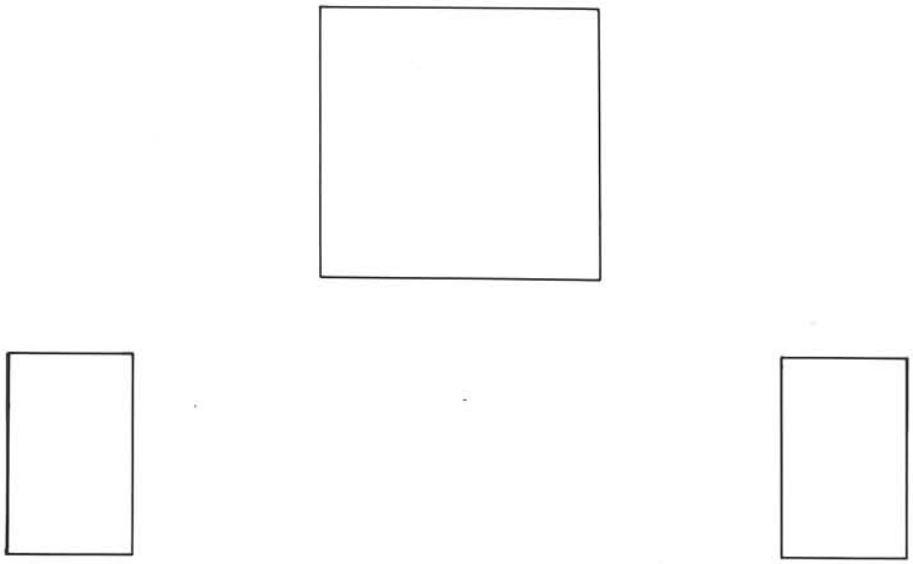

FIGURE 25: Layout of Typical Plantation House and Dependencies. (Source: Waterman and Barrows 1969: 183.)

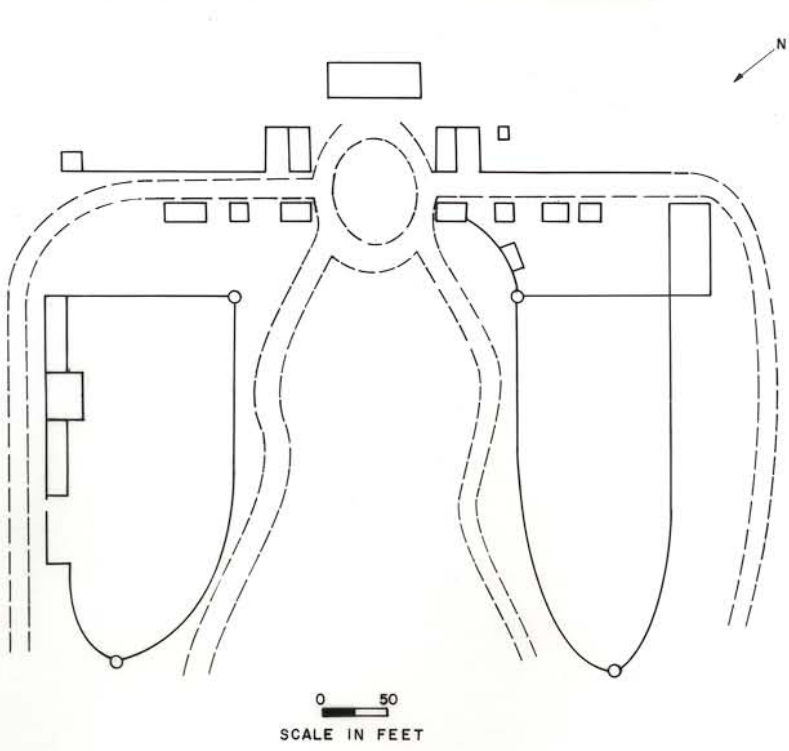

FIGURE 26: Plan of Mt. Vernon, Fairfax County, Virginia. This is the Final Form the Plantation Assumed in the 1780s. Its Crescentic Layout is Clearly Discernible. (Source: Architects Emergency Committee 1970: 70-71.)

U-shaped plan. Service buildings lie in a row stretching to either side of the forecourt. Quarters form a block oriented at a right angle to the service buildings. The U-shape of the layout is further emphasized by the positions of entrance roads, paths, walls, and ornamental and vegetable garden plots.

In summary, the plantation may be seen as an institution designed to produce and process raw agricultural commodities on a large scale utilizing extensive unfree labor. The organization of activities necessary to accomplish this purpose is reflected in their spatial distribution on the plantation site. This distribution appears to exhibit a uniform pattern in eighteenth century American plantations revealing an occupance form that should be recognizable in the archeological record.

The Farm Model

Although plantation farming existed in the South Carolina Piedmont prior to the expansion of large-scale cotton growing in the early nineteenth century, this frontier region was characterized by small farms. Those plantations that existed in the Piedmont during this early period were, in general, confined to the alluvial soils below the Fall Line. Small farms were situated in the narrower valleys above the Fall Line, as well as on the higher terraces (Meriwether 1940: 106). Camden's position near the falls of the Wateree River which placed the town on the small farm frontier, is reflected in the settlement's role as a processing and shipping center for backcountry flour as early as 1760 (Schulz 1972: 23). Other commercial commodities produced by small farmers included barley, oats, rye, hemp, flax, and peas (Woodmason 1953: 191; Meriwether 1940: 106).

Joseph Kershaw's residence, located apart from the contiguous settlement of Camden, would have been in a position well suited for farming. Adjacent lands under Kershaw's control were available for cultivation and could easily have provided the basis for agricultural production. Although documents do not refer to the house as a farm, Kershaw is known to have possessed farmlands in or near Camden (Kirkland and Kennedy 1905: 379), and it is possible that some of these may have been attached to his residence there.

Like the plantation, the function of a farm is reflected in the nature and arrangement of the activities associated with the site. Because the Camden area was settled by pioneers whose roots lay in the British Isles, it is reasonable to assume that the farms they built in the new country would attempt to replicate patterns established in that part of the Old World. The eighteenth century saw the close of the post-medieval period of British farming and the beginning of the Agricultural Revolution. Farms prior to 1750 tended to be generalized in production and form, consisting of a complex of separate structures to accommodate persons, animals, goods, and the processing of crops (Nigel 1970: 55-58). Unprecendented population growth and the concentration of persons in urban centers as a consequence of the Industrial Revolution had begun to place an increasingly greater demand upon agriculture. The larger output required of agriculture was made possible

through organizational rather than technological improvement. It involved the use of 1) convertible agriculture, the alternation of arable lands and grass and 2) alternative agriculture, farming for fodder crops that enriched the soil both by the chemical action of the fodder plants as well as manure of the grazing animals (Chambers and Mingay 1966: 4). At the same time the enclosure movement hastened the consolidation of holdings and movement of farms from the village to the field (Hoskins 1970: 22).

Unlike the plantation, which is adapted to the exploitation of an increasingly enlarged area through the employment of potentially destructive, albeit very profitable, techniques of agriculture, the farm occupies a relatively small, limited area that must be continuously reused in the production of crops. The process of change in small farm agriculture brought about by the Agricultural Revolution may be seen as an attempt to increase the yields of farmlands through an intensification of soil rejuvenation. The introduction of the new methods of farming entailed a reorganization of the farm as a productive unit and resulted in the development of a distinctive occupance form. The characteristics of this form are embodied in the farm model.

The critical component in the improvement of soils in the eighteenth century was manure. In order to obtain, collect, and store this commodity it became necessary to reorganize the farmyard into a "manure reservoir." This was accomplished by assembling the following parts of the farmyard into a compact arrangement: a barn where corn was threshed and straw distributed, a collection of livestock buildings where the straw and hay were transformed into manure, and a yard bordered by these structures where stock was exercised and manure accumulated (Nigel 1970: 76-77). The farmyard generally formed a square to the rear of the house and kitchen (Downing 1969: 223). Ideally the farmyard faced south to catch the sun and was protected on the north side by its most substantial structure, the barn. Storage sheds were often located in the same range as the barn while the remaining two ranges contained buildings used for livestock and storage. Working animals were placed so as to face the early morning sun, and pigs and poultry were located near the house to provide easy access to household waste products. If present, farm processing machinery was installed in existing structures so as to involve little change in previous working routines. Not until much later did the massive use of inorganic energy force the rearrangement of farm buildings around the farm equipment (Nigel 1970: 79, 93). Construction materials used in farm buildings varied throughout Britain with the availability of local materials. While timber and wattle and daub construction were still common they were beginning to be replaced by locally manufactured brick (Nigel 1970: 98).

A composite plan of a typical eighteenth century British farmyard is illustrated in Figure 27. This arrangement represents an ideal layout for mixed farming and might be expected to vary with the precise nature and scale of the farming carried out (Hoskins 1970: 22). Although this general square arrangement was retained in British colonial America, new crops introduced different structures into the yard, climatic differences made

the cardinal orientation less mandatory, and the variety in size of frontier farms undoubtedly affected that of the farmyard. The defining criteria of the farmyard are its square shape, its relative position to the farmhouse and kitchen, and the functions of its structures. If the Kershaw house represents a farm, it should be possible to recognize these criteria in an examination of the archeological remains at the site.

The Town Residence Model

The third model regarding the proposed form and function of the Kershaw house is that of a town residence with no extensive role apart from that of a dwelling for the Kershaw family and their retinue of servants. A building of this sort, unlike the farm or the plantation, is typically found in an urban setting in which the use of land is much more restricted. Given the high socioeconomic status of Joseph Kershaw as indicated in documentary sources and by the very size and form of his house in Camden, it is likely that a town residence occupied by him there would share similarities with town residences of contemporary high status persons in Britain and colonial North America.

The model of the town residence is based primarily on generalized characteristics derived from a comparison of eighteenth century examples in South Carolina. During this period Charleston was the largest urban center in the colony, if not the South, and served as the principal entrepot for Piedmont frontier towns such as Camden. Joseph Kershaw maintained close ties with Charleston throughout his life and seems to have chosen several Charleston dwellings as the prototype for his Camden mansion. It is likely that this city would also have served as a guide for town residence planning on the frontier and, for this reason, the examples upon which the town residence model is based are drawn from the Georgian mansions of Charleston.

Like the plantation and the farm, the town residence is likely to be characterized by a distinctive layout related to its function. In a city like Charleston, residences of high status individuals served to house the family and provide a place for social entertainment (Taylor 1942: 36). These activities would generally have been confined to the dwelling house except for the preparation of food in a detached kitchen, a feature common to larger dwellings in the South in the second half of the eighteenth century (Kimball 1966: 71). A large household required service personnel and equipment which were also housed on the property. This necessitated the construction of servants' quarters as well as carriage houses and stables to house livestock and equipment used in transportation (Taylor 1942: 36). In general, these structures were situated in a row along the property boundary to the side or the rear of the main house.* The remainder of the property, much more restricted in size than either the

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*The general arrangement of structures in the town residence complex is based upon a comparison of several Georgian house lot plans. They are: the Miles Brewton house (ca. 1765), the William Gibbes house (ca. 1775), the Joseph Manigault house (ca. 1790), and the Colonel John Stuart house (ca. 1772), all of Charleston, South Carolina (Architects' Emergency Committee 1970: 35, 40, 31; Huger Smith and Huger Smith 1917: 246).

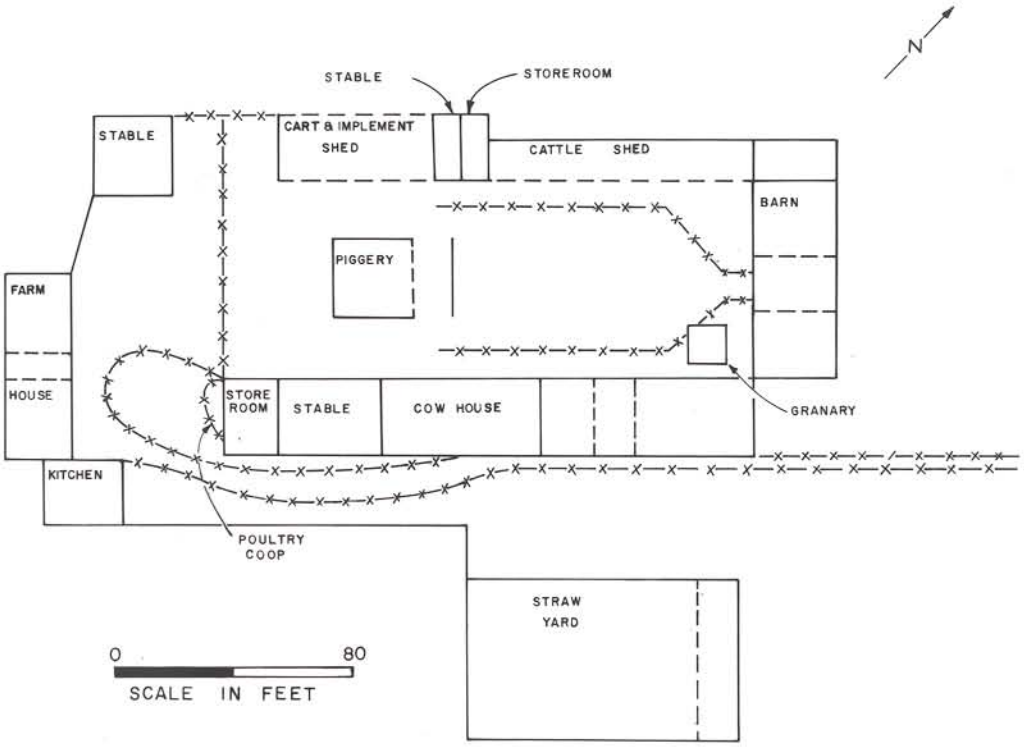

FIGURE 27: Plan of a Typical Eighteenth Century British Farm. This Farmstead, With a Yard Almost Completely Enclosed by Structures, Was Constructed in 1775. (Source: Nigel 1970: 80.)

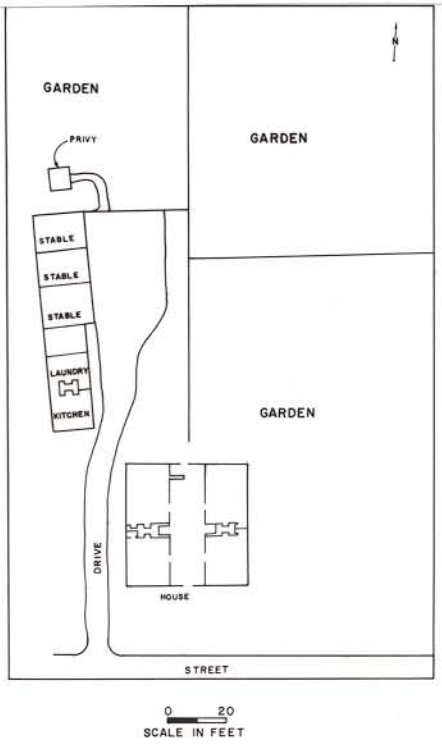

FIGURE 28: Plan of a Typical Eighteenth Century Town Residence, Charleston, South Carolina. The Structure is the William Gibbes House, Built, ca. 1775. (Source: Architects' Emergency Committee 1970: 40.)

plantation or the farm, was enclosed by walls or fences and usually contained gardens and decorative foliage (Leiding 1921: 3-4; Taylor 1942: 35). A plan of the William Gibbes residence of Charleston (Fig. 28) illustrates the basic layout of the town residence. It shows the main house fronting on the street with a kitchen and stables located just behind to one side, and gardens to the rear of both extending around one side of the house.

The town residence occupance form is characterized by relatively few structural elements compared to the other two forms. The town residence fulfilled a much less complex socioeconomic role than either a farm or a plantation and may be seen as representing the residential component of either, minus those activities associated with agricultural production. This reduction in specialized activities should be reflected in a similar reduction in the number of structures and the amount of space allocated to those activities. If the Kershaw house served as a town residence on the frontier, its function should be recognizable archeologically on the basis of these two criteria.

The Development of the Test Implications

Three models have been presented as potential explanations for the hypothesis that the site's function was that of a plantation, a farm, or a town residence. Each describes a functionally distinct occupance form characterized by a particular cluster of activities and a particular type of spatial layout. On the basis of these models it should be possible to discern the past function of the Kershaw house site by recognizing the presence of those activities that were carried out there and the manner in which they were arranged. In order to examine questions of form and function in terms of the archeological record it is necessary to deduce three sets of archeological test implications, one for each of the hypothesized models. The test implications spell out the form that the archeological data are expected to take in order to support a particular explanation of site function. The test implications may best be organized along lines of form and function. Formal implications will relate to the spatial distribution of structures and other activity areas over the site, while those implications of a functional nature will attempt to identify the activities.

Because the archeological record represents the byproduct of past activities, our ability to interpret this record is dependent upon an understanding of those processes by which it was formed as well as those that may have affected it prior to and during its recovery. Three cultural formation processes that most likely influenced the accumulation of the archeological record at the Kershaw house are those of discard, loss, and abandonment. Briefly, *discard* involves the deposition of waste material. It may accumulate at its location of use as *primary refuse* or be deposited elsewhere as *secondary refuse* (Schiffer 1975a: 4). Secondary deposition may vary in terms of distance from the location of use depending upon the size and nature of the material deposited (South 1977: 179). *Loss* involves the inadvertent deposition of items and may vary with the object's size, portability, and function (Schiffer 1975a: 6-7). Finally, the process of *abandonment* involves the accumulation of

artifacts that remain in a given activity area following the abandonment of that area. Abandoned material may include the *de facto* refuse of production or habitation that is left behind because it is inefficient or impossible to remove it to a new site (Schiffer 1975a: 7). An important type of abandonment refuse is architectural in nature, consisting not only of standing remains but also material that has accumulated as the result of the construction, repair, or demolition of structures (Green 1961: 53). Abandonment may also modify other cultural formation processes such as discard, resulting in the development of refuse disposal patterns different than those associated with an activity area still in use (Schiffer 1975a: 8; South 1977: 61).

Natural processes of transformation appear to have been minimal at the Kershaw house site. Apart from the deterioration of organic materials and the oxidation of metals, the archeological record does not seem to have been altered by natural forces.

Other processes have also had a marked effect on the archeological record following its deposition. Perhaps the process operating over the longest period of time is plow cultivation. Plowing on the site has resulted in a vertical mixing of cultural material in the upper 0.75 foot of the site and the destruction of intact features within this zone. Although disturbed, it must be assumed that artifacts and other debris associated with such features were not greatly displaced horizontally so that the patterning created by the by-product of past activities presumably lay intact prior to the archeological investigations. Such patterning was discernible in the archeological remains of the town (Lewis 1976). All features below the level of the plow zone remained intact. Archeological investigations constitute the transformation process that has had perhaps the greatest effect on the nature of the archeological record available for analysis. Excavations on the Kershaw house site were conducted under the assumption that archeological materials contained in the plow zone would not provide information as useful as that obtained from undisturbed contexts (Strickland 1976: 6). For this reason, as well as time limitations, plow zone materials were not recorded. As a result, the analysis of the Kershaw house must be limited to the consideration of only that portion of the archeological record that is contained in features extending below the level of the plow zone.

Each of the occupance forms described in the models is characterized by certain attributes of form that distinguish it from the others. The most obvious is that of settlement pattern which should be revealed in the spatial distribution of abandonment debris, consisting primarily of architectural remains, as well as those features containing discard which are associated with such remains. Based upon the characteristics outlined in the models, it is possible to develop the following test implications relating to settlement pattern for each of the occupance forms.

The test implication for a plantation settlement pattern states that the following elements will be present. Basically it should be characterized by the presence of a main structure and very likely two smaller structures symmetrically placed to both sides either in line with the axis of the main structure or situated just in front of it. Other smaller structures

should be located to one or both sides of the main structure and be arranged in a rectangle or a row. This arrangement should be oriented parallel to the axis of the main structure with an extension running perpendicular to it at the point furthest from the main structure. If the extension is present on both sides of the main structure, the whole arrangement should assume a U shape with the main structure at the base and the extensions turning out from and in front of it.

The settlement pattern of a farm, on the other hand, should be characterized by a main structure and a series of smaller structures arranged in a square or rectangle to its rear. Evidence indicating a subdivision of this area or the enclosure of immediately adjacent areas also may be present.

The town residence should exhibit a pattern of settlement much simpler than the others. It would consist of a main structure fronting directly on a street with several smaller structures placed to its side or to the rear. The latter should be arranged on an axis perpendicular to that of the street and may or may not be of contiguous construction.

The remaining test implications involve the observation of functional intrasite variation among the three settlement types. Assuming that each structure or activity area present on a site constitutes a locus for at least one type of activity, it should be possible to isolate activities spatially on the basis of the distribution of their archeological output. This output will probably represent the accumulation of discard and loss. The relationship between a structure's function and the activities associated with it provides the key to the identification of the latter through an examination of the archeological record.

In general, structures and activity areas that are included within the three occupance forms may be grouped according to four functional categories: living areas, animal accommodation areas, repair and processing areas, and storage areas. Each is assumed to be characterized archeologically by the by-products of the following activities. Living areas should be associated with domestic-related activities involved with the preparation, consumption, and storage of subsistence products and the housing of persons. Structures devoted to these activities include houses, quarters, and perhaps portions of buildings primarily devoted to other purposes.

Areas for the accommodation of animals are likely to include the housing of animals used in cultivation and transportation as well as those kept for food. Accommodation areas for working animals would also include room for their equipment. These areas may consist of structures as well as open enclosures, neither of which are likely to have accumulated a great deal of artifactual material because of regular cleaning and the absence of activities that would have generated a substantial archeological by-product. Structures used for housing specific types of animals may be distinguished by their architectural form.

Processing and repair areas would have housed equipment and supplies used in agricultural tasks as well as in the initial processing of agricultural commodities. Processing and repair loci may be expected to generate an archeological output of a rather specialized nature, reflecting both the discarded by-products of the particular tasks performed there, as well as domestic equipment and equipment parts lost or discarded as a result of these tasks.

Finally, storage areas, like those used to accommodate animals, essentially serve as temporary housing for items which are not usually greatly modified while there. The archeological by-product of such activities is not expected to be great and is more likely to be characterized by the remains of storage equipment and containers rather than by the actual products which were once stored there.

The expected archeological by-products of the four functional activity categories are summarized in Table 3. The associated artifact classes include the types of material assumed to be generated as the result of the processes of discard and loss. Abandonment artifacts in all cases would be grouped into a class designated architecture which would include construction materials as well as evidence of construction features, such as postholes and footing trenches.

In the plantation occupance form functional specialization is likely to be related to spatially distinct contexts. Its relatively large size and specialized economic function favored the segregation of activities by area (Phillips 1929: 332). The archeological by-products of these activities are expected to exhibit a similar distribution and should provide evidence of the functional diversity within a plantation complex. The following test implications constitute the archeological expectations for a plantation.

1. The main structure* should be identifiable as a living area characterized by the presence of material reflective of high socio-economic status.

2. Secondary living areas detached from the main house should also be present. They will consist of structures arranged in linear form generally perpendicular to the axis of the main house and contain evidence of an occupation by persons of a much lower socioeconomic status. The construction of these buildings may or may not be similar to that of the main house.

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*The term "main structure" is used here to refer to the largest residence structure in a complex of buildings. This building is a prominent feature in each of the settlement types and should be recognizable on the basis of its architecture. The main structure at the Kershaw house site is, of course, the Kershaw house itself. Its identification as a living area on the basis of form has been discussed earlier in this report.

TABLE 3

FUNCTIONAL ACTIVITY CATEGORIES AND ASSOCIATED ARTIFACT CLASSES

Activity Category	Artifact Class
Living Area	Preparation and consumption of food artifacts
	Storage containers
	Food processing tools
	Cooking and eating utensils
	Floral and faunal remains
	Fishing and hunting equipment
	Housing artifacts
	Furniture
	Personal items
	Domestic architectural artifacts
	Window glass
	Building hardware
	Architectural type
Animal Accommodation Area	
	Draft animal equipment
	Riding equipment
	Vehicle equipment
	Architectural type
Repair and Processing Areas	
	Farming tools
	Raw material processing tools
	Equipment maintenance tools
	Food processing tools
	Architectural type
Storage Areas	
	Storage containers
	Shipping containers
	Packing tools
	Architectural type

3. Structures associated with the accommodation of animals, the processing and repair of agricultural and domestic artifacts, and storage should be situated to the side of the main house. They may be arranged in linear or rectangular form with the animal accommodation areas furthest from the main house. It is possible that lower status living areas may be associated with repair and storage facilities if workers engaged in specialized activities were housed near the place of their work.

4. Evidence should be present for a multitude of manufacturing and maintenance tasks related to both domestic and agricultural activities.

5. Because of the large scale of agricultural production conducted on a plantation, evidence of specialized processing machinery may exist in the form of discarded or worn-out machine parts or other processing debris. Activity areas associated with such specialized tasks, however,

would generally have been removed from the main structural complex in order to be placed in a location more accessible to the fields. For this reason it is doubtful that such activity areas would be encountered archeologically in an investigation as spatially restricted as that of the Kershaw house site.

The farm, as a unit of agricultural production, shares its function with the plantation but differs greatly in the size and scope of its operation. It stands in contrast to the plantation because of its relatively compact situation together with the absence of many of the specialized activities associated with the latter. The following test implications express those conditions anticipated in the archeological record if the site under investigation represents a farm.

1. The main structure on a farm should be identifiable as a living area. Materials indicative of high economic status are not necessarily expected to be present for the farm may represent a habitation by inhabitants of varying socioeconomic status.

2. Structures associated with animal accommodation, repair and processing, and storage should be concentrated to the rear of the house and should form an inward-facing square.

3. Unlike the plantation, activity areas should not be confined to separate structures and, in fact, may be characterized by extensive overlapping within or among structures.

4. Because of the relatively small size of the farm complex, the size of farm structures and their associated activity areas should also be more spatially restricted.

5. Animal accommodation areas not confined to structures (such as pens or corrals), should be situated on the inside of the hollow square of farm buildings with access to water. They may also occur outside of this structural complex.

The town residence differs from both the plantation and the farm in that its basic function is not agricultural production. For this reason its archeological remains are not expected to include evidence of those activities that pertain to this basic function of the other two occupance forms. The archeological test implications for this occupance form are as follows.

1. The main structure should be discernible as a living area. It will contain evidence of an occupation by individuals of high socioeconomic status.

2. There should be secondary living areas associated with other structures located to the rear or the side of the main house. Materials from these structures should reflect a lower socioeconomic status for their inhabitants.

3. Animal accommodation areas and storage areas for vehicles should be present. These should be housed in structures less extensive than those on either the farm or plantation as they are likely to house animals and equipment used for transportation only. These areas will also be located to the side or rear of the main house and will be arranged perpendicular to the front of the main structure.

4. Evidence of other agricultural, manufacturing, or processing activities should not be present at the site of a town residence.

In summary, 14 test implications have been set forth describing the nature and distribution of activities for which evidence should be discernible in the archeological record if the site under investigation contains the remains of either a plantation, a farm, or a town residence. In the following section the test implications outlined here will be used in an examination of the archeological data from the Kershaw house site. The extent to which these data conform to the implications for a particular occupance form should reveal the degree to which the past occupation at the site approximated the type of settlement represented by that form.

FORM AND FUNCTION AT THE KERSHAW HOUSE SITE: TESTING THE MODELS

Introduction

Three models have been presented in an attempt to describe the nature of the settlement that existed at the Kershaw house site during its 55 years of occupation. Each of the settlement types constitutes a separate formal and functional entity composed of a combination of facilities and activities, the by-product of which should be recognizable in the archeological record. In the previous section a number of archeological test implications have been set forth to examine the Kershaw house site in terms of the characteristics of the hypothesized models in order to determine which best approximates the past settlement there. These test implications have been divided into two categories, those dealing with form and those with function.

Because each of the settlement types has a distinct form it is possible to initially identify the type present at a site on the basis of the layout of its structural features alone. The form of the settlement must also be discerned before individual portions of the site are analyzed with regard to activity occurrence and pattern. For these reasons the archeological testing of the implications relating to settlement form will precede that of those dealing with functional variation within it. If the implications for a particular settlement form are substantiated by the data and those of the other forms are not, then it is possible to proceed by examining only those functional implications relating to the particular model that fits the form of the site's layout. If these implications, too, are confirmed by an examination of the archeological data, it becomes likely that the site under consideration contains the remains of a settlement corresponding to that described in the model.

If, on the other hand, the form of the site does not correspond to that predicted by any of the settlement models or contains elements predicted by several models, then the possibilities exist that the past settlement was not one of the types considered in the models or that the archeological data upon which the site form was examined is not complete enough to distinguish between some or all of the settlement types. In either case it then becomes necessary to examine the functional test implications for all the settlement types to determine if the past settlement exhibited a functional similarity to any of them. It must be stressed that a failure of the archeological data to correspond to the criteria for any of the models does not mean that the settlement type at the Kershaw house is inexplicable, but rather that it represents a type that has not been anticipated based on current knowledge of colonial British occupance types, such an occupance type may have to be defined solely on the basis of archeological data.

Test Implications for Spatial Patterning at the Kershaw House Site

In this section three groups of test implications will be set forth. Each of these describes the expected formal attributes that the archeological record should exhibit if it represents the remains of a site corresponding to one of the three settlement models.

Five test implications characterize the spatial form of the plantation.

1. The main structure should be situated at the center of a crescent or U-shaped collection of buildings and should face the ends of the U.

2. The buildings to the sides of the main structure should be arranged in a row, but may also include a square or rectangular complex of structures.

3. Two smaller buildings, or dependencies, are likely to be situated to either side of the main structure, just in front of or on an axis with that building. The three structures should form a symmetrical arrangement. The dependencies may reflect an architectural similarity to the main structure.

4. Enclosures, if present, will be situated to the side of the main structure but not adjacent to it.

5. The main structure should not be located on a through road. Rather, it should lie at the terminal point of a branch road that passes through the center of the plantation complex, linking the latter to a through road.

The farm should be characterized by the formal attributes contained in the following test implications.

1. The main structure should be situated along one side of a square or rectangular arrangement of buildings. It should face away from the hollow square while the other structures of the arrangement face inward.

2. The area in the center of the square of buildings should be subdivided into smaller units by fences. These may enclose all or part of the square and should exhibit a regular pattern of arrangement. Enclosures may also be present outside the complex of buildings, but need not occur there.

3. The main structure of a farm is likely to be situated adjacent to and facing a major through road.

The town residence has the simplest layout of the three occupance forms. It may be identified by the following test implications.

1. The main structure should be located in front of all others in the complex and face away from them. The other buildings, situated directly behind or slightly to the side of the main structure, may be separate units, often arranged in a row, or contiguous units.

2. The axis of these structures is likely to run perpendicular to the front of the main structure. If lot width is limited these buildings may lie along the property line.

3. The main structure of a town residence should lie along a through road.

4. The borders of the property in which the town residence complex is situated should be demarcated by fences, walls, or a line of contiguous structures.

5. Evidence of a formal garden arrangement may be present to the rear of the main structure.

Examining the Spatial Patterning at the Kershaw House Site

The excavated area at the Kershaw house site extends north, east, and south of the Kershaw house structure and to the west as far as the line of Lyttleton Street. Archeological investigations resulted in the complete excavation of the area adjacent to the house, totalling over 67,000 square feet, as well as the preliminary exploration of a peripheral area about twice this size. These excavations uncovered two types of structural data that are useful in revealing the form of the past settlement. The first type of evidence consists of the remains of buildings lying *in situ* in the ground. Subsurface features, consisting mainly of pits and postholes, the distribution of which is related to that of structures, form the second type of data.

In the following discussion these types of data will be used to reconstruct the settlement form of the Kershaw house site. Because the means of the date ranges of all features outside the Kershaw house fall within the last three decades of the eighteenth century, the structural pattern they reveal is expected to be that of the Kershaw family occupation prior to and following the Revolutionary War. Although not all of the structural elements indicated by the archeological features appear to have been constructed simultaneously, the duration of the occupation was so short that most of the structures probably had overlapping use ranges and may be seen as contemporaneous settlement elements. The spatial patterning exhibited by the archeological data, then, may be viewed for the purpose of defining settlement form as a synchronic phenomenon.

The pattern of structural features at the Kershaw house site is formed by the remains of five spearate buildings (Fig. 14). First, the Kershaw house itself is situated at the west end of the structural complex facing away from the other structures. Behind it 60 feet to the northeast, is the brick foundation of the saddlebag house described earlier (Fig. 29). It is oriented on an axis perpendicular to the front of the Kershaw house and measures 38.5 x 19.5 feet. The foundation which is one and a half bricks thick, is capable of supporting a frame structure one and a half stories high or a one-story brick building (Noël Hume 1969: 128). The use of brick fragments and rubble in the concentration of this foundation

suggests that it did not support a brick structure but rather served as the base for a frame building.

A 14.0 x 14.0 foot structure on a brick foundation was situated 40 feet east of the saddlebag house and is aligned with the axis of that structure (Fig. 30). Because of the extremely disturbed condition of this foundation, which consists of little more than a continuous thin layer of brick rubble at the base of a footing trench, it is not possible to determine if other structural features are directly associated with it. The southwest corner of this structure intersects the northeast diagonal of the palisade trench and is superimposed on it.

Directly south of this foundation lies a brick cellar at a distance of about 167 feet (Fig. 31). It measures 18.0 x 18.0 feet and contains a circular unlined well in its floor. A 3.0 foot wide trench extends eastward from the base of the southeast corner of the cellar and runs along the slope of Magazine Hill for a distance of about 140 feet. Although portions of the cellar's walls have collapsed, this structure remains largely intact. Its walls are one and a half bricks thick and could have supported a frame house up to one and a half stories high (Noël Hume 1969: 128). Because of the restricted nature of excavations in the vicinity of this structure, it is not possible to determine if additional structural features are associated with it.

Nineteen feet northwest of the cellar a square structure measuring 16.0 x 16.0 feet is indicated by the presence of dark grey linear soil stains. Three postholes approximately 7.0 feet apart are situated in a line opposite its north wall at a distance of 3.5 feet, suggesting a shed or lean-to addition in this location (Fig. 32). The palisade wall trench passes between the wall of this structure and the postholes. The linear nature of the soil stains suggests that the building was a log structure, the even-tiered horizontal members of which were placed directly on the ground. The presence of gaps at the corners of the north wall suggests the use of either the corner-post (*piece sur piece*) or the hog trough methods of corner construction.*

The arrangement of the five structures at the Kershaw house site forms a rectangle 167 feet across and at least 140 feet deep. This pattern is similar to that described in the farm model except that the rear of the square of structures is not closed by a range of buildings. The likelihood of such a range of structures being situated there is uncertain because

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*The corner post method of construction involves the placement of the ends of the horizontal wall members in grooved or morticed vertical posts. The hog trough method would have the horizontal members secured by spikes or pegs to the two perpendicular sides of a vertical "trough" of heavy planks with its apex set in the corner. Horizontal construction with corner posts is generally found in those parts of the United States contiguous to Canada, however, it also occurs in the Southeast where it apparently was introduced by German immigrants (Kniffen and Glassie 1966: 50-51).

FIGURE 29: Excavated Foundations of the Saddlebag Structure Viewed From the Southeast.

FIGURE 30: Archeological Remains of the Structure Intersecting the Palisade From the South.

FIGURE 31: The Cellar Structure Viewed From the West. The Unexcavated Well is Visible in the Lower Left Corner Partially Obscured by the Central Balk.

FIGURE 32: Archeological Remains of the North Portion of the Log Structure From the Northeast.

because the east end of the site has remained largely unexplored beyond the limits of the palisade trench.

Although the form of the east end of the Kershaw house structural complex cannot be defined on the basis of structural foundations, its form and the form of the settlement complex in general may be inferred from the patterning of other features at the site. These features fall into four categories: wells, pits, postholes, and a shallow ditch.

Wells performed the obvious function of supplying drinking water and would have been situated adjacent to living areas, animal accommodation areas, and perhaps some processing areas. Three wells were located at the Kershaw house site. The first intersects the palisade and lies 43 feet northwest of the saddlebag structure (see Lewis 1975a: 25). The second is located about 25 feet south of the structure that intersects the palisade. It is a square well with postholes on opposite sides which could have held vertical supports for a windlass support or roof. The third well is in the floor of the cellar structure. All of the wells are unlined.

Pits at the Kershaw house site appear to consist chiefly of subterranean deposits of refuse that accumulated as the result of the site's occupation and their distribution may be assumed to be related to that of various activities there. South (1977) has noted that in British colonial American sites, refuse deposits associated with living areas tend to be heaviest in the vicinity of the rear entrances of structures, and it is expected that the occurrence of refuse pits at the Kershaw house site will follow a similar pattern. An examination of the archeological data indicates that pit features tend to cluster in several locations (Fig. 33). The first is in the area directly behind the Kershaw house and includes six separate pits, some of substantial size, and four superimposed pits. A group of six superimposed pits and two contiguous pits lie just north of the saddlebag structure and two separate pits are situated northeast of it. Three pits are found within the structure itself. A third group of three pits lies near the structure intersected by the palisade and four other pits are scattered south of it. The area around the log structure was only partially excavated and yielded evidence of two large pits south of the structure and 14 smaller pits in and around it. Unfortunately none of the area surrounding the cellar was explored and thus it is not known if any pits or other features are associated with this structure.

The pattern of pit features at the Kershaw house site reveals clusters to the east of the Kershaw house, to the north of the saddlebag structure, and to the south of the log structure. If these features were located to the rear of the structures, the settlement plan indicated is one in which the main structure faces westward and two structures behind it face one another.

Postholes account for the largest number of features at the Kershaw house site. A total of 347 were uncovered and excavated during the investigations of the palisaded area. Because information on these features is incomplete it is not possible to group them into larger patterns on the basis of physical characteristics such as width and depth. It is, however, possible to assume comparability among all of them and discern spatial

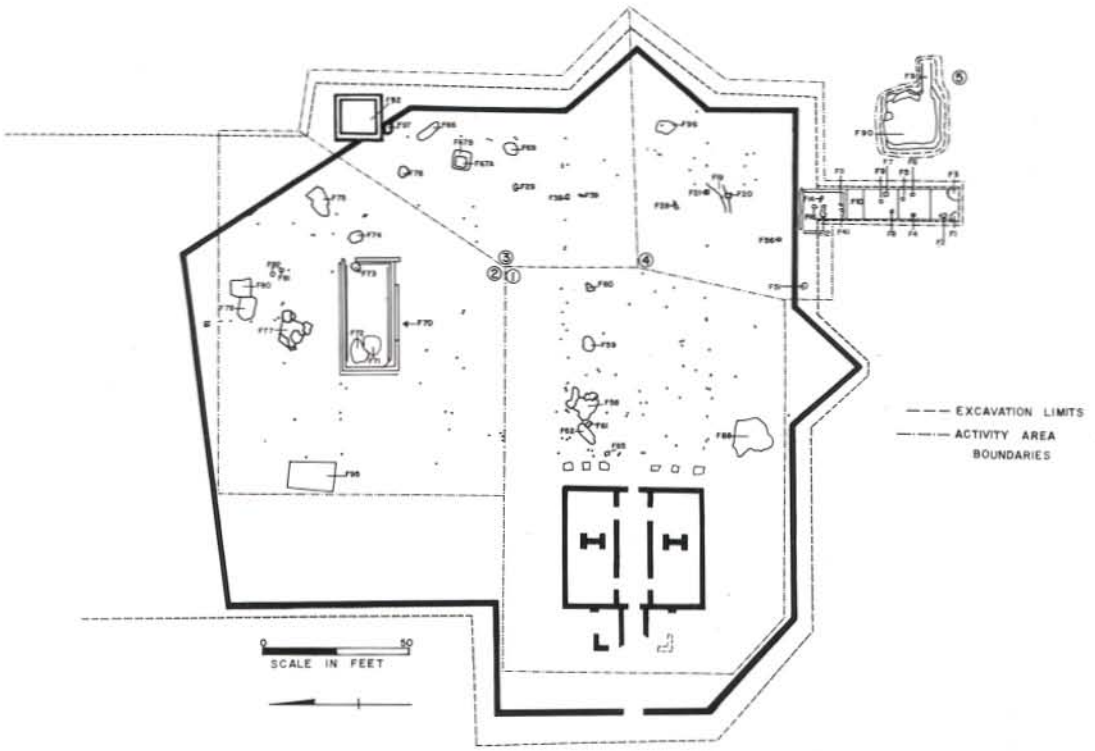

FIGURE 33: Plan of Activity Areas at the Kershaw House Site.

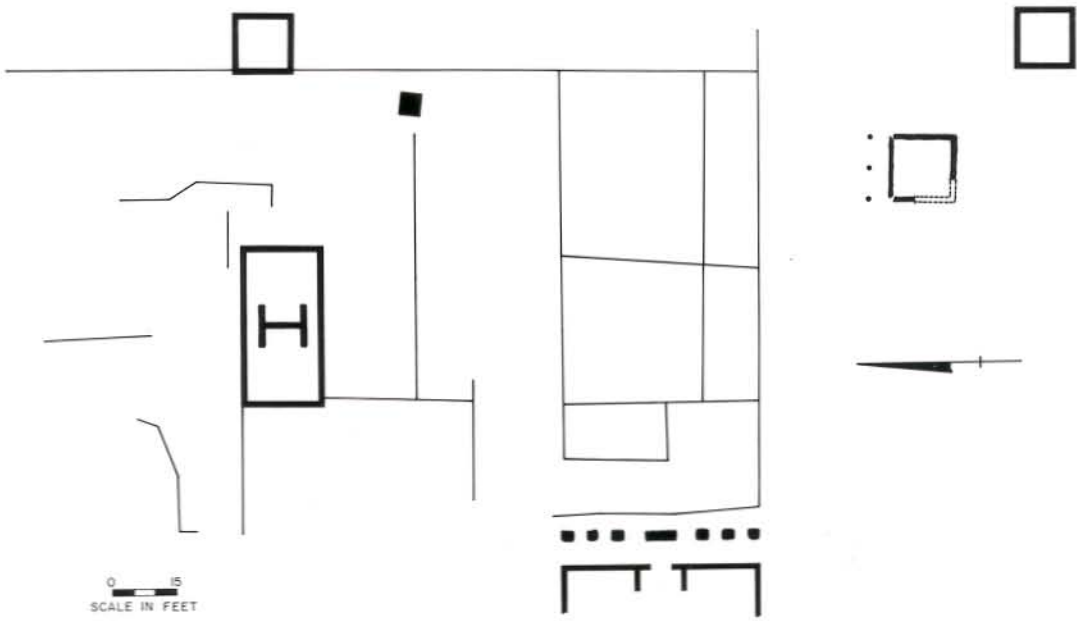

FIGURE 34: Diagram of Probable Posthole Alignments at the Kershaw House Site.

patterning from the distribution of all such features. If we assume that the structural features represented by postholes include fences, roof supports, and other features arranged in linear fashion, then it should be possible to recognize meaningful patterning of postholes by noting such linear alignments.

Several linear arrangements of postholes may be discerned (Fig. 34). These include two parallel rows running east-west from either side of the Kershaw house to the east line of the palisade wall. Several perpendicular rows of postholes appear to connect these alignments. One east-west row runs from a point south of the saddlebag structure nearly to the square well. An alignment turns northward from this point and extends at least as far as the northeast diagonal of the palisade wall. A north-south alignment extends along the eastern boundary of the excavated area just inside the east line of the palisade from the southernmost east-west alignment. It runs along the west wall of the structure intersected by the palisade, to a point outside of the northern limit of the excavated area. A short posthole alignment extends northward from the center of the saddlebag structure and another runs westward from the northwest corner of that structure. Finally, a roughly circular post alignment may be observed at the edge of the enclosed area just east of the Kershaw house.

Numerous other postholes are present in the excavated area, particularly in the area behind the Kershaw house. Although it is not possible to discern precise linear or other geometric arrangements among them, their general arrangement suggests that they served to subdivide the larger area into smaller enclosures or represent changes or realignment of the enclosure boundaries through time. Some may also be remains of light shelters, racks, or other unsubstantial structures. Other concentrations of postholes occur in the vicinity of the saddlebag structure.

The fourth type of feature is represented by a narrow, linear ditch located just outside of the northeast diagonal of the palisade. It is oriented in a north-south direction paralleling the posthole alignment and extends beyond the limits of the excavations. This feature may have served as a drainage ditch to collect and redirect runoff from the top of Magazine Hill.

The following spatial plan for the Kershaw house complex is indicated by the structural data uncovered in the archeological excavations. The plan contains a main structure facing westward along a through road. Behind it are situated four structures in two parallel rows. At least two of the structures face inward. The area between the two rows of structures contains evidence of fences laid out so as to subdivide it into smaller rectangular units and one circular unit, with a passage running in an east-west direction through the center of the area. The apparent continuation of the linear fence alignments east of the excavated area suggests that the structural complex extends beyond the limit of area investigated in this direction. The absence of usable archeological data from exploratory excavations east of the excavated area precludes the evaluation of settlement form here.

On the basis of the archeological evidence for spatial patterning, the following comparisons may be made regarding the plantation model.

1. The main structure is not in the center of a U-shaped complex of buildings that are arranged to the sides and front of it. The area to the front and sides of the Kershaw house has yielded no archeological evidence of structures, indicating that if other structures were present, they were situated behind it.

2. The absence of buildings to the sides of the main structure precludes the presence of the rows of structures predicted in the second test implication.

3. No dependency structures to the sides or the front of the main structure are present at the Kershaw house site.

4. Apart from the military palisade, no enclosures are located to the sides of the main structure.

5. The main structure lies directly on a through road and not at the terminal end of a branch road.

In summary, the Kershaw house data do not substantiate any of the test implications for form of the plantation model. For this reason it is unlikely that this site represents that type of settlement and it is not necessary to consider the plantation model further in the analysis of site function.

A comparison of the Kershaw house site data to the test implications for spatial patterning of the farm model yields the following results.

1. The main structure is situated along one side of a rectangular arrangement of structures and faces away from the rectangle.

2. The interior of the rectangle formed by the structures is subdivided into smaller units by fences. Several alignments of postholes appear to extend beyond the buildings and may represent portions of external enclosures.

3. The main structure at the Kershaw house site is situated along a through road as predicted in this test implication.

In summary, the archeological data substantiate all of the test implications relating to farm settlement form. On the basis of its spatial plan the Kershaw house site may be identified as a farm. This conclusion must, however, be substantiated by an analysis of the archeological data with regard to the test implications for function before the nature of the site's past occupation may be confirmed.

A comparison of spatial test implications for the town residence with the data from the Kershaw house site may be summarized as follows.

1. The main structure is located in front of other smaller structures on the site, however, the other buildings are not arranged in a single row and do not comprise a single contiguous unit.

2. The axis of the smaller structures is perpendicular to that of the main structure. The former do not, however, appear to demarcate the straight line of a boundary.

3. The main structure lies adjacent to a through road.

4. No evidence of property boundary walls or fences was found on the site.

5. The area behind the main structure contains no evidence of a formal garden arrangement.

In summary, the Kershaw house data support some of the test implications for the town residence model. Several others critical to the identification of this settlement type cannot be verified, however, making the substantiation of this type doubtful on the basis of settlement plan.

A comparison of the archeological data from the Kershaw house site with the test implications for form of three different settlement types has eliminated one type, the plantation, from further consideration as that of this site. The test implications for the farm model, on the other hand, fit the Kershaw house site data very closely and strongly suggest that the past settlement there fulfilled this function. The results of a comparison with the implications for the town residence form are uncertain and only partially support the presence of this settlement type.

In the following section the test implications relating to site function as expressed by the occurrence and distribution of activities will be examined. Because the test implications for form suggest that the Kershaw house settlement may have functioned as a town residence and even more strongly indicate that it served as a farm, it will be necessary to examine the functional test implications for both of these occupance forms.

The Examination of Functional Activity Occurrence at the Kershaw House Site

In the preceding chapter, eight test implications relating to the functions of farm and town residence settlements have been presented. Each implication describes the activities associated with the two settlement types as well as the spatial patterning of activities on the site. By comparing the occurrence and distribution of the archeological by-products of these activities on the Kershaw house site with the occurrence and distribution described in the test implications, it should be possible to recognize the model to which the site conforms most closely, and thereby assign to the site one of the site functions.

The analysis of site function is based upon artifactual data recovered from the structures and other features used to define the form of the settlement. Because archeological material not associated with such features was not retained, and because features lying adjacent to some of the structures were only partially explored in the archeological investigations, these data are assumed to reflect only a portion of all those deposited at the site.

If it is assumed that a structure is the locus of one or more sets of activities, then it is likely that the by-products of these sets will be associated with behaviorally significant proveniences centered around structural remains. It is possible to define such units on the basis of those cultural formation processes most likely to have been significant in the accumulation of the archeological record associated with eighteenth century structures (see Schiffer and Reid 1975: 253). These processes consist principally of primary and secondary refuse deposition, as well as that resulting from abandonment and loss (see Schiffer 1972: 161, 1975a: 6-8), and are related directly to the differential occurrence of archeological materials inside a structure and in the area surrounding it.* In general, interior deposition includes the primary refuse of activities associated with that structure as well as architectural and other debris that accumulated as the result of abandonment. Exterior deposition consists of some primary refuse, but is mainly secondary refuse removed from the area where the activity took place and redeposited elsewhere. The by-products of loss are likely to be associated with both interior and exterior areas. Each behaviorally significant unit, or activity area, consists of both the structure and its immediate surrounding area. Archeologically these areas may be defined at the Kershaw house by the presence of a structural ruin and a cluster of affiliated pit features. In order to conduct a comparative study of functional variation among structurally based activity areas, it is necessary that each area employed in the analysis consist of an adequate sample of cultural material obtained from both types of features.

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*Based upon archeological data from Brunswick Town, North Carolina, South (1977: 111; personal communication) has demonstrated that marked differences occur in the frequency relationships of various classes of artifacts, specifically those relating to food preparation and consumption, architecture, and if present, specialized activities, when the archeological materials recovered from the inside of structural ruins are compared with those found in the surrounding yard areas. Perhaps the most dramatic differences are the marked increase in food preparation and consumption artifacts outside where deliberate discard seems to have taken place and the increase of specialized activity artifacts inside the structure where they would probably have accumulated as the primary refuse of those activities or as the result of loss or abandonment. The increased frequency of architectural artifacts inside a structure reflects the accumulation of abandonment debris from the structure itself. Closely related to the differential distribution of refuse is the disposal pattern of organic waste, particularly bone, in areas peripheral to a structure. South (1977: 179-182) has shown that the ratio of bone to all other artifacts increases with the relative distance of the refuse deposit from a structure.

Another factor relating to the comparability between archeological areas is the physical nature of the features within that area and the manner in which it is likely to have affected the deposition of cultural material. Most activity sets may be expected to contain, for the most part, the by-products of activities centered there. Certain types of structural features, such as cellars and wells, become natural collecting areas after they are no longer in use, for secondary refuse generated elsewhere (Noël Hume 1969: 144). As a result, the archeological material from such features reflects not only a portion of the activity set once centered there, but also parts of many other activity sets located elsewhere (South 1977: 179; Schiffer 1975b: 64-65).

With these observations about the nature of the archeological record in mind, it is possible to make the following statements concerning the measurement of intrasite functional variability at the Kershaw house site. First, utilizing the five structural ruins as assumed activity loci, activity areas may be estimated by grouping each of them with those features whose distances are less to that structure than to all others. Five such activity areas have been delimited at the Kershaw house site (Fig. 33).

Secondly, of the five activity areas, only three (the Kershaw house, the saddlebag structure, and the structure intersected by the palisade) include both structural remains and an adequate sample of external features. These are labeled areas 1, 2, and 3 in Figure 33. The remaining two areas consist of only structural remains: in the case of the cellar, and an incompletely explored structure interior of the log structure and several partially excavated features exposed in an exploratory trench to its rear.

Thirdly, the cellar, as a subterranean feature, presumably was filled with secondary refuse following its abandonment. This material does not appear to be stratigraphically separable from that accumulated during the time of the structure's use (see Appendix B), making the cellar's use dubious in a comparison of intrasite variation.

In summary, the Kershaw house site has been broken down into five activity areas, each of which is based upon the occurrence of a structural ruin and those features lying in close proximity to it. Each of these areas is assumed to represent the locus of a single, although not necessarily discrete, activity set related to the structure. Three of the five areas were found to contain archeological remains which were comparable on the basis of their similar nature of deposition. Each represents the outside deposition of secondary refuse as well as the accumulation of primary refuse, architectural debris, and other artifacts accumulating within the structure as the result of abandonment and loss. The other two areas lack an adequate sample of material outside the structure and one, a cellar, contains a large quantity of material not related to its occupation. These two areas do, however, exhibit architectural characteristics which undoubtedly relate to their past functions and they will be included with the other areas in the architectural analysis of site function. The first three areas will serve as the data base for examining the functional test implications of the farm and town residence models on the basis of non-architectural material evidence.

Architectural Evidence for the Settlement Models

Architectural remains, unlike the other artifacts at the site, retain much of their form and spatial orientation intact. Although the form of a structure is not always related directly to entire activity sets centered there, it often exhibits characteristics that either identify in a general way the broad types of activity, or at least preclude the occurrence of certain other types of activity that could have been carried out there. Direct associations between form and function have already been made in this report relevant to the site as a whole and to the Kershaw house in particular. Based on analogy with comparative data, the following functional statements about structural form may be made regarding the farm model.

1. The main structure has been identified as a living area of a type associated with high status individuals in the southern British North American colonies.

2. The prediction that structures devoted to animal accommodation, repair and processing, and storage should form a hollow, inward-facing rectangle to the rear of the house has been partially confirmed by a study of the site's plan alone. The layout of the Kershaw house site contains four structures in addition to the house itself. The activities associated with them are revealed in a general way by their architectural form.

The first of the structures forms the locus of Activity Area 2 (Fig. 33). It consists of the brick foundation of a saddlebag structure. Its location just behind the house and the fact that it alone of all the outbuildings possesses a large, central hearth suggests that it served as a kitchen. Newton (1971: 7) has associated this form with quarters when found in the context of a large plantation, and with individual dwellings when found alone. Noël Hume (1969: 138), however, has stated that when found in association with a large house in an eighteenth century context such structures are liekly to have been kitchens.*

The structure in Activity Area 3 (Fig. 33) consists only of the base of a square brick foundation. There is no evidence indicating the presence of a hearth or other structural features. The structure likely to have left a foundation of this type is the smokehouse. Noël Hume (1969: 138-139) describes such structures as tightly closed boxes resting on light

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*Comparative archeological evidence indicates that separate kitchen structures were generally situated just to the rear of larger dwellings. In Marlborough, Stafford County, Virginia, ca. 1731 (Watkins 1968: 101-105); the Price house (South 1970: 27); the Fox house, Lexington County, South Carolina, 1835 (Polhemus 1972: 99); and the Waite house, Camden, South Carolina, 1833, for example, the kichens are located in this position. In all but one, the kitchen is located nearest the left rear corner of the house as is the saddlebag structure at the Kershaw house.

brick foundations. Within the smokehouse meats were hung on hooks over a smoking fire that was contained in a shallow brick or stone-lined firebox in the floor. Often the latter is of such a shallow nature that no trace of it is left in the archeological record.*

The structure in Activity Area 4 (Fig. 33) is the only one of the five on the site that was not constructed with a brick foundation. It is a roughly square log structure with an overhang supported by three posts and does not contain a hearth. Several small pit features inside it may mark the positions of vertical supports or partitions. Its plan and method of construction are not associated with a specific functional structure type. Rather, they may be found in a variety of outbuildings ranging from small crib barns (see Sloane 1967: 27; Glassie 1968: 90-91) to various types of sheds, all of which may be linked generally to a storage function although repair and processing facilities may also have been housed there.

Finally, the fifth area is characterized by the presence of a cellar with a well in its floor, suggesting that it was constructed as a ground cellar. Ground cellars were constructed for the cold storage of food and often included an internal well within which items might be suspended for cooling.** Ground cellars could be built either below an above ground

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*Several comparative archeological examples of smokehouses exist, of which the following are a sample. These include the Fox house; the Palmer-Marsh house, Bath, North Carolina, ca. 1769 (South 1965b); the Chapman-Taylor house, New Bern, North Carolina, ca. 1800 (South 1962); the Waite house; Marlborough (Watkins 1968: 107-109); and the Judge Maurice Moore house, Brunswick Town, North Carolina, ca. 1759 (South 1963: 16-21). The smokehouse at the Judge Maurice Moore house was a frame structure resting on a stone foundation 9.5 feet square. This structure was connected by a brick-lined tunnel to a separate firebox about 7.5 feet away. The foundations of this structure lie directly behind those of the house. The Marlborough smokehouse was larger, measuring 18.3 x 18.6 feet, and like the Brunswick Town example had a separate firebox connected by a tunnel. It was a frame structure resting on a brick rubble foundation located to the rear of the house on the right side. The Palmer-Marsh house smokehouse is situated to the rear and left of the house and measures 13 feet square. The Fox house smokehouse was located directly behind the house, but its dimensions and method of construction are uncertain. The smokehouse at the Chapman-Taylor house is a rectangular brick structure 10 x 20 feet in size, situated to the left rear of the house. The Waite house smokehouse is a frame structure on a brick foundation lying to the left rear of the house. It measures 12 feet square.

**Comparative examples of both lined and unlined ground cellars are not uncommon in the archeological literature, however, few examples of such structures associated with wells have been reported. One such cellar well was uncovered in the ruin of Russellborough, the governors' home in Brunswick Town, North Carolina, built in the 1760's. Here a brick-lined well was situated in the northwest room of the house cellar, an area that apparently served as a wine cellar and dairy. The well is believed to have been used to cool perishables suspended in it in sealed containers (South 1967).

structure or by themselves (Sloane 1967: 73). The cellar at the Kershaw house site appears to provide the foundation for a standing structure from which entry to the cellar was gained by means of an internal stairway or ladder. The function of the trench running eastward from the cellar is uncertain. It could have served to drain water from the cellar during or after its construction. The virtual absence of erosion on the trench walls and silt deposits at its base suggest that it did not serve as an open drain for any length of time. The sandy composition of its fill, however, would have allowed it to function as an aquifer to drain water from a cellar excavated in nearly impermeable clay (Strickland 1976: 21).

The inward orientation of the structures is revealed by their association with concentrations of refuse pits. Because the intensive deposition of refuse in the area just to the rear of a structure was a common pattern on British colonial American sites, the location of refuse features should reveal the orientation of adjacent structures found in an archeological context on such sites. Figure 33 illustrates the relationship of structures and trash pit features at the Kershaw house site. Concentrations of trash pit features are associated with the structures in Areas 1, 2, and 4 and indicate that the latter two faced one another while the other, the Kershaw house, faced away from them. Only scattered pits are present in the vicinity of the Area 3 structure and the area around the structure in Area 5 was not explored archeologically.

3. The occurrence of spatially overlapping activities is difficult to observe on the basis of architecture alone, because architectural remains do not represent the by-product of the activities performed there. They instead indicate only the structure's potential use by revealing architectural elements that are associated with specific types of activities or are so commonly employed that they reflect no particular activity. The architectural evidence at the Kershaw house site reveals a potential overlapping of activities in two of the five structures.

The specialized structures at the site have been identified as a living area, an area associated with the preparation of food, a meat processing area, and a cold storage area for perishables. The structure in Area 2 that was identified as a kitchen could also have served as the locus for other domestic-related activities such as the quartering of servants, laundering, spinning, and storage. The log structure in Area 4 is a generalized type of building that could have been used for storage of agricultural products as well as the housing of repair and processing activities not requiring the use of a hearth.

4. The fourth test implication predicts that outdoor animal accommodation areas will be present in the area enclosed by the outbuildings behind the main structure. These are most likely to consist of pens, corrals, or other open enclosures. Such areas are evidenced at the Kershaw house site by the posthole alignments situated to the east of the main house (Fig. 34). The alignments reveal two large, rectangular areas that appear to be subdivided into smaller units lying directly in line with the house. At the west end of the west area is a rectangular alignment with a linear extension leading from it to the north edge of the larger enclosure. Several posthole alignments on the north side of the area enclosed by the

outbuildings appear to enclose portions of this area. An alignment extending northward from the eastern edge of the rectangular enclosure behind the Kershaw house may represent the edge of a larger enclosure to the east or may have served to demarcate the eastern border of the yard area. In general, this area is characterized by an absence of other types of features. Only behind the Kershaw house in the western section of the large rectangular enclosure is a cluster of pits present.

A comparison of these alignments with the layout of open animal enclosures on eighteenth century farms (Fig. 27) reveals that the large rectangular areas are similar to those used to contain sheep, cattle, horses, and other large stock. The enclosures were usually constructed near the structures in which the animals were housed and served as collecting areas for manure. The enclosures were often subdivided in order to segregate stock. Smaller, specialized enclosures were also present on farms of this period. The most distinctive form is that of piggeries which were often constructed in a circular or oval shape. These, together with small, rectangular shaped poultry enclosures, were situated near the rear of the house in order to facilitate the feeding of household refuse to these animals (Nigel 1970: 79). The smaller enclosure at the west end of the Kershaw house yard corresponds to the form and location of the eighteenth century farm piggery and could have served that purpose there. In addition, some of the smaller enclosures on the site may represent poultry yards.

The positions of wells are not as critical to the plan of the farm as are those of the structures, however, it was recommended practice to place wells used to water stock and process agricultural products within the area enclosed by the farm buildings. The square well at the Kershaw house site is situated in the northeast corner of the area and would have been accessible to both large enclosed areas via the open strip between them (Fig. 34).

In summary, the four test implications for the farm model of site function have been used to examine the architectural data at the Kershaw house site. The Kershaw house has been identified as a high status dwelling and the structures situated near it exhibit the characteristics of buildings associated with processing, repair, and storage activities. Animal accommodation areas are represented only by outside enclosures. The presence of overlapping activities is suggested by structures of multi-purpose and non-specialized design. Each of the test implications of the farm model is supported by the architectural data, and on the basis of this evidence, the past settlement at the Kershaw house site appears to have been a farm.

Several formal characteristics of the town residence model are indicated by an examination of the plan of the Kershaw house site. In order to explore further the possibility that the site represents the remains of this type of settlement, it is necessary to examine the architectural evidence found there with regard to the functional test implications for the town residence settlement.

1. The Kershaw house, the site's main structure, has been shown to exhibit the architectural characteristics of a high status dwelling.

2. Evidence of secondary living areas is present in the saddlebag structure in Area 2. This structure, though principally a kitchen, exhibits an architectural form also found in servants quarters and could have served as a living area for those servants attached to the main house. As predicted, this building lies to the rear of the main structure.

3. Animal accommodation areas are present at the Kershaw house site as described in the discussion of the farm model. These, however, appear to be outside enclosures only and do not consist of structures as would be the case in a town residence settlement. Likewise no structures of a size large enough to accommodate vehicles used in transportation are present at the Kershaw house site.

The presence of at least two agricultural processing structures (the smokehouse and the ground cellar) not normally associated with a town residence, as well as the occurrence of extensive enclosures, suggest that the settlement at the Kershaw house site fulfilled functions other than those associated with the restricted role of the town residence.

Only the presence of a high status occupation and the presence of secondary living areas behind the main structure argue that the Kershaw house site represents the remains of a town residence settlement. The apparent absence of animal accommodation and vehicle storage structures together with the presence of agricultural processing and livestock enclosure areas do not support the hypothesis that the settlement once performed this function. Thus, the architectural data at the Kershaw house site imply that the Kershaw house did not serve as a town residence in Camden.

The architectural data, it must be remembered, represent only a portion of the total archeological record from the Kershaw house site and, therefore, do not constitute the only means of determining site function. It will be necessary to confirm the conclusions based upon the architectural evidence by analyzing the artifacts that comprise the remainder of the archeological record and which represent the by-products of the actual activities carried out at the Kershaw house settlement.

Artifactual Evidence for the Settlement Models

Three of the five activity areas at the Kershaw house site may be examined in terms of the test implications for the farm and town residence models. Areas 1, 2, and 3 are assumed on the basis of the extent to which they are represented archeologically to possess comparable by-products of past activities. The differences among these by-products should reflect the variation in activities that will, in turn, reflect site function. Unlike the architectural remains, the artifacts associated with an area represent only a portion of the artifacts originally deposited in the archeological record. The discard, during excavation, of archeological materials located in the plow zone has resulted in the destruction of a significant part of the remains of past activities at the site. For this reason, it is expected that a great deal of potential information on intrasite variability, especially that reflected by artifacts occurring in

low frequencies or deposited on the surface as primary refuse, has been lost. It is anticipated that because several of the artifact classes grouped under the four activity categories in Table 3 are characterized by such artifacts, it will not be possible to identify all of these activities at the Kershaw house site. The analysis of the two sets of test implications must, therefore, be confined to dealing with those functional classes of data sufficiently large to be identifiable in the archeological record.

The analysis of the artifactual remains at the Kershaw house site is intended to discover functional distinctions between the areas defined at the site. Because of the expected overlap among the activity sets that were present in these areas, it is not anticipated that the archeological by-products of those activities by area will comprise discrete assemblages. Rather, the functional distinctions between areas are more likely to be reflected by differences in the proportional occurrence of those artifacts most closely associated with particular activities or types of activities. It is expected that the relationships between such functionally significant artifact categories will indicate those activities predominant in different areas and thus form the basis for discerning activity patterning at the site. For this reason it is necessary to examine the functional test implications of the two models in terms of a series of statements,each of which deals with an expected relationship between certain of these artifact categories.

A comparison of the frequencies of occurrence by area of nine functional artifact classes is illustrated in Table 4. Of three classes it will be noted that 1 - 5 are generally associated with living areas, 6 may be found in structures housing a variety of activities, and 7, 8, and 9 represent the three specialized activities dealt with in the models. It should also be obvious that, of the nine classes, only the first six and the ninth occur in substantial numbers in the three activity areas examined. The low frequencies of classes 7 and 8 indicate that the by-products of the activities they represent are not present in the archeological material from the Kershaw house site and, therefore, adequate evidence for inferring these specialized activities is not available in the data.

In order to distinguish specialized activity areas from living areas, it will be necessary to break down these activity classes into smaller groups. These groups should be composed of those artifacts that are assumed to be sensitive to the distinction between domestic and non-domestic activities as well as an overlapping between the two. In the following discussion various artifact groups will be compared in order to measure those variables significant to the two sets of test implications.

1. Because the Kershaw house, as an eighteenth century mansion, is expected to have had a separate kitchen, the activities associated with food preparation may be assumed to have been spatially distinct from those related to food consumption. A lower frequency of artifacts representing the former group is expected to characterize the living area, in this case the main structure, while a higher frequency of food consumption items is expected there. In the kitchen, a specialized activity area, the opposite relationship between these two artifact groups is anticipated.

Areas of other specialized activity are expected to exhibit a lower total frequency of both food preparation and food consumption artifacts.

TABLE 4

FREQUENCIES OF OCCURRENCE OF FUNCTIONAL ARTIFACT CLASSES BY AREA

	Artifact Counts				Artifact Percentages		
	Area 1	Area 2	Area 3	Totals	Area 1	Area 2	Area 3
1 Cooking and eating	3834	726	407	4967	40.5	24.3	25.5
2 Faunal remains	1454	1344	862	3660	15.4	45.0	54.0
3 Furniture hardware	33	11	0	44	.3	.3	0
4 Personal items	138	147	32	317	1.4	4.9	2.0
5 Window glass	1484	98	99	1681	16.7	3.3	6.2
6 Building hardware	2503	620	152	3275	26.5	20.7	9.5
7 Animal accommodation	4	0	0	4	.1	0	0
8 Agricultural artifacts	5	0	1	6	.1	0	0
9 Storage	14	42	44	100	.1	1.4	2.8
Totals	9469	2988	1597	14054	101.1	99.9	100.0

A comparison of Areas 1, 2, and 3 by percentage frequencies of artifacts used in food preparation versus those used in food consumption is shown in Figure 35. It indicates the hypothesized relationship between the two artifact groups in Areas 1 and 2 and identifies them as a living area and kitchen respectively. The lower frequencies of both groups of artifacts in Area 3 suggest that it contained a specialized activity.

2. The distribution of faunal remains is likely to be directly related to the function of an area either as a locus of food consumption or of food preparation and processing. South (1977: 179) has noted that faunal remains are usually deposited at a distance from living areas because of their odors. Other areas where such items were used, stored, or processed would also have been associated with faunal remains, yet because they were not living areas the disposal of such material would probably have been heavier and in closer proximity to the structure. It is predicted that in areas in which faunal material accumulated as a by-product of the activities carried out there, living areas will exhibit a lower frequency of occurrence than areas of food processing or storage. Areas not containing activities related to food production, however, are likely to exhibit an absence of faunal material.

A comparison of the percentage frequencies of faunal remains in Areas 1, 2, and 3 reveals frequencies of 15.4%, 45%, and 54% respectively for these areas. This implies that Area 1 has the greatest likelihood of being a living area while areas of food storage or processing are represented by Areas 2 and 3.

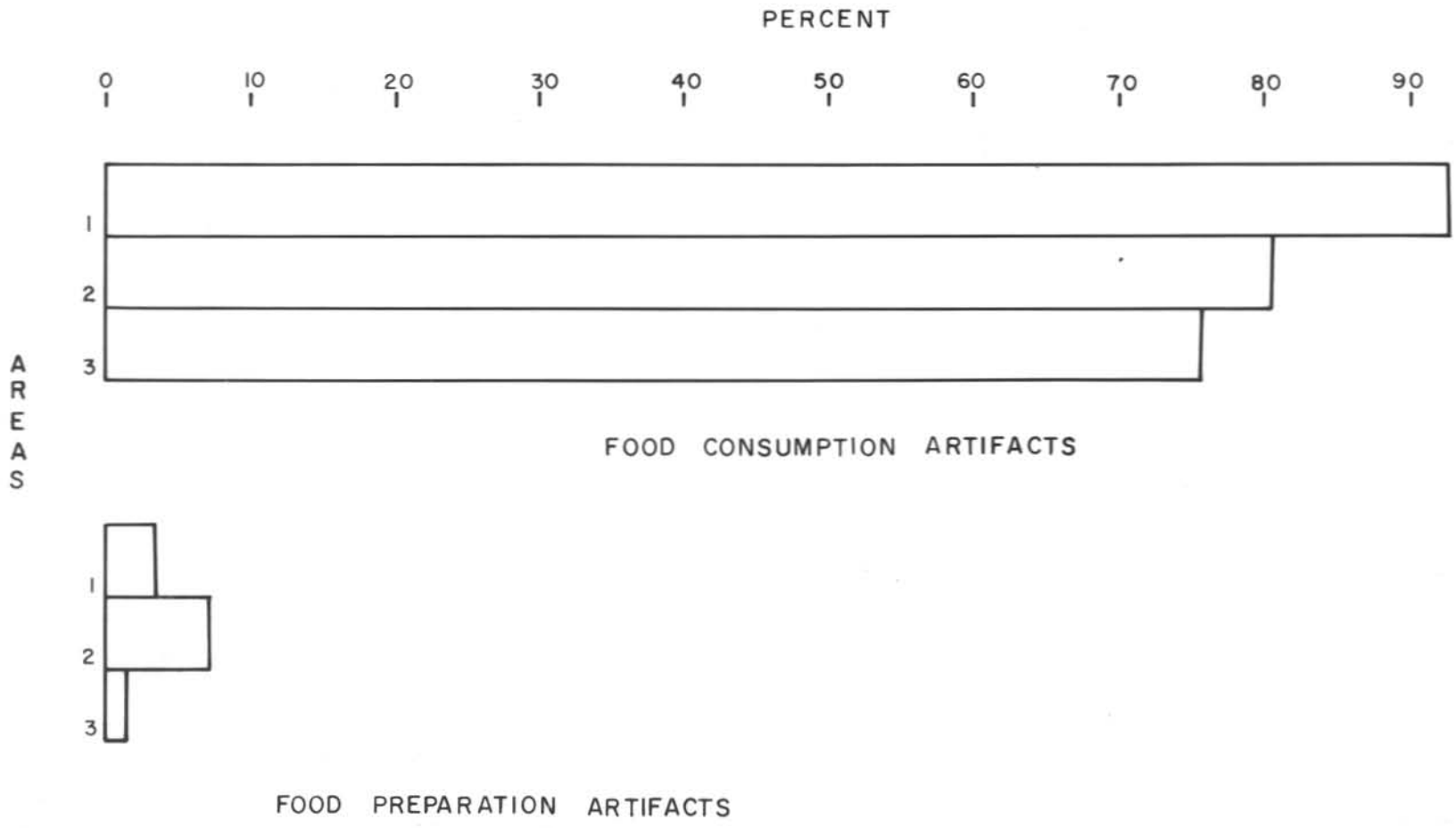

FIGURE 35: Comparison of Percentage Frequencies of Occurrence of Food Consumption and Food Preparation Artifacts in Areas 1, 2, and 3.

3. Wine bottles in the eighteenth century were primarily used as vessels for storing, serving, and decanting beverages rather than as containers in which such beverages were shipped from manufacturer to user. Because the heaviest use, and consequently breakage, of bottles would have been associated with living areas, it is expected that the greatest rate of discard would also have occurred there. For this reason it is expected that areas characterized by the greatest relative occurrence of wine bottle fragments in the archeological record will be living areas, while those areas with a lower proportion or an absence of such artifacts will represent centers of other sorts of activity.

An examination of the relative percentage frequencies of wine bottle glass to all other artifacts in the three activity areas at the Kershaw house site indicates that the former comprises 9.1% of the total artifacts in Area 1, while in Areas 2 and 3 this percentage drops to 6.5% and 5.7% respectively. The relatively larger frequency of wine bottle glass in Area 1 suggests that this area is more likely to have been a living area than the other two areas.

4. Structures used as living areas would have constituted the principal depository for the class of artifacts collectively termed furniture hardware. Unlike many types of artifacts, furniture is a durable item that is not likely to have been broken and discarded, or to have entered the archeological record, at a high and constant rate. Consequently, the percentage frequency of furniture hardware to other artifacts in the archeological record may be assumed to be quite low on any site. The spatially restricted use of such artifacts, however, would nearly preclude their occurrence in areas that lacked a domestic occupation. Areas of specialized, nondomestic activity, then, should be characterized by a near absence of furniture hardware in the archeological record.

A comparison of the percentage frequencies of furniture hardware to all other artifacts in Areas 1, 2, and 3 reveals that in Areas 1 and 2 this artifact class comprises about 0.3% of the total artifacts. It is absent in Area 3. On the basis of this observation, it appears that living areas were present in Areas 1 and 2 but not Area 3.

5. Of the structures that served as living areas in a settlement, it is likely that the one inhabited by high status individuals have generated a discard composed of a greater proportion of high status artifacts than would have those living areas occupied by servants, slaves, or other persons of lower socioeconomic status. An inspection of the archeological remains of the three areas at the Kershaw house site is expected to reveal a higher frequency of high status artifacts in the living area of the site occupied by upper status persons, and a lower occurrence or absence of such items in living areas of persons of lower status and in specialized activity areas.

A list of upper status items recovered from the Kershaw house site by area appears in Table 5. It clearly shows a preponderance of high status items to be associated with Area 1, while few or none were recovered from the other two areas. On the basis of the marked differential occurrence of these artifacts, it seems probable that Area 1 represents the high

status living area at the site while occupations by lower status persons may have been present in the other two areas.

TABLE 5

COMPARISON OF HIGH STATUS ARTIFACT OCCURRENCE BY AREA

	Area 1	Area 2	Area 3
Stemware fragments	10		3
Porcelain buttons	1		
Silver ornament plate	1		
Etched glass fragments	2		
Silver plated objects	1		
Silver buttons	3		
Wig curlers	1		
Total artifacts	19	0	3

6. Closely related to the status of the site's occupants is their use of the ceramics collectively termed "Colono-Indian" wares (Noël Hume 1962). These ceramics represent the reproduction of European and possibly African vessel forms utilizing aboriginal American ceramic technology. They were manufactured and marketed by various Indian peoples in eastern North America who were overwhelmed in the initial period of European expansion and seem to represent an economic adaptation to the colonial system that had engulfed them (Baker 1972: 16). Two functions have generally been ascribed to Colono-Indian pottery. The first is that it was an inexpensive ware manufactured for use by lower status persons, primarily slaves (Noël Hume 1962: 12). The second is that Colono-Indian ware was a pottery used by all segments of colonial society as a secondary ware in general but as a preferred ware for the preparation of certain foods (Baker 1972: 16).

If both these statements are true, at least in part, the appearance of Colono-Indian ware in the archeological record should indicate the existence of food preparation and processing activities as well as the presence of persons of lower economic status. Changes in the relative frequency occurrence of this artifact in different parts of the site should indicate the extent to which these two characteristics are present. In the case of an upper status dwelling with separate kitchen, it is predicted that Colono-Indian ceramics will occur in greatest quantities in the refuse of the kitchen and other structures devoted to food preparation. Living areas occupied by servants would also be expected to exhibit a higher frequency of this artifact than would the residence of the owner. The main structure, lacking both food preparation and lower status living areas, is expected to contain the lowest relative frequency of Colono-Indian pottery.

An examination of the percentage frequency of Colono-Indian ceramics to all other ceramics in the three areas of the Kershaw house site reveals

that the occurrence of this artifact varies greatly across the site. It comprises 3.5% of the total ceramics in Area 1, 9.7% of the ceramics in Area 2, and 21.2% of them in Area 3. This suggests that the least amount of food preparation and the highest status occupation took place in Area 1, the Kershaw house. Area 2, and especially Area 3, are more likely to have served as food preparation and processing areas and to have housed persons of lower status.

7. Finally, the extent to which storage activities were carried out within a settlement complex should be reflected by the relative degree to which artifacts falling in this class occur throughout the site. It is anticipated that storage related artifacts will have their highest frequency of occurrence in structures that did not serve as living areas and that they would be present in increasingly lesser frequencies in structures that served to an increasingly larger degree as living areas.

An examination of the three areas at the Kershaw house site shows that the percentage frequency of storage related artifacts to all other artifacts is low throughout the site. The frequency is lowest (0.1%) in Area 1, it increases to 1.4% in Area 2, and to 2.8% in Area 3. This suggests that Area 1 is most likely to have served exclusively as a living area while Area 3 has the greatest likelihood of having been a storage area. Area 2 exhibits a percentage frequency between the others and may have contained both activities.

In summary, a comparison of the relative frequencies of a variety of functionally significant artifact groups in the three activity areas of the Kershaw house site suggests that Area 1, the Kershaw house, represents the remains of a high status living area where storage and food preparation and processing activities occurred to a lesser extent than in the other two areas examined. Area 3, on the other hand, appears to have been the locus of storage and processing activities as well as the preparation of food. Area 2, the saddlebag structure, seems to reflect a mixture of the types of activities found in the other two areas and presumably served a multipurpose function as a lower status living area as well as one devoted in part to food preparation, processing, and storage. The overlapping of activities is evidenced by the distribution throughout the site of artifacts representing nearly all of the groups discussed. This overlapping is clearly discernible in the results of a discriminant analysis, which indicates the presence of a shared activity among four of the five areas at the Kershaw house site (Appendix C).

Although the artifacts utilized in the functional analysis of the Kershaw house site represent the archeological record of only a portion of that site, they reveal evidence that indicates the presence of living areas and specialized activity areas as well as an overlapping of activities between both. In this respect the artifactual data support the test implications of the farm model. The test implications for the town residence model, on the other hand, are not supported by this evidence. Although the existence of living areas occupied by groups of differential status are indicated, the presence of areas where processing and storage activities were predominant suggests that the function of the settlement complex was more diversified than that of a town residence. In short, an

examination of the artifactual material recovered from the Kershaw house site supports the conclusion that the site represents the remains of an eighteenth century farm complex.

Summary

In this discussion the archeological data recovered from the Kershaw house site have been analyzed through the use of three comparative settlement models: the plantation, the farm, and the town residence. Test implications for each of the models were developed specifying the expected form the archeological data would take to identify both the formal and functional characteristics of each settlement type. In terms of its spatial plan the site conforms to the farm model most closely. The farm function inferred from the settlement layout is supported by the results arrived at through analyses of structure centered activity areas with regard to the functional implications of architectural form as well as artifactual content.

SUMMARY AND CONCLUSIONS

This report has attempted to integrate the available documentary and archeological data relating to the past occupations of the site of the Kershaw house in Camden in order to ascertain the nature of the historic structural complex that existed there. Historical documents indicate that this site was occupied by a mansion constructed in the late 1770s by Joseph Kershaw, a frontier merchant and entrepreneur in colonial South Carolina. Shortly after its completion the shouse was used as a headquarters by the commander of the British force that occupied Camden for a year during the American Revolution. After the war it served as a home for the Kershaw family, an orphan house, and again as a residence prior to its abandonment and subsequent destruction at the close of the Civil War.

Because documentary sources provide only a few clues to the actual form and function of the past occupations of the site, it has been necessary to examine the archeological record in order to investigate these questions. In order to interpret the archeological data three models have been employed, each of which specifies a separate functional settlement type that could have characterized the site's past occupations. The settlement types consist of the plantation, the farm, and the town residence. Each exhibits a different overall form, contains different types of structures, and is associated with some different activities that reflect the particular function of the site as a whole.

Archeological investigations have uncovered the discernible remains of the Kershaw house and four outbuildings situated to the rear of it. Their physical arrangement has made it possible to tentatively identify the site as that of a farm. An examination of the architecture of individual structures has revealed that the outbuildings and enclosures at the Kershaw house site could have functioned as loci for the four activity categories associated with farm settlements: human habitation, animal accommodation, repair and processing, and storage. Subsequent to the analysis of the structural data, associated artifactual data were analyzed with regard to the hypothesized site functions. Because of the manner in which the site was excavated, the artifact samples from only three of the five activity areas associated with structures were judged to be adequately representative of the material by-products of past activities in those areas. The analysis of this small sample, however, did yield evidence indicating the presence of those activities associated with a farm settlement, thus supporting the conclusions derived from the site layout and architecture.

Archeological evidence revealed that the Kershaw house was used over a much longer span of time than the outbuildings associated with it. While the house and many of the outbuildings appear to have been constructed at about the same time, the house was occupied for perhaps 90 years. The outbuildings and other structural features seem to have been used only into the first few years of the nineteenth century, indicating that the site served as a farm only during the Kershaw period which ended with the

purchase of the house as an orphan house in 1805. The archeological data indicate that the Kershaw house itself was abandoned around 1840 and clear evidence exists for the building's destruction by fire.

The British military occupation of the Kershaw house site is indicated most obviously by the presence of a palisade fortification designed to enclose the house and its immediate area. Military artifacts occur at the site but appear to be mostly associated with post-war refuse deposits. No archeological features were uncovered, with the exception of the palisade, that could definitely be assigned to the military occupation of the site. The absence of military features is very likely due to the fact that either domestic military refuse is generally not distinguishable from that resulting from a civilian occupation, or that the military trash deposits were of a shallow nature and, because materials from the upper layer of the site were discarded during the excavation, these artifacts were not recovered archeologically.

Reference has been made in this report to the inadequacy of the archeological data for the interpretation of certain aspects of the past settlement at the Kershaw house site. This situation is largely the result of the research strategy under which the archeological excavations were undertaken and the nature of the goals the excavations were intended to attain. During the five years that archeological work was conducted at Kershaw house site, research goals were architecturally-oriented and of a general descriptive nature. They appear to have been designed only to ascertain the size of the site and the existence of architectural and other features on it (Calmes 1968: 15; Strickland 1971: 66, 1976: 1, 2, 3). The research strategy employed failed to integrate these descriptive goals into a larger explanatory framework within which questions might have been posed regarding the past function of the site or the relationships between its component parts. The archeological data this strategy generated were, consequently, not relevant to such questions.

In archeology the phase of data collection is of crucial significance not only because of the extremely altered condition of much of the archeological record, but also because that record is irreplaceable once it is removed from its original context. It is important that specific research problems be formulated before the collection phase begins so that data relating to them may be gathered and data not relevant to the research goals be left undisturbed. If specific research problems are not framed at this point, it is likely that subsequent excavation will be unguided and that the interpretation of the material recovered will be limited. The absence of specific research goals during the excavation phase at the Kershaw house site reflects the lack of an overall integrated archeological research design that would have permitted more precise, problem-oriented work to have been conducted there.

Despite the problems inherent in the Kershaw house data, it has been possible to ascertain the basic function of the site as a whole as well as of the several activity areas within it. This information can, in turn, be used as the basis for a tentative reconstruction of the site as it appeared in the period following the Revolution when it presumably served as a farm. Figure 36 illustrates the site as viewed from the east.

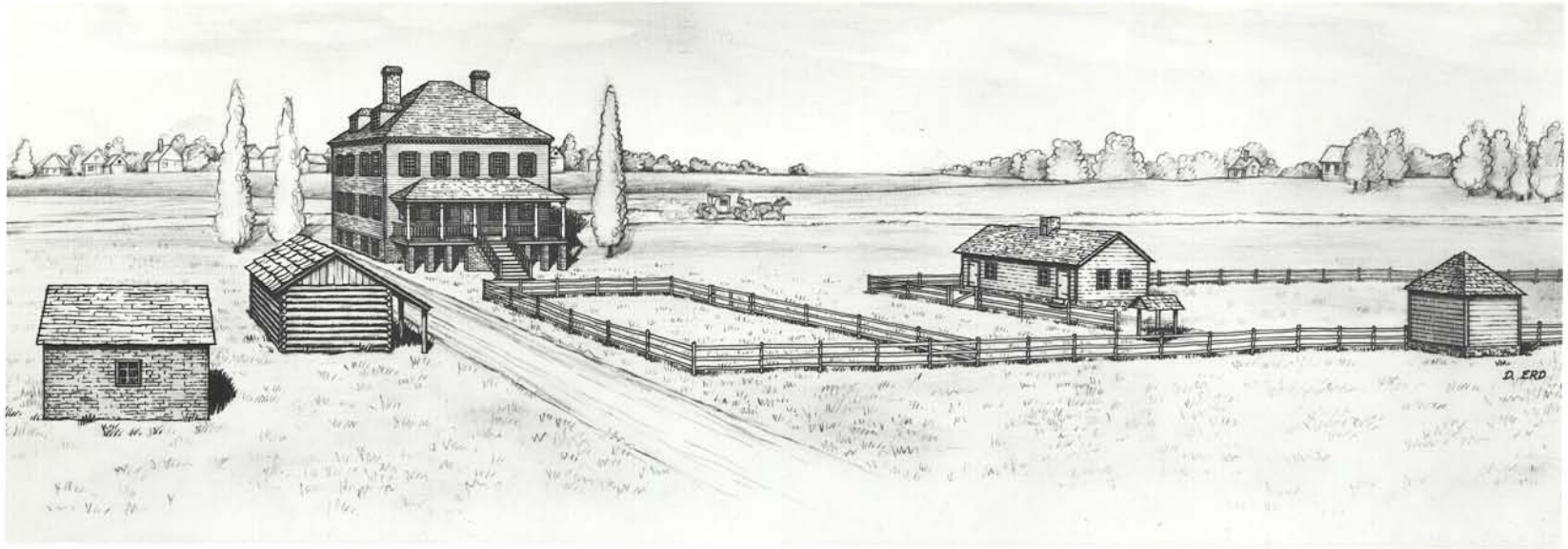

FIGURE 36: Conjectural View of the Kershaw House Site as it Appeared About 1790.

In the background is the Kershaw house itself with the saddlebag structure, presumably a kitchen and servants' quarters, to the right of it. Moving clockwise around the toft area are the smokehouse, a well, the ground cellar, and the log structure. Within the toft is a series of enclosures for stock. The area in the foreground of the structural complex is purposefully left blank because this area has not been examined archeologically. It is possible that structures were placed here to form an enclosed yard as is common in farms of this period.

At present, the Kershaw house is being reconstructed as it probably existed during the British occupation of 1780-1781. The current project includes both the rebuilding of the mansion and the surrounding palisade wall. In that none of the other structural features are definitely associated with this period and insufficient information exists to reconstruct them, it is not recommended that other structures be erected as part of this exhibit. Rather, the brick foundations of the saddlebag structure and the ground cellar may be stabilized and capped to serve as interpretive exhibits reflecting the farm phase of the site's occupation. If the ground cellar is to be left open, it walls will have to be rebuilt and capped and provisions made for draining the structure.* The smokehouse and log structure would be difficult to stabilize because of the absence of substantial foundations, the insubstantial construction materials used in the buildings, and their proximity to the reconstructed palisade wall. These two structures and the two wells may be best interpreted through the use of explanatory markers. Perhaps the most difficult features to interpret are the fenced enclosures within the toft. Because their exact positions are uncertain they may best be indicated by markers describing their presence and general locations.

Archeological investigations did not explore the area just outside the east line of the palisade, an area that comparative historical information suggests may have contained additional structures related to the Kershaw house complex. If an attempt is made to interpret the farm phase of the site's occupation, further archeological excavations should be conducted in this area to investigate the presence and functional nature of structural features here. Because of the extensive nature of the Kershaw house site, it is possible that the eighteenth century occupation of Magazine Hill reached beyond the limits of the excavated area. For this reason it is imperative that any development of this portion of the Camden site be preceded by archeological investigations to insure that no evidence of past settlement is destroyed.

In summary, the Kershaw house site represents the remains of a structural complex that stood on Magazine Hill for nearly a century. Serving variously as a residence, a fortified headquarters, an orphan house, and a storehouse, the archeological record obtained from the site has yielded information not only relating to the settlement's changing form but also increasing our knowledge of settlements of this type in general in British colonial North America.

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*For examples of stabilization of historic structures see Bullock (1976), Torraca (1976), Manucy (1962), and South (1965c).

APPENDIX A

DERIVATION OF MEAN CERAMIC DATE

The mean ceramic date formula was developed as a technique by which to determine a mean date of manufacture for British ceramics found in an archeological context. It is based on the assumption that a ceramic type's popularity will form a unimodal curve through time reaching a peak between the time of its introduction and that of its discontinuance. The median date is represented by the peak in popularity. Utilizing Ivor Noël Hume's *A Guide to Artifacts of Colonial America* (1970) as a source for the median dates for the use span of each ceramic type, the mean date (Y) for a group of ceramics present at a particular site is calculated by the following formula:

$$Y = \frac{\sum_{i=1}^{n} X_i \cdot f_i}{\sum_{i=1}^{n} f_i}$$

where: X_i = the median date of use

f_i = the frequency of each ceramic type

n = the number of ceramic types in the sample

The calculation of a mean ceramic date for the Kershaw house yields the following results.

Level	$\sum_{i=1}^{n} f_i$	$\sum_{i=1}^{n} X_i \cdot f_i$	Y
1 (0-9")	318	575004	1808.19
2 (below 9")	141	254261	1803.27
Total	459	829265	1806.68

MEAN CERAMIC DATES FOR THE FEATURES AT THE KERSHAW HOUSE SITE

Feature	Date
3	1775.9
38	1791.4
58	1781.75
59	1787.79
61	1782.32
62	1769.56
66	1788.25
67A	1796.37
67B	1788.1
70(surface)	1796.71
70E	1774
70G	1795.47
71	1786.98
78	1792.35
80	1772
88	1789.49
90	1797.77
91(91'-100')	1782.6
91(50'-60')	1789.32
91(70'-80')	1788.86
93	1795.45
97	1789.25
99(N1/2)	1793.26

Mean ceramic date, all features = 1787.17

APPENDIX B

DESCRIPTION OF THE ARCHITECTURAL FEATURES AT THE KERSHAW HOUSE SITE

by
William T. Langhorne, Jr.

Saddlebag Structure

This structure consists of two superimposed foundations, the lower being 36.5 feet by 18 feet and the upper being 39 feet by 19 feet. These two foundations are the remains of two buildings which occupied this location at different times.

The earlier building is represented only by the single layer of bricks in the west wall and by the lowest layer of bricks in the north wall. The foundation for this building was constructed of whole bricks laid in English bond. Associated with these brick foundations are the builders' trench and a later robbers' trench (Fig. 37, E), both of which encircle the entire foundation perimeter.

The later and larger building is represented by the upper layer of bricks along the north and east walls. This foundation was constructed on top of the earlier one. The relationship of the two foundations can be seen in the stratigraphy of the north wall, where the brickwork of the later foundation overlays that of the earlier one. Associated with this foundation is another builders' trench and a robbers' trench, which extend around the entire perimeter of the structure (Fig. 37, F,G). The foundation was constructed of whole and fragmentary bricks and was laid in English bond. It is possible that some of these bricks were robbed from the earlier foundation to build the later one.

A chimney foundation was situated in the center of the structure, however, only limited archeological work was completed here and the chimney cannot be assigned specifically to one building or the other. Three features (71,72,73) were located within the foundation walls. These were apparently refuse pits, which were excavated and filled after the destruction of the first building. Whether they were utilized between the two building phases or after the second building was destroyed cannot be determined at this point. However, since two of the features are superimposed on each other and are in turn superimposed over the robbers' trench for the earlier foundation, it is safe to assume that they were formed after the destruction of the first building.

Structure Intersecting the Palisade

This structure consists of a foundation measuring 9 feet by 9 feet, which was dug into the palisade trench surrounding the Kershaw house.

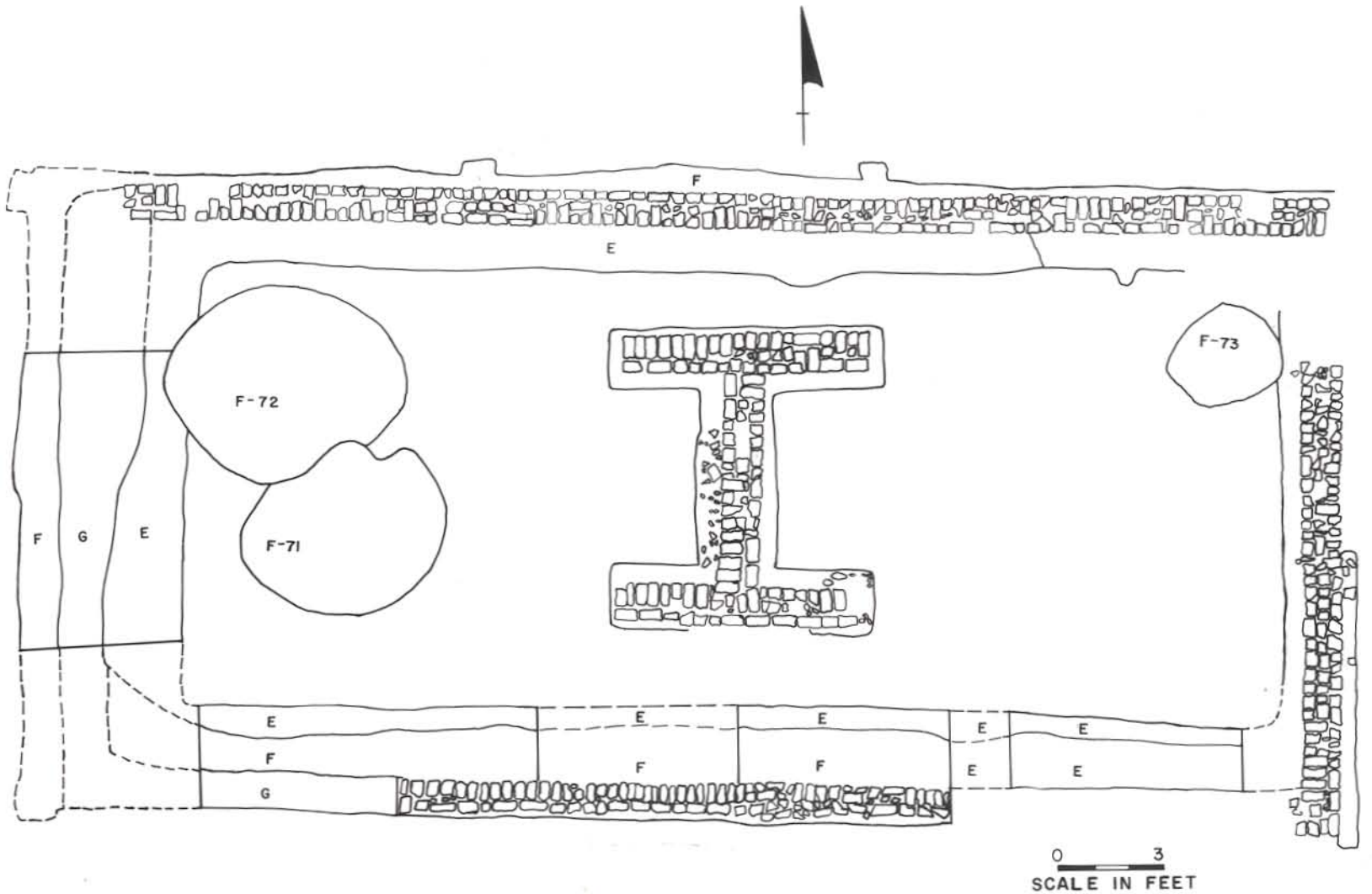

FIGURE 37: Plan of Saddlebag Structure (E=Builder's Trench, Robber's Trench--Early Structure. F=Builder's Trench--Later Structure. G=Robber's Trench--Later Structure).

The foundation was of bricks, all of which were robbed subsequent to the destruction of the building. Since the building foundation was dug through the palisade trench, it is obviously of post-Revolutionary War construction; but its exact date of construction cannot be ascertained (Fig. 40).

Cellar

This feature consists of a cellar located to the southeast of the Kershaw house, outside of the palisade trench. It measures approximately 20 feet by 20 feet. The excavation was done by quadrants, leaving balks (N-S,E-W) between the quadrants. The N-S balk was later excavated. Originally a building stood over the cellar, but there is no evidence of its structural characteristics or appearance (Fig. 38).

There were several deposition layers inside the cellar. A reconstruction of these will be attempted, but it is likely to be accurate only in very gross terms. The absence of field notes and the incomplete drawings left by the excavator place these restrictions on the reconstruction.

The bottom layer (Zone 1) is composed of two types of sand. Superimposed over part of this bottom layer is a zone of gray-brown, clayey sand (Zone 2), containing much brick rubble. This layer possibly resulted from the destruction of the building, since a large quantity of brick debris is present. On top of Zone 2 and over the remaining portion of Zone 1 is a layer composed of gray, clayey sand (Zone 3). A lens of bricks, possibly resulting from the destruction of the original building was found in a portion of this zone. Covering most of Zone 3 is a thin layer of gray sand, with a high content of mortar fragments (Zone 4). The uppermost layer is composed of gray-brown sand (Zone 5) which occurs directly over the top of Zone 4. The surface of the feature is composed mostly of this zone. Where Zones 4 and 5 are absent, Zone 3 was the uppermost level (Fig. 39).

Artifacts were recovered in all of these layers, but ceramics occurred in quantity sufficient to yield a mean ceramic date only in Zones 3 and 4. Both zones yielded mean ceramic dates of 1797. The mean ceramic date for the entire feature was also 1797. The correspondence between these dates seems to indicate that the feature was filled in within a short time after the original building was destroyed.

Log Structure

This feature lies adjacent to the palisade trench on the south side of the Kershaw house. Its approximate size is 16 feet by 16 feet. This second dimension is an estimate, as only part of the structure was uncovered. Because of the nature of the soil stains and the fact that no bricks or evidence of brick foundations was found, this is believed to have been a log structure. Little else is known about this structure. It was uncovered, but never recorded by Strickland in 1970 and was again uncovered by Lewis (1975a: 27-30) in 1975 (Fig. 41).

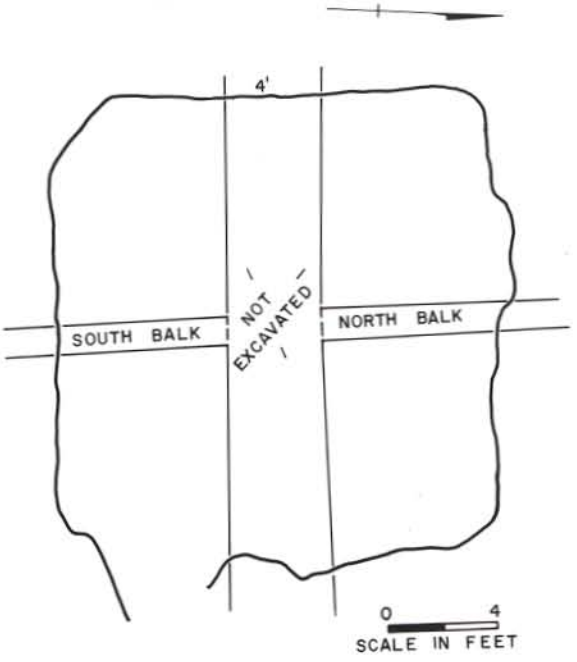

FIGURE 38: Plan of Cellar.

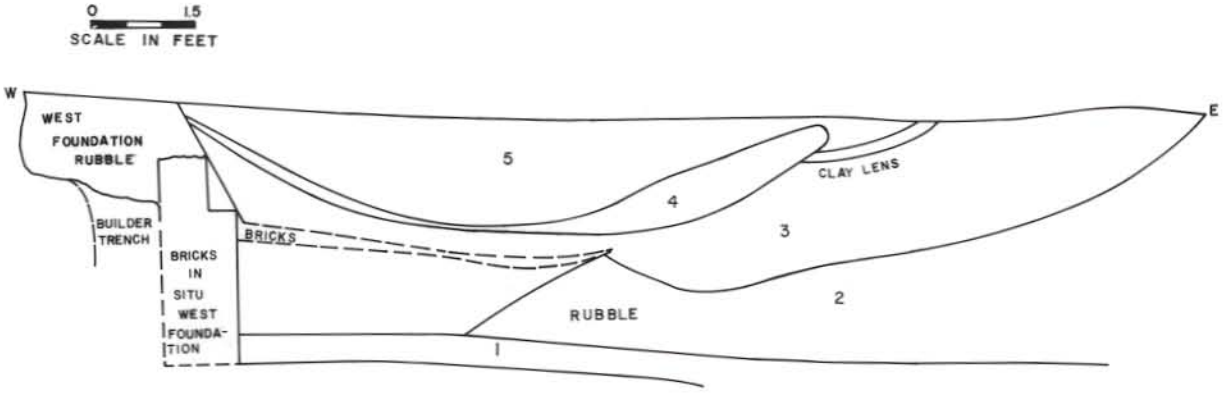

FIGURE 39: Stratigraphy of Cellar.

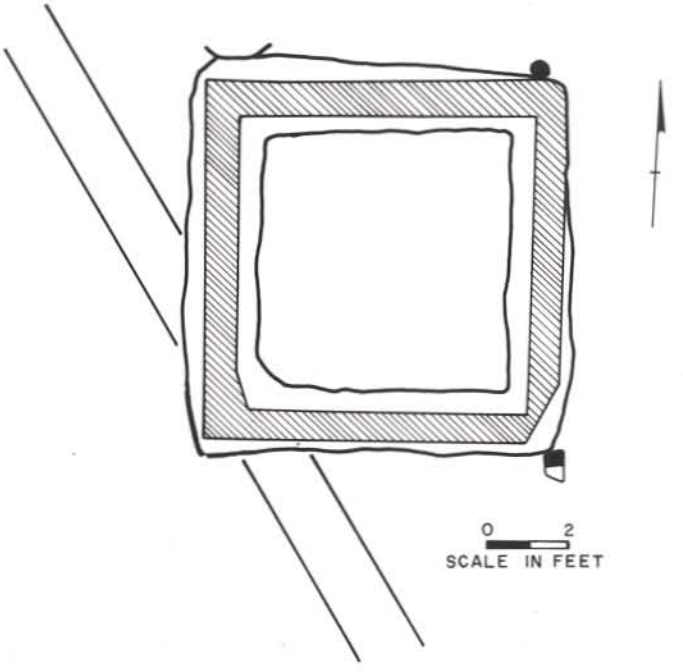

FIGURE 40: Plan of Structure Intersecting Palisade.

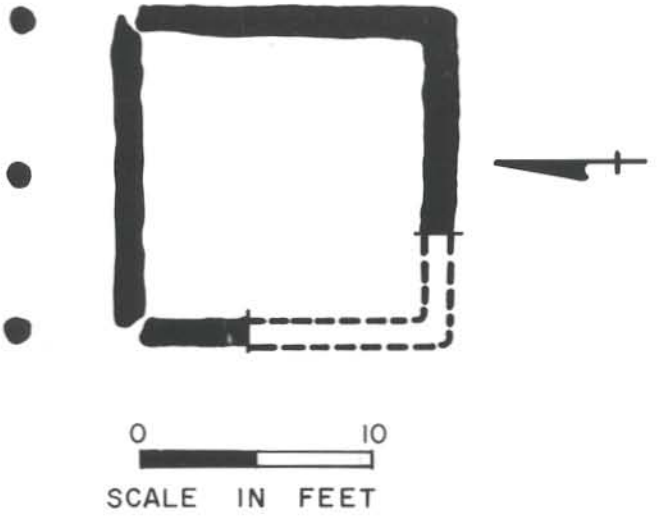

FIGURE 41: Plan of Loghouse.

APPENDIX C

SPATIAL ANALYSIS OF THE KERSHAW HOUSE SITE

by
William T. Langhorne, Jr.

Introduction

This analysis will devote itself to the definition of activity areas at the Kershaw site. The spatial distribution of human activities and the resulting archeological material is relevant to explaining the internal organization of a particular site, and the role of the site in the context of its surroundings.

This analysis will focus on the Kershaw house site as a representative of the previously discussed farm model. Briefly, the model states that the farm buildings associated with the house should be arranged in a rectilinear fashion behind it. These buildings will be the loci of different activities and will have different functions in the farm organization and operation. Archeological deposits, as by-products of these activities, should reflect the differences in the activities carried out in each of the buildings in the farm complex.

Problem

The problem of identifying functional/behavioral areas of the Kershaw house site will be approached through the location of structures in the "backyard" area of the site. In addition to the house, there are at least four other structures known at this time (Fig. 33, Nos. 1-5). The archeological depositions in and around these structures should reflect the nature of the activities associated with the structure and its function within the Kershaw farm complex.

Hypothesis and Test Implications

The hypothesis to be tested here relates to the farm model presented earlier in this report and briefly discussed above. It is basically concerned with the identification of functional/behavioral (activity) areas at the Kershaw house site.

The hypothesis can be stated as follows: (H_1) The activity areas associated with the structures of the Kershaw farm complex should be identified by their archeological remains, because these remains reflect the functional/behavioral roles these structures played within the farm complex. The null hypothesis (H_0) is that these activity areas cannot be identified.

Several test implications follow from this hypothesis.

First, the various activity areas of the farm complex should exhibit strong intragroup similarity and cohesion, resulting from the occurrence of a single (or few) activity(s) within each area.

Secondly, there should be intergroup differences resulting from the occurrence of different activities at each of the five loci under consideration. These differences should be great enough to allow distinctions between areas to be made on the basis of the by-products (artifacts) of these activities.

Finally, the results of implications one and two should determine the validity of using the farm model as an interpretive device for eighteenth century settlements of this type.

Methodology

The procedures discussed below were followed in operationalizing the analytical phase of this research.

First, the features in the "backyard" area were placed into the hypothesized activity groups (areas) based on their proximity to one of the five structures. This was determined by plotting the features and the structures on a map and dividing the map into areas based on the concentration of features associated with a particular structure. This resulted in the features nearest a given structure being grouped with that structure and the features further away being grouped with other structures (Table 6; Fig. 33).

Table 6

ACTIVITY GROUP COMPOSITION

1. House Group (No. 1)
   Features: 58, 59, 60, 61, 62, 65, 88.

2. Saddlebag House Group (No. 2)
   Features: 70, 71, 72, 73, 74, 75, 77, 79, 80, 95.

3. Structure Intersecting Palisade Group (No. 3)
   Features: 29, 38, 39, 66, 69, 78, 92, 97.

4. Log Structure Group (No. 4)
   Features: 01, 02, 03, 18, 19, 20, 21, 96.

5. Cellar Group (No. 5)
   Features: 90, 91.

Secondly, the nine artifact class variables that will be used in the analysis were chosen because they are classes of artifacts that would be the by-products of various activities carried out on a farm. The differential occurrence of these variables at the site should reflect the presence of the hypothesized activity areas (Table 7).

Table 7

ARTIFACT CLASSES AND ASSOCIATED ACTIVITIES

Cooking and eating utensils	Domestic
Faunal remains	
Furniture	
Personal items	
Storage	
Animal accommodation	Farming
Agricultural equipment	
Window glass	Architectural
Building hardware	

The proposed method for dealing with this problem is Stepwise Discriminant Analysis. Stepwise Discriminant Analysis can be used to test the hypothesized association of individual features with one activity group or another. The original definition of these groups depends on the variables by which the investigator wishes to analyze the features. One first establishes the variables for distinguishing between two or more groups, then the features are placed into the groups and the values of these variables are recorded. The distinction between groups is made based on all the variables taken in a stepwise manner, from the most to the least significant in distinguishing difference between groups. The mechanics of the operation involve the computation of a Mahalanobis distance and a posterior probability for each feature in each group. The Mahalanobis distance is a distance through n-space from the group means of each of the groups to the individual features of each group. The lower the Mahalanobis distance, the greater the probability that the individual feature belongs in that group. A posterior probability is computed for each Mahalanobis distance and indicates the probability that the individual feature belongs in the group whose Mahalanobis distance has just been computed. In this fashion, it is determined whether or not the individual features belong in the groups into which they were originally placed, if they belong in one of the other groups, or if they belong in none of the other groups (Dixon 1973; Doran and Hodson 1975; Harris 1975; Nie, *et al.* 1975).

The results of this analysis, at the empirical level, will indicate whether or not the activity groups hold up as discrete units, based on the criteria selected for analysis. On the analytical level, the hypothesis relating to why these groups should or should not be discrete units, will be either accepted or rejected on the basis of this test.

Results

The results of the stepwise discriminant analysis were, to a certain extent, those predicted. All of the features associated with the Log structure and the Cellar groups were classified correctly. This indicated that the activities occurring at these two loci are different than those from the rest of the site. It also indicates that these activities are specialized, occurring only at the single locus noted. In order to test the strength of these associations, however, posterior probabilities were examined. Although the posterior probabilities for the Cellar classifications are 1.00 (100%), those for the Log structure classifications ranged from .355 to .734 (36% to 73%). This has several ramifications for the classification. First, we can be sure that the Cellar group was correctly classified. Secondly, the classification of the Log structure group is not certain with any degree of confidence, since there is only a 36% to 73% probability (only one value over 50%) that the classification has been made correctly. There were posterior probabilities, ranging from 10% to 30%, associated with the Mahalanobis values for three of the other groups (House, Saddlebag house, Structure intersecting the palisade). This indicates that, although the Log structure group was the best choice for the classification, other groups came close to the probability level of being the best choice.

The classification of all the features of the Log structure group into that group will have to be accepted on a tentative basis. It should be kept in mind that this group apparently has similarities with one or more of the remaining three groups (Fig. 42; Table 8).

The three remaining groups (House, Saddlebag house, Structure intersecting the palisade) did not conform to the predicted results.

Only three features (42%) of the House group were classified correctly. These correctly classified members had posterior probabilities ranging from .715 to .996 (71% to 99%), which indicates that they were correctly classified.

Four features (58%) of the House group were classified into other groups. One was in the Saddlebag group and three were in the Log structure group. The posterior probabilities of these four incorrectly classified cases ranged from .356 to .564 (36% to 56%), indicating that, although they were classified into the Log structure and Saddlebag groups, this classification was a weak one.

Three (30%) of the cases in the Saddlebag group were correctly classified. All of these had posterior probabilities (above 60%) indicating a fairly certain classification (Table 8; Fig. 42).

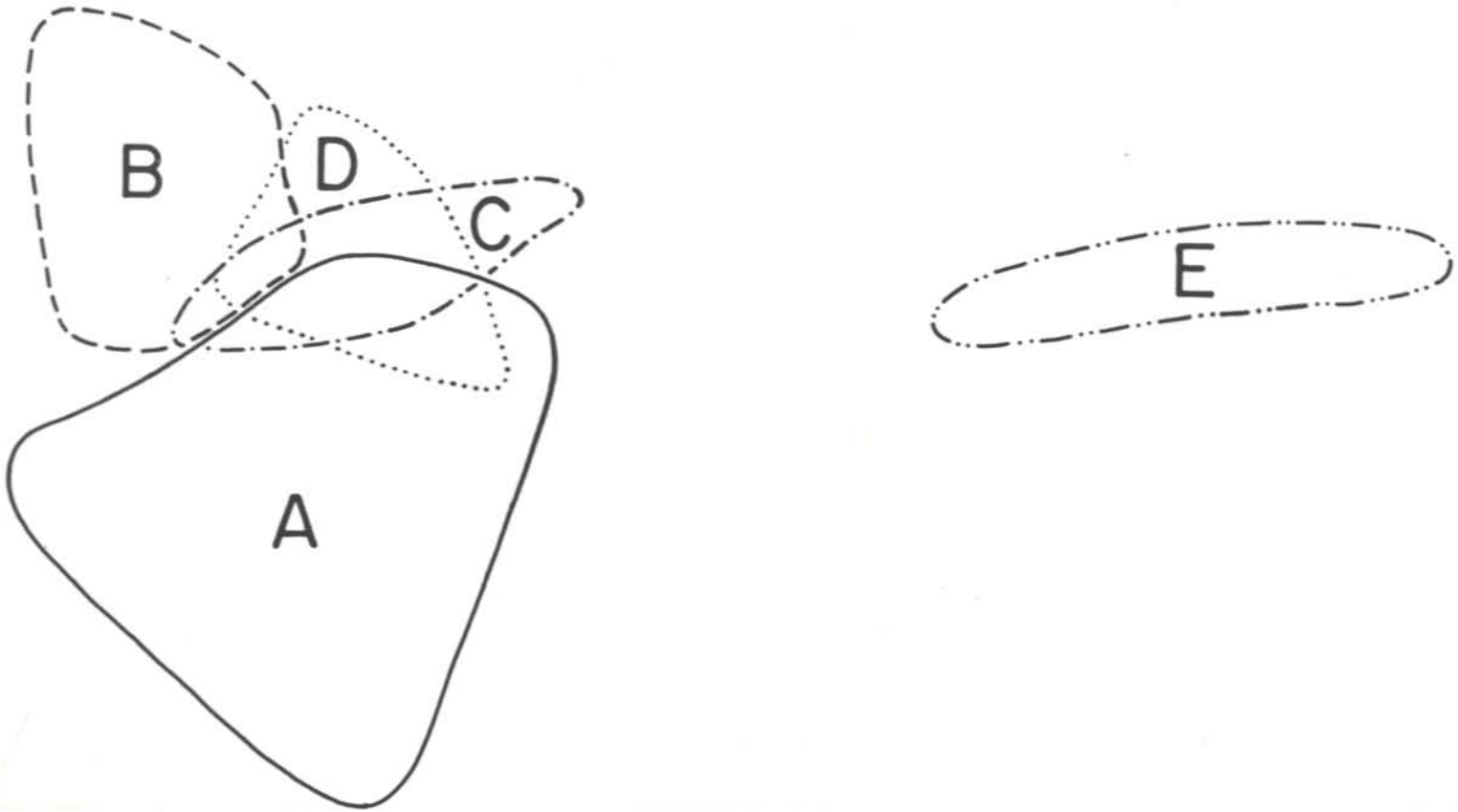

FIGURE 42: Discriminant Analysis Plots. (A=House Group. B=Structure Intersecting Palisade Group. C=Log Structure Group. D=Saddlebag Group. E=Cellar Group).

Table 8

CLASSIFICATION MATRIX

Original Groups	Reclassified Groups: House	Saddlebag Structure	Structure Intersecting Palisade	Log Structure	Cellar
House	3*	1	0	3	0
	42%	16%	0%	42%	0%
Saddlebag Structure	1	3*	0	6	0
	10%	30%	0%	60%	0%
Structure Intersecting Palisade	0	0	4*	4	0
	0%	0%	50%	50%	0%
Log Structure	0	0	0	8*	0
	0%	0%	0%	100%	0%
Cellar	0	0	0	0	2*
	0%	0%	0%	0%	100%

*Those features which have been correctly reclassified.

The six remaining cases (60%) of the Saddlebag group were classified into the Log structure group. The posterior probabilities of these cases range from .405 to .475 (40% to 48%). This indicates a fairly weak classification, with the possibility that some of these cases could be classified into another group (Fig. 42).

Four (50%) cases of the Structure intersecting the palisade group were classified into that group. Two of these had high posterior probabilities (above 90%) and two had fairly low (less than 50%) probabilities. The four (50%) remaining cases were classified into the Log structure group. All of these cases had posterior probabilities between 38% and 49%, indicating only a weak probability of correct classification (Table 8; Fig. 42).

Since these results differed from the expected, a closer examination of the data and the program results was performed. In examining the data, two things became apparent. First, the artifact counts for the features in the Log structure group were lower than those for the features in the other structural groups. In some cases there is a difference of several

hundred artifacts between the Log structure values for a particular artifact class and the values for that variable in the other groups. Secondly, the values for the furniture, building hardware, animal accommodation, agricultural and storage artifact classes were low across all groups. In almost all the cases under consideration these values were zero.

To investigate the effect of the relatively low values of the Log structure group, the stepwise discriminant analysis was run without the Log structure group. This yielded results that were significantly different only in the Saddlebag group, which had correct classification of eight (80%) of its members. The Cellar and Structure intersecting the palisade groups maintained the same classification. The House group only had one additional member classified correctly. The posterior probabilities for the newly classified members of the House and Saddlebag groups were all less than 50%. The results from this test tend to confirm the original results of the analysis, with only one group deviating significantly from the original classification.

The second phenomenon, that five variables had mostly zero values across all groups, will be discussed with respect to two points: the discrimination ability of the variables and the quality of the data.

The predominance of zeros in several variables had two effects on the operation of the discriminant analysis. First, the distribution of each of the variables is skewed away from normal, thus making it difficult for the classification to be made under conditions which assume normal distribution. Secondly, the predominance of zeros is a bad discriminator between groups, since it tends to equalize the groups according to the particular variable rather than enabling an accurate classification to be made.

The conditions under which the data were retrieved and recorded at the site were inadequate for obtaining a statistically relevant sample. Because of this there is no way to assess quality of data at the site.

Summary and Conclusions

Only two groups (Log structure and Cellar) behaved as predicted. One of these, the Log structure, had low posterior probabilities, indicating that its members could possibly be placed in another group. The three remaining groups clearly differed from the expected. The Structure intersecting the palisade group deviated the least, still having 50% of its cases classified correctly. However, the Saddlebag and House groups had less than 40% of their cases classified correctly. Each also had more than 40% of its cases classified into the Log structure group. Although in most cases the posterior probabilities of these misclassified cases were low, they did indicate that the incorrectly classified cases did not belong to their original groups, although they may not have belonged strongly to their new groups either (Table 8; Fig. 42).

The hypothesized activity areas did not occur at the Kershaw house site, at least not in the manner originally proposed. Only two groups, the Cellar and the Log structure groups, can be said to be the loci of two different activities. Even in these instances, the low posterior probabilities for the Log structure group indicate that its members could have been classified into another group.

The classification for the remaining groups broke down under the analysis. Although the Structure intersecting the palisade group did maintain integrity percentagewise (50%), all of the deviant members were classified by the program in the Log structure group. The House and Saddlebag groups did not maintain integrity, and, as with the Structure intersecting the palisade group, the majority of their deviant cases were placed in the Log structure group.

The only group to maintain total integrity, hence indicating a separate functional/behavioral activity area, was the Cellar group. The remaining groups, with the exception of the Log structure group, did not maintain integrity, and hence the hypothesis of mutually exclusive activity areas was rejected.

It would be remiss to conclude the analysis at this point, since patterning in the data did occur, though not in the predicted fashion. Although there was one mutually exclusive group (Cellar), the remainder of the groups seemed to be homogeneous, in that they all tended to group into one category, the Log structure group. It would seem that there was some category of group, which was not represented in the analysis, but which was held in common by four of the groups in the analysis.

The most obvious, though not the only, explanation for this phenomenon, is that each of the four groups participated in some shared activity. That is, the same activity was carried out in each of the four different loci on the site. This explanation would account for the grouping of some members of each of the four groups together (Fig. 42).

It should be noted that not all members of the four groups can be placed into the shared group. That is, although there were shared activities at each of the four loci, there were different, mutually exclusive activities as well.

It would seem then, that the activity dispersal on an eighteenth century farm was mixed, with some areas being mutually exclusive, while most others shared some activities and maintained some exclusively. In the case of the Kershaw house site there was a good deal of shared activity loci as well as there being mutually exclusive activity loci. Lewis has examined the ramifications of these results with respect to the farm and frontier models developed for dealing with eighteenth century settlement patterns.

APPENDIX D

ARTIFACT CATALOGUE

CERAMIC ARTIFACTS FROM KERSHAW HOUSE AND FEATURES

	Lead Glazed Slipware	Red Lead-glazed Earthenware	Buckley-ware	Jackfield-ware	Faience	Decorated Delftware	Plain White Delft	Fingerpainted Creamware	Annular Creamware	Overglazed Hand Painted Creamware	Transfere Print Creamware	Undecorated Creamware	Green Glaze Cream Bodied Creamware	Underglaze Polychrome Pearlware	Blue and Green Edged Pearlware	Transfere Print Pearlware	Sponged Pearlware
Kershaw House																	
Surface	3		1		1			4		1		232		8		83	
0"-6"												45	1	4		32	
6"-9"	1										1	48		1	3	24	
Below 9"		2									1	47		7		19	
Features					1							30		11		7	
Kershaw House Pit																	
0"-15"		2	5	1				5				99		28		153	
15"-24"						4						51				6	
24"-42"												40					
Pit-Arbitrary	1		1									42		4		25	
Feature 1												1					
Feature 3		1				37						72					
Feature 19																	
Feature 20																	
Feature 21												2					
Feature 28																	
Feature 29						4											
Feature 38				1				1				11					
Feature 58					1	60					1	200		1			
Feature 59				6		3		4			4	52				1	
Feature 60								1				8					
Feature 61						8					1	33				3	
Feature 62						23						21	1				
Feature 65		1										6					
Feature 66		1				12						169				13	
Feature 67	14	11	1	2	1	65			1		1	662		5		44	1
Feature 69												2					
Feature 70	2	1				3			1			99		6		12	1
Feature 71			3			7			1		3	49					
Feature 72												1					
Feature 73				1								10					
Feature 75						3						2					
Feature 76		1										3					
Feature 77						4	1					8					
Feature 78	1					2						23				1	
Feature 79												1					
Feature 80		2				2						5					
Feature 88	46	5	2	7	3	52		14	4	8		1320		16		105	
Feature 90	2	2	1	3		4		2	1		1	217		12	3	100	1
Feature 91	1	1				6		5		1	1	81					
Feature 92	1											7					
Feature 93									1			7					
Feature 94												3					
Feature 95		1							1			24		1			
Feature 96												3					
Feature 97		1			1							33					
Feature 99						1		4				33					
Total	72	32	14	21	8	300	1	40	10	10	14	3804	2	104	6	628	3

	Annular Pearlware	Underglaze Blue Hand Painted Pearlware	Blue and Green Edged Pearlware	Decorated Pearlware	Ironstone Whiteware	Mocha	Moravian	Carolina Creamware	Colono Indianware	British Brown Stoneware	Westerwald	White Salt Glazed Plates	Black Basalts	Engined Turned Unglazed Red Stoneware	Alkaline Glaze Stoneware	Albany Slip Stoneware	Canton Porcelain
Kershaw House																	
Surface	14	9	56	148	78	1				3	8					4	
0"-6"	4	2	8	53	23					2	5				1	2	
6"-9"	1	3	3	23	26			2		1	3					4	
Below 9"	7	7	7	32	10			1		1	3					1	
Features	3	4	1	27	1					1	1	1			2		
Kershaw House Pit																	
0"-15"	21	30	39	79	40	2			2	16	6	3	2		1	3	
15"-24"			1			1				5	1						
24"-42"	1	5	1	2					2	7	1						
Pit-Arbitrary	4	3	7	16						11							
Feature 1																	
Feature 3										3							
Feature 19																	
Feature 20				1													
Feature 21																	
Feature 28										1							
Feature 29																	
Feature 38		1		1													
Feature 58	1	12	4	4				11	6	5	3	1	1	1			
Feature 59		16		4				2	21		4	2					
Feature 60									4								
Feature 61								4	3	1	1	2					
Feature 62		1		1				2	3		1	1	1	1			
Feature 65								1		2							
Feature 66				2				2	95	3	4			3			
Feature 67	27	18	21	100	6			29	114	34	12	1	1	6	1		
Feature 69	1	1	2	15				1									
Feature 70	4	1	4	9				6	8	4		1	1				
Feature 71		6		4					12	2							
Feature 72	1									5							
Feature 73																	
Feature 75									1								
Feature 76									1								
Feature 77					1			3	19	7		3		1		6	
Feature 78		1		1	2								1				
Feature 79				1													
Feature 30				2				1		3							
Feature 88	20	4	16	154			13	10	87	23	41	4	9	3			
Feature 90	18	30	23	126	13		1	17	34	11	5		1	1	3	2	1
Feature 91		12		8				8	8	4	3			1			
Feature 92		3	1	2					1								
Feature 93				3													
Feature 94								2	1								
Feature 95		2	1	5					2								
Feature 96								2	1	1							
Feature 97									1	1							
Feature 99			3	10					2								
Total	127	171	198	833	200	4	16	104	428	157	102	19	17	17	8	22	1

CERAMIC ARTIFACTS FROM KERSHAW HOUSE AND FEATURES - cont.

	Overglazed Enamelled Chinese Ex.	English Porcelain	Underglaze Blue Chinese	Brown Slip Porcelain	Undecorated Porcelain	Bisque	Unidentified Burned Ceramics	Yellow Ironstone	Misc. Stoneware	Ginger Beer Feldspathic Glaze		Total
Kershaw House												
Surface			5		19	2	25	1		4		710
0"-6"	1		1	1	3		2		2			192
6"-9"	1		1		2		4		4			156
Below 9"	1				8		3		1			158
Features	1				6							97
Kershaw House Pit												
0"-15"					4	8	15	1				565
15"-24"												69
24"-42"												59
Pit	1				4	1	7	1				128
Feature 1		1	1									3
Feature 3			7				1					121
Feature 19												1
Feature 20												1
Feature 21												2
Feature 28												1
Feature 29							2					6
Feature 38					1							16
Feature 58	2		13	1	8							336
Feature 59			2		2							123
Feature 60												13
Feature 61	1		3		2							62
Feature 62												56
Feature 65			1									11
Feature 66			7		7							318
Feature 67	18		18		33		49					1296
Feature 69			3		2							27
Feature 70			5				3					171
Feature 71	1		2									90
Feature 72					1							8
Feature 73												11
Feature 75			4		1							11
Feature 76	1											6
Feature 77	4		6		4		9					76
Feature 78					1		4					37
Feature 79	1											3
Feature 80					1		2					18
Feature 88	93	3	57	15	2	2	13					2152
Feature 90	11	3	11		12		21					693
Feature 91	5		6			1						152
Feature 92	2						8					25
Feature 93							1					12
Feature 94												6
Feature 95	3		4									44
Feature 96			1				1					11
Feature 97			5				1					43
Feature 99												53
Total	147	7	164	17	123	14	171	3	7	4		8150

ARTIFACTS FROM KERSHAW HOUSE AND FEATURES

	Bottle Glass	Window Glass	Stoneware Fragments	Bone Knife Handle	Bone, Handle Fork	Porcelain Button	Bone Button	Metal Button	Button Misc. Material	Jews Harp	Metal Ornaments	Buckle, Fragment	Cufflink	Tassel Tip	Ear Ring	Beads	Drawer Pull
Feature 1	5											1					
Feature 2		32									1						
Feature 3	43																
Feature 7																	
Feature 8																	
Feature 10																	
Feature 12																	
Feature 14																	
Feature 16																	
Feature 18	3										1						
Feature 19																	
Feature 20		1															
Feature 21		1															
Feature 28	2																
Feature 29	2																
Feature 38		3															
Feature 39																	
Feature 51																	
Feature 56																	
Feature 58	53	230	3	1			1		2								
Feature 59	20	34															
Feature 60		11															
Feature 61	4	33				1	1										
Feature 62	8	40															
Feature 65																	
Feature 66	40	80	1				1			1	1	1					
Feature 67	476	758					1		4		3						
Feature 69																	
Feature 70	92	30							6								
Feature 71	50	40															
Feature 72	1																
Feature 73	3																
Feature 74																	
Feature 75	10	1					1										
Feature 76																	
Feature 77	19	21											1				
Feature 78	21	14	3								1						
Feature 79		4															
Feature 80	12	1															
Feature 81																	
Feature 82																	
Feature 88	478	855	2				12	5	5		4	5	1	1		2	
Feature 90	216	2606	2				2		1			3	1	1		1	
Feature 91	67	51															1
Feature 92	2																
Feature 93	6	6													1		
Feature 94	3																
Feature 95	8	200															
Feature 96	5	3															
Feature 97	27	2															
Feature 99	31										1						
Total	1707	5057	11	1	1	1	18	5	18	1	12	10	3	2	1	3	1

	Iron Strap	Brass Cotter Pin	Wire	Springs	Iron Hook	Brass Strip	Nails	Iron Handle	Pins & Needles	Brass Padlock	Door Locks & Assessories	Metal Screen	Flat Brass Piece	Printers Type	Fish Hook	Misc. Metal Tools	Hinge Parts
Feature 1							4										
Feature 2																	
Feature 3							7	1									
Feature 7																	
Feature 8																	
Feature 10																	
Feature 12																	
Feature 14																	
Feature 16																	
Feature 18																	
Feature 19																	
Feature 20							2										
Feature 21																	
Feature 28							1										
Feature 29																	
Feature 38							16										
Feature 39																	
Feature 51																	
Feature 56							8										
Feature 58	1						220		15								
Feature 59	1						42										
Feature 60									3								
Feature 61							9										
Feature 62	4	1	4				20		5								
Feature 65																	
Feature 66	3		7	4			68		5								
Feature 67	26				1	2	430		16								
Feature 69	5						5										
Feature 70	11						350		19	1							
Feature 71	15						56		41								
Feature 72	8						80										
Feature 73							5										
Feature 74							2										
Feature 75	1						25										
Feature 76							2										
Feature 77	3	1					67				1	1					
Feature 78							50		12								
Feature 79																	
Feature 80																	
Feature 81																	
Feature 82							3										
Feature 88	5				2		1125		26		7		1	1	1	5	6
Feature 90	16						2218		1							1	
Feature 91							50										1
Feature 92							12										
Feature 93							15										
Feature 94							7										
Feature 95							30										
Feature 96	29		2				20										
Feature 97	6						1										
Feature 99							45									1	
Total	134	2	13	4	3	2	4995	1	139	1	8	1	1	1	1	7	2

ARTIFACTS FROM KERSHAW HOUSE AND FEATURES - cont.

		Bolts	Spigot Parts	Metal Spikes	Tacks	Misc. Metal Fragments	Epaulet Springs	Gun Parts	Pike Head	Cannon Shot	Canister Shot	Flint	Gun Flint Debitage	Slate Pencil	Marble Marbles	Flakes	Banner Stone	Projectile Point Fragment
Feature	1					3												
Feature	2																	
Feature	3					159												
Feature	7																	
Feature	8					50												
Feature	10					47												
Feature	12					55												
Feature	14					38												
Feature	16					42												
Feature	18																	
Feature	19																	
Feature	20					51												
Feature	21																	
Feature	28					53												
Feature	29					51												
Feature	38					1												
Feature	39																	
Feature	51																	
Feature	56																	
Feature	58				2	18												
Feature	59					1												
Feature	60																	
Feature	61					3												
Feature	62				2	11										2		
Feature	65																	
Feature	66					32								1			1	
Feature	67				2	140						3		2				
Feature	69										1							
Feature	70				1	135									2			1
Feature	71				2	7												
Feature	72				1	1												
Feature	73									1	1							
Feature	74																	
Feature	75																	
Feature	5																	
Feature	77				1	13												1
Feature	78																	
Feature	79					50												
Feature	80					84												
Feature	81																	
Feature	92																	
Feature	88	2	2		12	98	2	5				3	2	2				1
Feature	90				2	290		1				1		3		2		2
Feature	91					105					1	1				13		1
Feature	92					1												
Feature	93					8												
Feature	94					2												
Feature	95					70												
Feature	96			2	1	3		1				5	1					
Feature	97					53		2										
Feature	99					7			1									
	Total	2	2	2	28	1682	2	11	1	1	8	9	2	8	2	17	1	6

		Brick & Mortar	Drain Tile Fragment	Pipe Bowl Fragment	Pipe Stem Fragment	Slag	Bone & Teeth	Shell	Fish Scales	Egg Shells	Charcoal	Wood Fragments	Leaf Galls		Total
Feature	1	.025					61				101				175
Feature	2	.025													33
Feature	3	1.0		1	1		9	1							222
Feature	7	.02													
Feature	8	.02													50
Feature	10	.04													47
Feature	12	.02													55
Feature	14														38
Feature	16														42
Feature	18														4
Feature	19	.03													
Feature	20	.04					1								55
Feature	21	.04													1
Feature	28	2.11													56
Feature	29	1.04			1		4				1				58
Feature	38	1.16					2								22
Feature	39	.007					2								2
Feature	51										48				48
Feature	56														8
Feature	58	4.16		4	9		549	103					1		1212
Feature	59	.77			2		55	111							266
Feature	60	.014					14	7							35
Feature	61			2			25								78
Feature	62			1	5		80								183
Feature	65							232							232
Feature	66			6	18		580				53				903
Feature	67	.077		67	68	5	422	9			13	47	2		2497
Feature	69	.43			1		10				3				25
Feature	70	.01		6	15		485	9	7						1166
Feature	71	.13		14	40	61	233	1	1	5	10	25			601
Feature	72	.01			1	1	148				1				244
Feature	73					1	42					5			58
Feature	74					1	24								27
Feature	75				1						1				40
Feature	76						110								112
Feature	77	.94		1	9	31	364				25				559
Feature	78	.31		4	8										113
Feature	79						12				47				113
Feature	80	1.772		1	1	12	175				50				336
Feature	81						44								44
Feature	82						52								55
Feature	88	2.64	4	12	38		228	52			16	60	1		3088
Feature	90	5.01		7	14	4	163	13			69	9	1		5652
Feature	91	.093		5	5		25								326
Feature	92	.003			1		5	2			1	2			26
Feature	93			3	2		8								49
Feature	94														12
Feature	95	.014			1		18								327
Feature	96			1											73
Feature	97	.011					236								327
Feature	99			3	7										96
	Total		4	138	248	116	4186	540	8	5	439	148	5		19793

CERAMIC ARTIFACTS FROM PROVENIENCE UNITS

		Lead Glazed Slipware	Red Lead Glazed Earthenware	Decorated Delftware	Delft Chamber Pots	Fingerpainted Creamware	Annular Creamware	Undecorated Creamware	Embossed Pearlware	Transfer Print Pearlware	Underglaze Polychrome Pearlware	Underglaze Blue Handpainted Pearlware	Blue & Green Edged Pearlware	Undecorated Pearlware	Ironstone Whiteware	Mocha	Carolina Creamware	Colono Indian Ware	British Brown Stoneware	Westerwald Chamber Pot	Albany Slip Stoneware	Overglazed Enamelled Chinese Ex.	Underglaze Blue Chinese	Undecorated Porcelain	Bisque	Unidentified Burned Ceramics		Total
P.U.	2			1				2																				3
P.U.	4							1																				1
P.U.	5							1																				1
P.U.	6							6		1				2														9
P.U.	7							3		1																		4
P.U.	8							1																				1
P.U.	13													1														1
P.U.	14																								1			1
P.U.	16						1	2		1								1										5
P.U.	25							2																				2
P.U.	26							4				1												1				6
P.U.	27							1							1													2
P.U.	36			1																								1
P.U.	37							2																				2
P.U.	38							1																				1
P.U.	45							3														1						4
P.U.	46							2			2								2			1			1			8
P.U.	47													1														1
P.U.	50							2																				2
P.U.	55											1																1
P.U.	79							6		1				1														8
P.U.	80																	1				1	1					3
P.U.	84							1																				1
P.U.	85																						1					1
P.U.	87																									1		1
P.U.	91			1				1																				2
P.U.	94																	1					1					2
P.U.	102							1																				1
P.U.	106											1																1
P.U.	114			1										1														2
P.U.	115							1																				1
P.U.	127		1					7		2			1	2	1													14
P.U.	133							2										1										3
P.U.	135							1																	1			2
P.U.	137							1					1															2
P.U.	138													1														1
P.U.	146							1																				1
P.U.	147													1														1
P.U.	161							3																	1			4
P.U.	162							1																1				2
P.U.	165							1																				1
P.U.	168							3												1								4
P.U.	169							3																				3
P.U.	171																	1										1
P.U.	173	1											1															2
P.U.	174							2																				2
P.U.	181							2																				2
P.U.	186							1																				1
P.U.	204							2																				2
P.U.	205							1																				1
P.U.	207							1																				1
P.U.	212			1				3																				4
P.U.	213			4				7				1												1				13
P.U.	216							2																				2
P.U.	218							1				1	1	2														5
P.U.	220							2																				2
P.U.	221							9																1	2			12
P.U.	222							1																				1
P.U.	241																	1										1
P.U.	242						1	1	3																			5
P.U.	270																					1						1
P.U.	273								15	2			2					1										20
P.U.	274								3																			5
P.U.	328								1									1										2
P.U.	331										1																	1
P.U.	332								2																			2
P.U.	338-339							1	2									2										5
P.U.	351							1	2		4																	7
P.U.	358								1																			1
P.U.	359										6																	6
P.U.	382								3									1										4
P.U.	384																	1										1
P.U.	390																								1			1
P.U.	405													1														1
P.U.	419								1														1					2
P.U.	420								1					1														2
P.U.	422								1																			1
P.U.	424								3									2						1				6
P.U.	425								1																			1
P.U.	434																		1									1
P.U.	437								2						1													3
P.U.	446														1													1
P.U.	448								5																1			6
P.U.	464								3									1					2	1				7
P.U.	473																	1										1
P.U.	702								1																			1
P.U.	706																1	1										2
P.U.	722																	1										1
P.U.	725					1												1										2
P.U.	802																1											1
P.U.	805								1																			1
P.U.	808								1									1										2
P.U.	810														1													1
	Totals	1	1	9	1	2	3	132	2	17	2	7	6	17	2	1	1	20	5	1	1	6	9	7	1	1		273

ARTIFACTS FROM PROVENIENCE UNITS

	Window Glass	Bottle Glass	Nails	Iron Staples	Splitting Wedge	Cannister Shot	Cannon Balls	Unidentifiable Metal Fragments	Straight Pins	Brass Button	Bone Button	Pipe Stem Fragment	Pipe Bowl Fragment	Brick and Mortar (kg.)	Lead Pencil	Slate Roofing	Flint Debitage
P.U. 2	3	1	2														
P.U. 4			1														
P.U. 5								1									
P.U. 6		4	2									1					
P.U. 7	1	1	1										1				
P.U. 9	1		3											.026			
P.U. 11			1					1									
P.U. 16		4															
P.U. 22																	
P.U. 23																	
P.U. 25	3	1						3									
P.U. 26		2															
P.U. 28																	
P.U. 29-30	6		1					2									
P.U. 33			7											.658			
P.U. 36			1														
P.U. 37	1		1														
P.U. 38	7		1														
P.U. 45								1					1				
P.U. 46	1	2	3										1				
P.U. 47	1		1														
P.U. 49	1		2														
P.U. 50																	
P.U. 55	1																
P.U. 56			1														
P.U. 58	1																
P.U. 61			1					2									
P.U. 63								1									
P.U. 72			1														
P.U. 73		1						1									
P.U. 75			1														
P.U. 79		2															
P.U. 80		1															
P.U. 84				1													
P.U. 85								2									
P.U. 91			1														
P.U. 94								1									
P.U. 111		1															
P.U. 112																	
P.U. 113			1														
P.U. 114		2	1									2		.058			
P.U. 116			1														
P.U. 120		1															
P.U. 121								1									
P.U. 124																	
P.U. 127		2	1									1					
P.U. 132	3																
P.U. 133		1															
P.U. 135								3									
P.U. 137			3														
P.U. 138			3														
P.U. 140			1														
P.U. 143			1														
P.U. 146								2				1					
P.U. 157			2														
P.U. 159			5														
P.U. 160			1											.011			
P.U. 161	2	2						4									
P.U. 165			1														
P.U. 168								2				1					
P.U. 169								3									1
P.U. 177			1														
P.U. 182			2														
P.U. 183		2															
P.U. 203										1							
P.U. 205	1	4	1														
P.U. 207	1							1									
P.U. 208	2	3															
P.U. 212			1					1									
P.U. 213	2	2						4			1						
P.U. 215																	
P.U. 216	2							2									
P.U. 217	2																
P.U. 218	2	2	3										1				
P.U. 221	1	2	3														
P.U. 222	1		1									1					
P.U. 224								3									
P.U. 230								3									
P.U. 242	1		2						2				2				
P.U. 246	1		2														
P.U. 250			1														
P.U. 253			4														

ARTIFACTS FROM PROVENIENCE UNITS - cont.

		Window Glass	Bottle Glass	Nails	Iron Staples	Splitting Wedge	Cannister Shot	Cannon Balls	Unidentifiable Metal Fragments	Straight Pins	Brass Button	Bone Button	Pipe Stem Fragment	Pipe Bowl Fragment	Brick and Mortar (kg.)	Lead Pencil	Slate Roofing	Flint Debitage
P.U.	254			5														
P.U.	258			1														
P.U.	260																	
P.U.	263			3														
P.U.	270			12														
P.U.	273	1		6									1	1				
P.U.	274																	
P.U.	276																	
P.U.	280					1												
P.U.	328														.305			
P.U.	331			1														
P.U.	332																	
P.U.	338-339			2														
P.U.	351			3														
P.U.	354			1														
P.U.	358			1														
P.U.	359			13					2							1		
P.U.	361			1			5											
P.U.	363																	
P.U.	371			1														
P.U.	382	1	1	3														
P.U.	383	1	1	2														
P.U.	384			5														
P.U.	385																	
P.U.	387			1														
P.U.	402																	
P.U.	403			2														
P.U.	405	1	1	2														
P.U.	407			2														
P.U.	409			1											.002			
P.U.	412			1											.005			
P.U.	415			1														
P.U.	419												1					
P.U.	420		1															
P.U.	422	2					1						1	1				
P.U.	423	1																
P.U.	424	1	1	1											.0035			
P.U.	425			1														
P.U.	426			2														
P.U.	428								1									
P.U.	434			1					1									
P.U.	437								1									
P.U.	445			4														
P.U.	446			5														
P.U.	448		1	5														
P.U.	459			2														
P.U.	461			5													1	
P.U.	464			3														
P.U.	470		2															
P.U.	472			1														
P.U.	474																	
P.U.	478			1														
P.U.	479		1															
P.U.	480																	
P.U.	702	1																
P.U.	706		1															
P.U.	710			2														
P.U.	712			1														
P.U.	714			2														
P.U.	715			2														
P.U.	716							3										
P.U.	721			2														
P.U.	722			1														
P.U.	725																	
P.U.	801			2														
P.U.	802			1														
P.U.	805			2														
P.U.	806			1														
P.U.	807			1														
P.U.	808			2														
P.U.	810		2	1									1					
P.U.	811																	
P.U.	812																	
	Total	57	55	195	1	1	6	3	49	2	1	1	11	8		1	1	1

ARTIFACTS FROM PROVENIENCE UNITS - cont.

		Projectile Point	Flakes	Bone	Wood Fragments	Charcoal		Total
P.U.	2							6
P.U.	4							1
P.U.	5							1
P.U.	6	1		1				9
P.U.	7							4
P.U.	9			9		7		20
P.U.	11			1				3
P.U.	16		3	4				11
P.U.	22				45			45
P.U.	23				10			10
P.U.	25							7
P.U.	26				1			3
P.U.	28				1			1
P.U.	29-30				4			13
P.U.	33			3				10
P.U.	36							1
P.U.	37							2
P.U.	38			12				20
P.U.	45			9				11
P.U.	46			5				12
P.U.	47			1				3
P.U.	49							3
P.U.	50			1				1
P.U.	55							1
P.U.	56							1
P.U.	58							1
P.U.	61							3
P.U.	63							1
P.U.	72							1
P.U.	73							2
P.U.	75							1
P.U.	79			1				3
P.U.	80			3				4
P.U.	84							1
P.U.	85							2
P.U.	91							1
P.U.	94							1
P.U.	111				1			2
P.U.	112				1			1
P.U.	113			1				1
P.U.	114				1			6
P.U.	116							1
P.U.	120							1
P.U.	121							1
P.U.	124			5				5
P.U.	127			1				5
P.U.	132							3
P.U.	133							1
P.U.	135							3
P.U.	137			2				5
P.U.	138							3
P.U.	140							1
P.U.	143							1
P.U.	146							3
P.U.	157							2
P.U.	159			3				8
P.U.	160			1				2
P.U.	161							8
P.U.	165							1
P.U.	168							3
P.U.	169			1				5
P.U.	177							1
P.U.	182							2
P.U.	183							2
P.U.	203			1				2
P.U.	205							6
P.U.	207							2
P.U.	208							5
P.U.	212				10			12
P.U.	213							9
P.U.	215				1			1
P.U.	216							4
P.U.	217							2
P.U.	218							8
P.U.	221							6
P.U.	222							3
P.U.	224							3
P.U.	230							3
P.U.	242				1			8
P.U.	246							3
P.U.	250							1
P.U.	253							4

		Projectile Point	Flakes	Bone	Wood Fragments	Charcoal		Total
P.U.	254							5
P.U.	258							1
P.U.	260				10	2		12
P.U.	263							3
P.U.	270					10		22
P.U.	273			3				12
P.U.	274			5				5
P.U.	276			3				3
P.U.	280							1
P.U.	328			2				2
P.U.	331				20			21
P.U.	332				1			1
P.U.	338-339			2				4
P.U.	351							3
P.U.	354							1
P.U.	358							1
P.U.	359			9				25
P.U.	361							6
P.U.	363			1				1
P.U.	371							1
P.U.	382			3	10	2		20
P.U.	383			1				5
P.U.	384							5
P.U.	385				47			47
P.U.	387				1			2
P.U.	402				1			1
P.U.	403							2
P.U.	405					1		5
P.U.	407							2
P.U.	409			3				4
P.U.	412							1
P.U.	415							1
P.U.	419							1
P.U.	420			2				3
P.U.	422				4			9
P.U.	423							1
P.U.	424					1		4
P.U.	425			1	8			10
P.U.	426							2
P.U.	428							1
P.U.	434							2
P.U.	437							1
P.U.	445				3			7
P.U.	446							5
P.U.	448			2				8
P.U.	459			1				3
P.U.	461							6
P.U.	464							3
P.U.	470							2
P.U.	472							1
P.U.	474				1			1
P.U.	478							1
P.U.	479							1
P.U.	480			1				1
P.U.	702							1
P.U.	706							1
P.U.	710							2
P.U.	712							1
P.U.	714							2
P.U.	715							2
P.U.	716							3
P.U.	721							2
P.U.	722							1
P.U.	725			1				1
P.U.	801							2
P.U.	802			1				2
P.U.	805							2
P.U.	806							1
P.U.	807							1
P.U.	808				1			3
P.U.	810				2			6
P.U.	811				18			18
P.U.	812				20			20
	Total	1	3	107	222	23		749

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