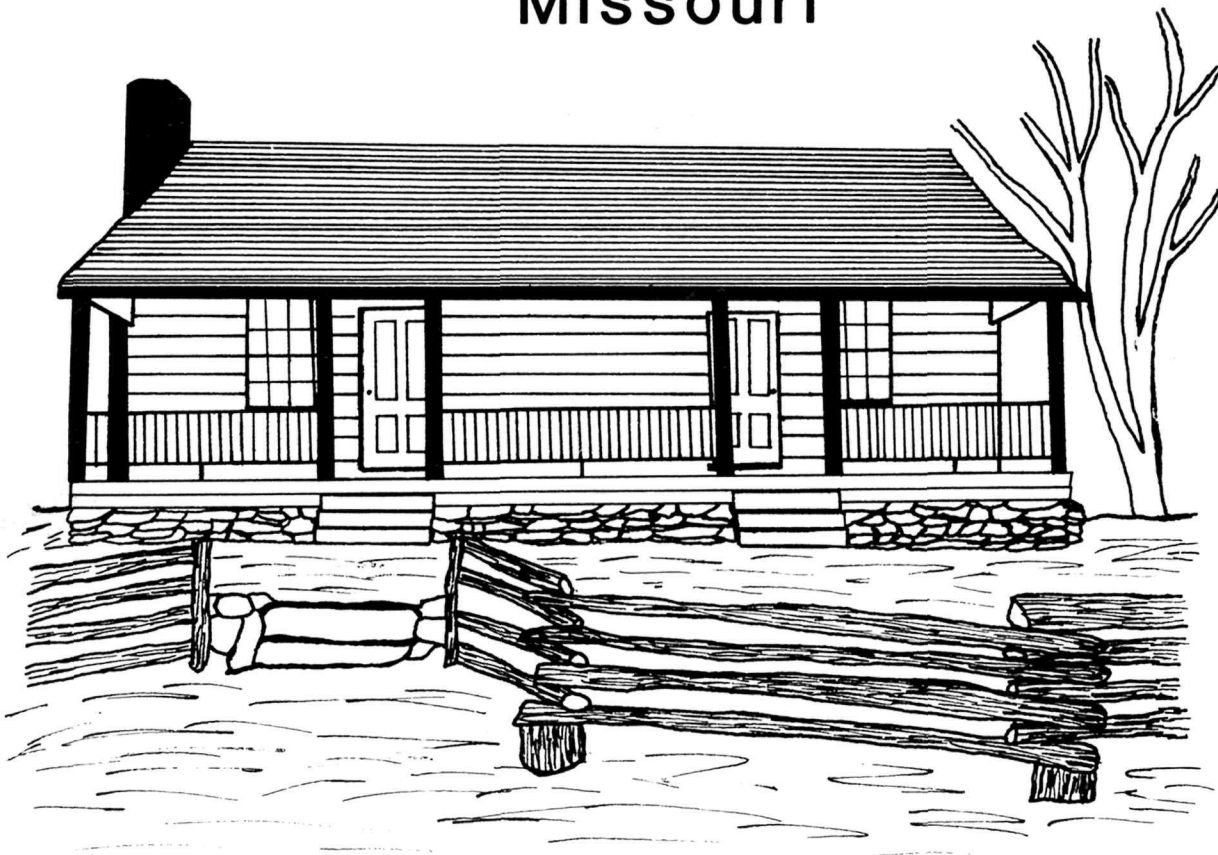


Archeological Testing
at
The Ray House:
Wilson's Creek National Battlefield,
Missouri



ARCHEOLOGICAL TESTING AT THE RAY HOUSE:
WILSON'S CREEK NATIONAL BATTLEFIELD,
MISSOURI

by

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INTRODUCTION

Wilson's Creek National Battlefield is located in southwest Missouri, approximately 180 miles southeast of Kansas City. The Civil War battlefield includes 1752 acres, which approximates the area of the battle which determined whether the North or South would gain control of much of the state of Missouri (See Figure 1).

This report contains a descriptive account of archeological test excavations at the John A. Ray house. Residents here observed the struggle between the two armies and used the house as a hospital after the battle on 10 August 1861. Although the occupation of the Ray house spanned more than 100 years, the present excavations were undertaken to acquire both architectural information and material culture from the mid-nineteenth century, relating specifically to the time of the battle of Wilson's Creek. This report includes a brief introduction to the history of the Ray house; both pre- and post battle, together with descriptions of the excavations and synthesis of the artifactual and architectural remains. Distributional analysis of remains will also be included. Archeological testing at the Ray house was enacted as part of the overall building stabilization scheme proposed by the National Park Service. Interest in the actual happenings of the Battle of Wilson's Creek is of secondary importance for the purposes of this report. The initial objective of this project was to examine the area around the foundation of the structure prior to ground disturbance from the stabilization process. Figure 2 is a photograph of the Ray house as it looks today.

The Ray farm is built in a region of rolling hills associated with the western Ozarks. Physiographically, the park is included in the Springfield Plateau of the western Ozarks. This region near Springfield is situated at the edge of the western savanna and prairie lands (National Park Service 1976:II-14). The predominate vegetation occurring along the ravines and floodplains includes black walnut, American elm, and green ash. Upland forests predominately contain numerous species of oak and hickory. Prairie grasses, including little and big bluestem and Indian grass, are found on the Springfield Plateau.

In the past the vegetation encouraged the existence of numerous game animals including white-tailed deer, elk, wolf, bison, and black bear. The floodplains supported beaver, mink, muskrat, and otter (Sauer 1920:59). Local fish include catfish, carp, buffalo, bass, sunfish, and sucker (Pflieger 1975).

In 1861 the Wilson Creek bottoms were farmed, while the hills and hollows were covered with scrub oak and underbrush. Several farmsteads with houses and outbuildings were located in the area. Only one of these structures, the John A. Ray house, is extant.

It was anticipated that the composition of the recovered material assemblage would shed light on the lifeways of the occupants of the Ray house both prior to, during, and after the battle of Wilson's Creek. Contexts associated with the occupation of the house during the 1861 battle will be stressed. However, post battle changes over time, as shown in the archeological record, will also be discussed.

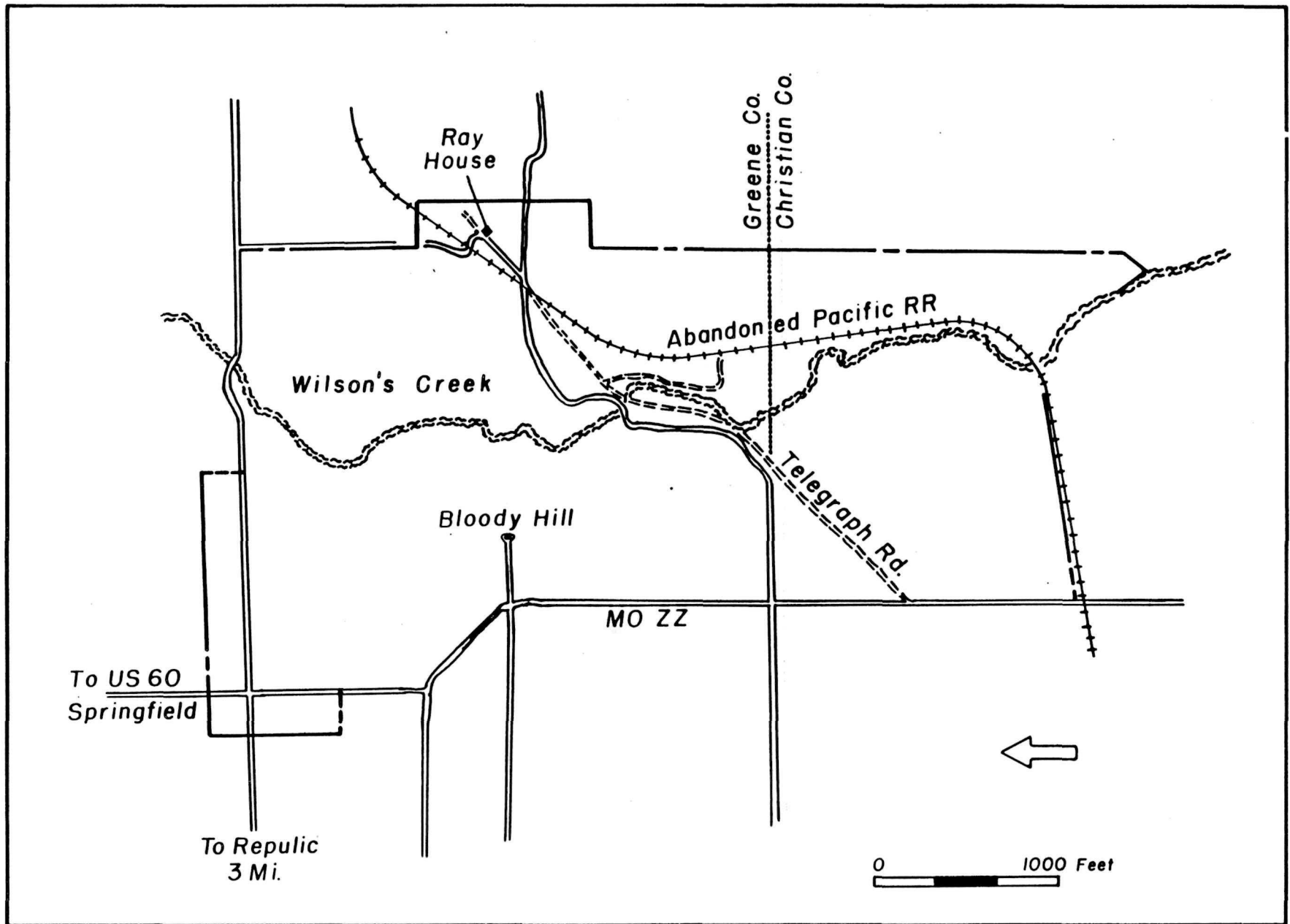


Figure 1. Wilson's Creek National Battlefield, near Springfield, Missouri.

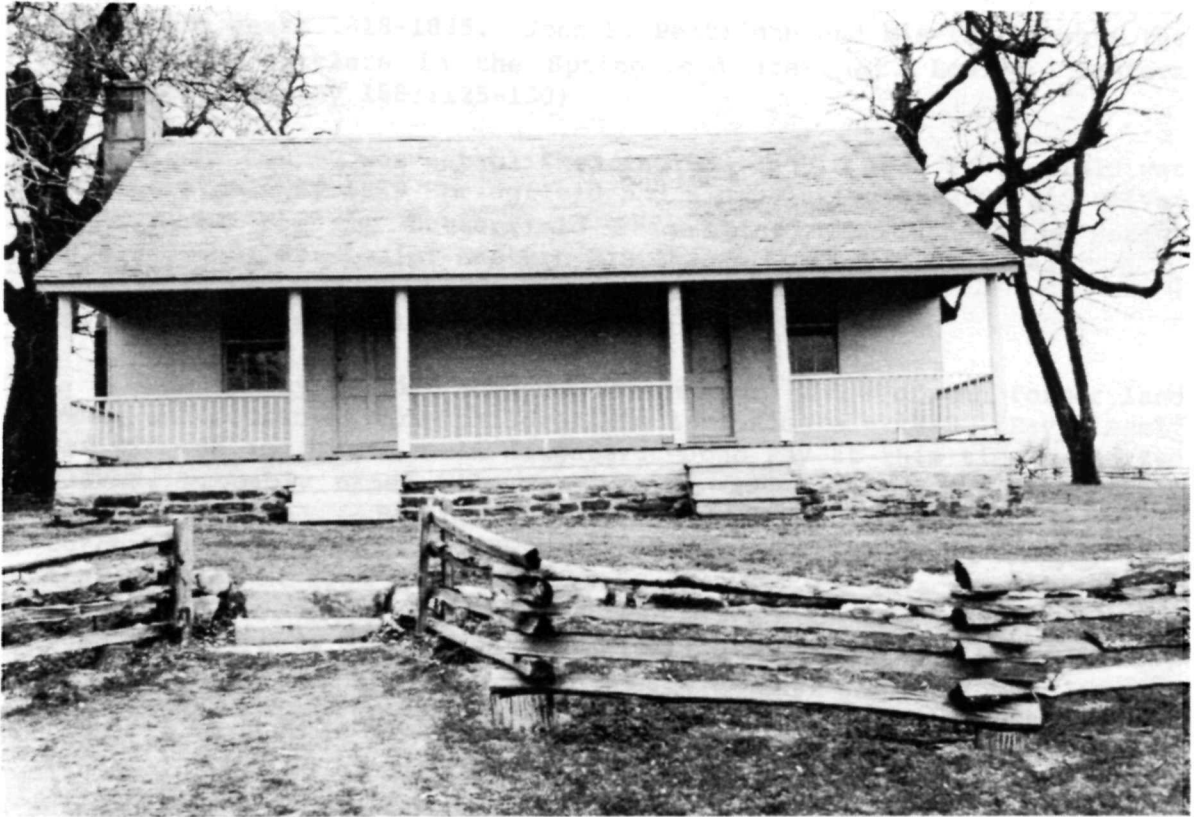


Figure 2. The John A. Ray House, 23Gr233.

HISTORICAL BACKGROUND

During the early part of the eighteenth century, the Osage and Missouri were occupants of western Missouri. In 1789, the Delaware and Shawnee moved into the area and exchanged hostilities with the Osage until 1808. After that the Osage ceded all claims to land in Missouri and moved west. The Shawnee and Delaware were sent to reservations in southwestern Missouri before moving further west in the 1830s (Morrow 1981).

The earliest white settlers to the Springfield area are believed to have come from Tennessee, Kentucky, and South Carolina, predominately during the years 1818-1835. John P. Pettijohn and his family were the first white settlers in the Springfield area (St. Louis: Western Historical Company 1883:125-130).

Greene County was established in 1833 and in 1838 Springfield was incorporated. By 1859 Springfield had a population of 2500 and served as a depot for the Butterfield Stage Line (American Guide Series 1954:329-335; St. Louis: Western Historical Company 1883:59-65).

Ray House -- Pre-Battle

John A. Ray married Roxanna Steele, the widow of the former land owner and mother of four children, in approximately 1849. Ray himself was widowed and had a small daughter. John Ray at this time owned two slaves, probably named Wiley and Rhoda, ages 19 and 14 respectively (Bearss 1968:34). Besides buying the Steeles' 120 acres, Ray also purchased additional land from the government. Adjacent to the land that Ray bought from the Steele estate in 1851 was 40 acres (the NW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 25) on which no one had lived. On the first of October 1852 these tracts of land were granted to Ray and his heirs.

Construction on the new house probably began shortly after acquiring the land. It is known definitely that the Ray family was living in the extant house at the time he was appointed postmaster of Wilson's Creek on 18 January 1856. Ray held this position as postmaster for over ten years with the post office located in his home. It was said that Ray used the northeast front room, the Lyon room, as the post office (Bearss 1968:40).

A Concord stage of the Butterfield Overland Mail started its western route out of Springfield on 17 September 1858 passing the Ray house on its way to San Francisco. The first eastbound stage passed the Ray house on 8 October and for two and one-half years the Butterfield stages continued to pass that way until 1861 (Ormsby 1942).

For a number of years during the late 1830s and into the 1840s two roads (the Delaware Trace and the Telegraph Road) led southwest from Springfield to the Arkansas state line. The Telegraph road reached Springfield in the spring of 1860. The first message was sent over the line above the road on 30 April 1860. The telegraph between Springfield and Fort Smith paralleled the route used by the Butterfield Overland

Mail, and by the summer of 1861 this road was known locally as the Telegraph or Wire road. This road passed directly in front of the Ray house (Bearss 1968:53).

Ray House -- Battle Period

The battle of Wilson's Creek took place on 10 August 1861 as a result of a confrontation between Union forces led by Brig. General Nathaniel Lyon and Confederate forces led by Major General Sterling Price, Generals Ben McCulloch and N. Bart Pearce. The battleground located 10 miles southwest of Springfield, straddles the Greene and Christian County line and was a fight for control of Missouri during the first year of the Civil War. See Bearss (1960) for a detailed description of the battle.

John Ray is reported to have sat on his front porch, while his family hid in the cellar beneath the house, and watched the battle as it took place across the Wire Road on the ridge now known as Bloody Hill. One of the fired shells is reported to have struck his chicken house in the back yard. Other projectiles narrowly missed the house and failed to explode when hitting the ground. As soon as the firing ceased the Ray family started taking care of the wounded and dying soldiers (Bruton 1930). Mrs. Bruton (Ray's daughter) reported that the house resembled a field hospital with wounded men lying all around inside and outside of the house. Lyon had been killed in the fighting on Bloody Hill while leading a charge by the 2d Kansas (Bearss 1968:14) and his body was brought to the Ray house on the afternoon of 10 August. Shortly after the battle, ambulances began carrying the soldiers off the field, although some remained there nearly a week.

Ray House -- Post Battle

John A. Ray died intestate in July 1875, leaving his wife Roxanna with six children: three married daughters--Mrs. Frances E. Steward, Mrs. Livonia Green, and Mrs. Olivia Dryden, and three sons: John W., Marshall, and Edward Ray.

An examination of the record of the Greene County Probate Court by Bearss (1968:67) states that when John Ray died he left his heirs 280 acres of land. This was 160 more acres than William Steele had left his family in 1848, and contradicts local rumor that John Ray had acquired his land by marrying Roxanna Steele (Bearss 1968:67).

Roxanna Ray died shortly thereafter on 26 March 1876, leaving eight children: three by her first husband (William Fletcher Steele, Mary Yarbrough, and Andrew McCord Steele) and five by her second (Olivia Dryden, Livonia Green, John W., Marshall and Edward Ray). On Saturday 11 November 1876, the Ray estate was sold at the Greene County courthouse to the highest bidder, Matthew M. Alexander, for \$1,539.50 (Bearss 1968:76).

During the years 1876-1882 the Ray property transferred owners numerous times. On 11 October 1878 the Alexanders sold to Mary Johnson for \$36.00 a tract of land at the extreme northeast corner of the NW¼ of the NE¼ of Sec. 25. R.W. Stevens on 18 May 1882 purchased from the Alexanders a number of tracts of land not previously sold for a price of \$4,320. The Stevens then sold on 26 December to James M. Ryrie and Aaron D. Auten for \$4,000 their undivided two-thirds interest in the tracts they had acquired from the Alexanders (Greene County Deed Books 36, 47, 48).

In July of 1883, Stevens, Ryrie, and Auten formed a corporation known as "The Wilson Creek Mining and Smelting Company." The land owned between these people changed ownership numerous times until finally James Ryrie purchased the four-acre parcel of land still owned by Mary Johnson (Greene County Deed Book 54, 64, 87, 110). In 1903, part of this land was sold by Ryrie to the Greene County court for a highway and school.

In July of 1904, John McConnell purchased a number of tracts of land from the Ryries in Greene County. One piece of land contained the Ray house. McConnell lived in the Ray house from 1904 until his death in 1934 (Bearss 1968:84). McConnell's daughter Bessie (McConnell) McElhaney who grew up in the Ray house was given the house after her father's death. She retained possession of this property until it was purchased by the Wilson's Creek National Battlefield Commission.

The bedstead on which Lyon's body was placed on 10 August 1861 and the counterpane in which he was wrapped were among the items purchased by Ollie Dryden at the auction of her mother's property. Subsequently she sold these objects to Mrs. Bessie McElhaney, who in turn sold them to the National Park Service.

PREVIOUS ARCHEOLOGICAL INVESTIGATIONS AT THE RAY HOUSE

Basically, only two previous studies regarding the history, archeology and relevance of the Ray house have been conducted. The first was conducted in 1968 by Edwin C. Bearss to satisfy research needs in WICR-H-2, the Historic Structures Report completed for the National Park Service. Bearss stated that the purpose of the report, as suggested by needs of the park superintendent, was determining "the chronological history of the Ray house; to confirm and document its association with and locate the Telegraph Road (Butterfield Stage Road) and the battle of Wilson's Creek, and to provide the other historical and architectural data necessary for the authentic restoration-reconstruction of the historic structure" (Bearss 1968:i).

What followed was a detailed description of the Ray house and the Civil War, the Steele and Ray families and the Ray house, the construction and non-battle history of the Ray house, the "Trail of Tears" and the Ray house, the deaths of John A. and Roxanna Steele Ray, real estate transactions on the original Ray property from 1876-1908, the Ray house in the twentieth century, and finally the Ray house on maps and in photographs.

The second investigation of the Ray house was reported by Robert T. Bray (1975:7-16). His volume dealt with the entire Wilson's Creek National Battlefield area and contained a small section on the Ray house. The report is titled Inventory and Evaluation of the Archaeological Resources: Wilson's Creek National Battlefield, Missouri. In this report Bray discussed the structures and features associated with the house, together with artifacts recovered from surface inspection and metal detector survey. A sketch map of suggested locations of structures associated with the Ray house, based upon documentary and oral history was also included.

Today, as in 1975, no outbuildings are standing on the farm land surrounding the Ray house. In 1975, the remains of a coal pile behind the house were still visible on the surface. They are vaguely visible today. This coal is thought to be of 20th century origin. Location of nine structures has been suggested by Bray. These are: 1) slave cabin, 2) second building, 3) chicken house, 4) privy, 5) coal (wood) shed, 6) smoke house, 7) cistern, 8) outbuildings, and 9) barn (see Figure 3). A map of the battlefield drawn by Captain N. Boardman as reproduced in Bearss (1968:95-96) shows two sizable outbuildings located close together southeast of the extant house. Bessie (McConnell) McElhaney who grew up in the Ray house ca 1904 remembers having dismantled the slave cabin used during the Ray period of occupation. She suggests the location shown on the map. Her son, Glen McElhaney, suggested the location of other outbuildings including the barn built by the Rays which burned in 1852, as being about 50 yards southeast of the house.

Bray (1975:12) states that his attempts to locate structures associated with the Ray house included surface inspection with a metal

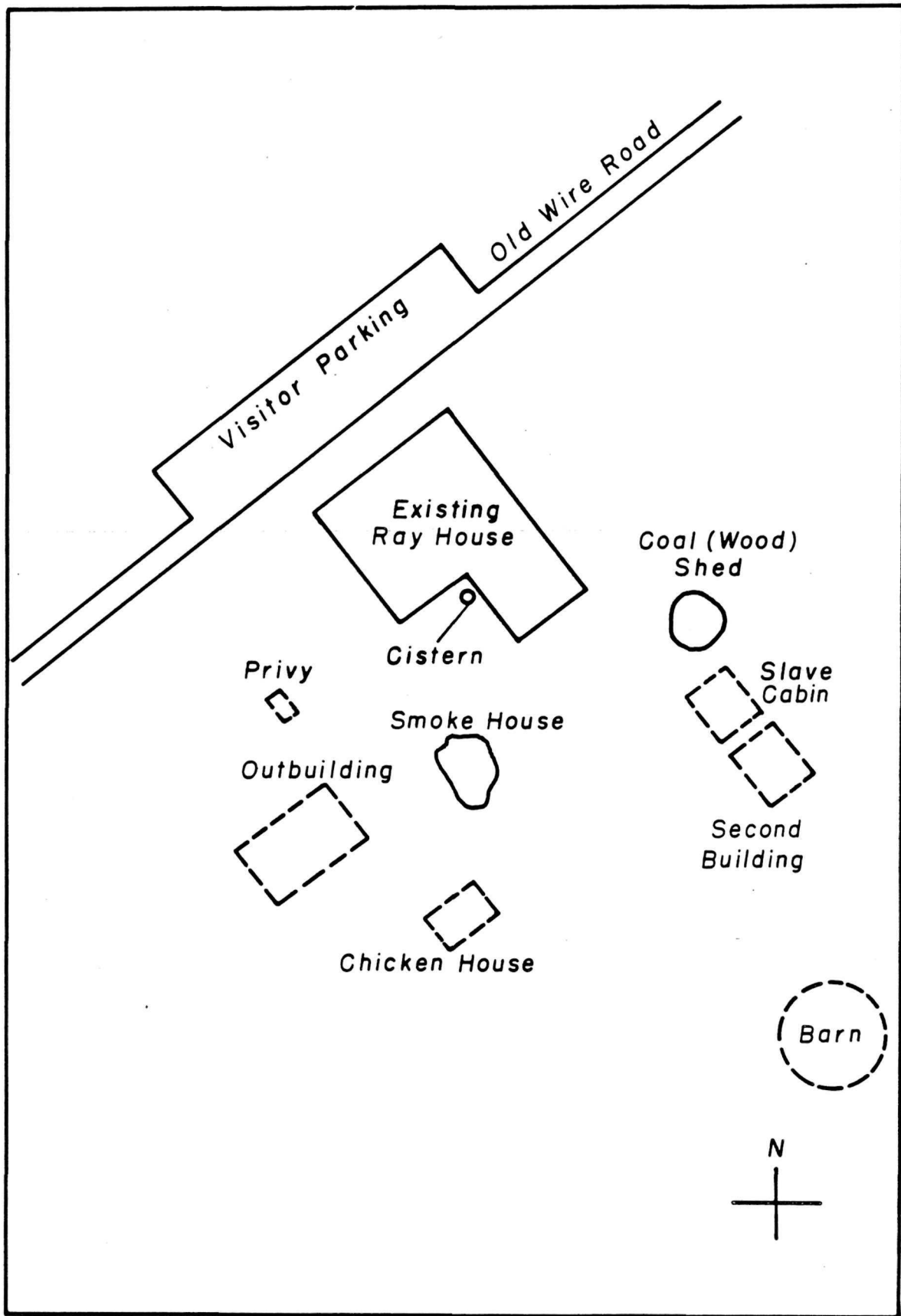


Figure 3. Locations of structures associated with the Ray House, as suggested by Bray (1975).

detector on features outside the wire fence which enclosed the yard at that time. He states that many feature "locations are sufficiently obvious" (1975:12). Today the only feature visible in the yard is a scant remnant of the purported coal (wood) shed. Other concentrations of artifacts found in the surrounding plowed fields during the 1983 investigations will be discussed later. A number of artifacts were found outside the fence by Bray but all were associated with nineteenth and twentieth century farming operations. The outbuilding had a concentration of metal artifacts and is suggested by Bray as a "fairly sizable structure that was being used as an implement shed" (1975:12). He says there is no indication that it dates from the Civil War period. The barn was not tested because of heavy brush and ground cover.

Bray then went on to summarize his findings: his comments regarding the farm outbuildings will be paraphrased here as discussed in his report (1975:14-16). According to Bray, the most credible of the oral and documentary histories indicate that at the time of the battle there were at least two outbuildings near the Ray house. These are the chicken coop, probably outside the fenced in yard, southeast of the house, and adjacent to the slave cabin which is thought to be a structure southeast of the southeast corner of the dwelling. Bray's archeological survey did not verify either of these by the discovery of material remains, although one iron artifact was found in the area of the chicken coop.

Less certain was a building identified as a smoke house by Glen McElhaney, inside the present yard fence near the well, at a point which Bray considered to be disturbed. A barn may have stood southeast of the house. Although no indication of a privy was observed, there undoubtedly was one at the time of the battle and, probably, one or more since then.

In an attempt to summarize the identifications and relative locations of outbuildings, Bray produced a sketch map with the house and suggested structures plotted on it according to the directions given him, although not to scale (Figure 3). Features shown on the map were ranked on a scale of dependability with regards to their historical authenticity (1-4).

1. Two adjacent buildings are suggested southeast of the Ray house—a slave cabin and a possible chicken coop. The approximate locations are shown on the sketch map. The identifications and authentications are supported by oral histories which are purported to be first-hand accounts. The chicken coop, reported by McElhaney as being south of the drilled well, was probably a late one, and not from the original Ray occupation.
2. A building identified as a smokehouse was in the south corner of the yard of the Ray house. The location is indicated archeologically according to Bray. Identification is a first-hand account, but the authentication is unsupported.

3. A barn southeast of the Ray house and privy southwest of the Ray house. Locations and identifications are first-hand accounts but they are not verified archeologically.
4. A probable outbuilding location southwest of the Ray house, and a building at the site of the coal pile. Locations are indicated archaeologically, but not supported by contemporary accounts or by oral histories.

A cistern behind the house is believed to be of post Civil War origin. Other features mentioned in historical accounts including a cattle shed, spring house, and fenced garden were not found in the surface examination by Bray. The following is a quote from Bray regarding the evaluation of the Ray house archeological potential:

The archaeological potential near the Ray house is good. There are undoubtedly two, possibly four, outbuildings dating from the Civil War period. These could probably be located, identified, authenticated and partially described by archaeological work.

There are other building sites that apparently post date the Civil War period (1975:16).

Hence a precedent was set many years ago suggesting the archeological relevance of further investigation of the Ray house and associated outbuildings. Work done in the past was composed of only a surface examination and is not sufficient to answer present management concerns with the upcoming stabilization of the Ray house.

GOALS OF STUDY AND FIELD METHODS

Goals of Study

The Civil War battle which took place along Wilson Creek and surrounding the John A. Ray house has been investigated at length from the historical military perspective but rarely from a personal viewpoint. While the Ray house itself was not an integral part of the battle per se it did provide shelter and a vantage point for the family as well as a temporary military hospital after the battle. The house also was the initial resting place for the body of General Nathaniel Lyon, killed in the battle on Bloody Hill. Furthermore, the Ray house is the only extant building remaining in the park from the time of the battle. To date, very few archeological attempts have been made to examine the Ray house structure or material culture.

The proposed stabilization of the house by the National Park Service will involve, during the initial phase, the restoration of the

building foundation. Therefore, the primary focus of the present archeological work will be upon foundation related attributes which may be lost in construction.

Recovered architectural information together with cultural remains will be used to answer questions relating to the structure as it stood in 1861 along with its changes over time. The following is a list of foundation related priorities which were assigned prior to the March 1983 field work. The number of objectives met was predicated by many factors including weather and amount of recovered information. The projects list here are in order of importance as agreed upon by Park Service personnel.

1. Examine the subsurface remains associated with the east fireplace and missing west fireplace.
2. Investigate the east side of the house near the ventilator to determine whether evidence of a former cellar entrance is present.
3. Excavate under the back porch to determine if a former cellar entrance is present.
4. Test inside the house under the floor to examine possible evidence of a fireplace in the kitchen and adjoining room.
5. Test to evaluate the condition of archeological resources in the basement.
6. Locate an area in the back yard for the septic tank, water tank, etc., that will have minimal impact on archeological resources associated with the Ray House.

It is proposed that the data recovered from the Ray house excavations may be used to answer the above architectural questions as well as illuminate the socioeconomic level of the Ray family and others over time. Artifacts found relating directly to the battle will also help us focus on the actual involvement of the Ray family/house with the battle. Given the limited time and scope of this research, all questions could not be fully answered. It is hoped, however, that enough architectural and archeological evidence will be gained to guide future archeological testing. This in turn will aid in discerning the nature of the Ray house as it stood 10 August 1861.

Methods

Prior to fieldwork, library research was conducted to study the battle and its relation to the Ray house. Very little archival information could be gleaned regarding photos or accounts of the house. The project archeologist and a crew of five archeologists worked for a total of six days at the site. The field crew consisted of six persons: Bill Chada, Linda Haws, Chris Riddle, Chris Schoen, and Jim Zalesky under the supervision of Susan Monk. Debbie McBride is responsible for all photographs and figures.

Before any ground disturbance was enacted a thorough walkover and metal detector survey of the outside of the house was undertaken. Excavation units were set up on the east and west sides of the house and under the back porch, which had been previously removed by park personnel. One by one meter square excavation units were gridded out with string and pins on both sides of the house. Test units behind the house (under the porch) were measured along the floor joists left after the removal of the porch planking. Hence, these units were not of uniform size. For purposes of consistency in excavating and mapping, north was considered to be the direction of the front porch of the house. Hence the extant fireplace is considered to be along the east wall.

A base map was made which included the extant house and all excavation and shovel test areas. One subsurface feature (A) was assigned and added to this map. A survey reconnaissance was made in the plowed areas surrounding the house, and 33 shovel tests were undertaken in the area suggested by park personnel as suitable for the proposed fire suppression water tank.

Digging of all subsurface excavation units proceeded in arbitrary 10 cm levels, usually by shovel skimming. All material was screened through 1/4-inch hardware mesh. Location of feature A (the base of the fireplace) necessitated the excavation of two .50 x 1 m units directly adjacent to the units (6, 8 and 9) containing the chimney support stones.

EXCAVATION UNITS

A total of 16 excavation units were completed during the March 1983 testing around the Ray house. The basis of most of the architectural comments made here regarding the alleged west fireplace are based upon non "artifactual" items such as stone, soil color, and other disturbances as seen in the stratigraphy. Hence, a review of the excavated areas together with a discussion regarding the soil stratigraphy represented is necessary. The following discussion is taken from field notes and level excavation forms written in the field and is included here to show in detail all units excavated.

WEST SIDE UNITS

Excavation Unit 1

This is a 1 m x 50 cm test unit on the west side of the Ray house. The north wall of the unit is the foundation of the house. This unit was dug on 9 November 1982 during an initial examination of the site.

Level 1: The soil consists of a brown clay loam with numerous rocks. Artifacts found include mortar, roofing, asphalt shingle, wire

nails, and glass. The soil is obviously disturbed.

Level 2: The soil consists of mottled brown loose loamy matrix-becoming compact at 30 cm and appears very disturbed. Artifacts include nails, window glass, rock, mortar, and bone.

Level 3: The soil consists of mottled loamy matrix with a high clay content. Artifacts include cut nails, glass, ceramic pottery fragments and mortar.

Level 4: The soil consists of a rocky loam matrix with homogenous color at the top of the level, becoming mottled and darker at the bottom. Artifacts include window glass, nails, and mortar. The soil is still disturbed but artifacts are generally indicative of a mid-nineteenth century period.

Level 5: The soil consists of a rocky brown loam becoming increasingly rocky with depth. Artifacts include a metal fragment and ceramic pottery fragment. The disturbed zone seems limited to the 1/3 of the test unit next to the house foundation.

Level 6: The soil is composed of a brownish red clayey loam with no artifacts. The matrix is disturbed in the north end of the unit.

Excavation Unit 1-A

Level 1: This unit is a re-examination of XU 1 and adjacent area forming a complete 1 x 1 m unit. Unit one was shoveled out and contained dark brown clayey loam/humus with a patch of reddish brown clayey loam/humus. Artifacts found in level 1 include nails, bottle and window glass, metal, caulking, cement, and mortar.

Level 2: The soil consists of dark brown clay loam. Artifacts include concrete, mortar, cement, wire/cut nails, window and bottle glass, a button, and miscellaneous metal.

Level 3: The soil consists of reddish brown clayey loam which is fine textured and loosely packed. Artifacts include charcoal, nails, a metal spike, a bottle cap, mortar, cement, and ceramic pottery fragments.

Level 4: The soil consists of reddish brown clayey loam with a dark brown stain in the southeast corner of the unit along the foundation wall. Artifacts include nails, window glass, cement, and mortar.

Level 5: The soil consists of mottled reddish/brown clayey loam with a dark stain on the east side. Artifacts include nails, cement, mortar, and window glass.

Level 6: The soil consists of reddish brown clay loam near the foundation and mottled with a darker color. Artifacts include cement and mortar.

Excavation Unit 11

This unit is an 1 m (N-S) x 88 cm (E-W) excavation unit adjacent to the present cellar entrance on the west side of the house. Excavation unit XU 1 overlaps into XU 11 on the north side.

Level 1: The soil consists of a brown humus layer. Artifacts include window glass, mortar, cement, shingle, caulking, and nails.

Level 2: The soil consists of a medium brown clay loam. Artifacts include window glass, cement, mortar, cut and wire nails, metal, brick, and shingles.

Level 3: The soil consists of a medium reddish-brown clay loam. Artifacts include window glass, mortar, nails, brick, bottle glass, and caulking.

Level 4: The soil consists of a reddish brown clay loam, except for the southeast wall which is a mottled tan/black clay. The appearance of the mottled tan/black/gray clay loam at 40 cm covers 3/4 of the unit, although not in the northwest corner. Artifacts include brick, ceramic pottery fragments, mortar, and window glass.

Level 5: The soil consists of a reddish brown clay loam except on the east side near the foundation which is an undisturbed reddish clay. Artifacts include mortar and window glass.

Level 6: The soil consists of a mottled dark reddish brown/dark brown clay loam. Artifacts include mortar and bottle glass.

Excavation Unit 12

This unit is a 1 m x 1 m test unit on the west side of the Ray house just outside the basement window.

Level 1: The soil consists of brown humus and top soil layer with a possible stained area which is a lighter brown but similar in texture. Artifacts include a .22 caliber cartridge case, nails, mortar, ceramic pottery fragments, window and bottle glass, cement, and a metal object left in the floor of the level.

Level 2: The soil consists of an orangish brown silty clay over most of the unit with a darker brown in the area of artifact concentration. At the bottom of the level a dark stain occupied the area under the artifact concentration. The soil in the central area of the unit is more compact on the east edge. Artifacts include nails, shingle, iron implement part, iron scale weight, mortar, cement, and bottle and window glass.

Level 3: The soil consists of a dark orange brown silty clay, with the dark stain still apparent in the area as seen in the upper level. Rocks were found in the northern part of the unit against the foundation of the house. Artifacts include mortar, ceramic pottery fragments, window and bottle glass, a grommet, nails, and shingles.

Level 4: The soil consists of a fine textured reddish brown clayey loam with a few rocks. Artifacts include mortar, window glass, cut nails, and screws.

Level 5: The soil consists of reddish brown fine textured clay loam with scattered rocks. Artifacts include one piece of bottle glass.

Level 6: The soil consists of red-orange brown clay. Cement was the only material present.

Excavation Unit 13

This is a 1 m x 1 m test unit on the west side of the house 1 m north of XU 12.

Level 1: The soil consists of red and brown clay loam. Artifacts include mortar, concrete, bottle and window glass, and nails. The brick was left in the southeast corner.

Level 2: The soil consists of mottled brown loam with much looser soil near the foundation. A concentration of mortar was found along the foundation about 10 cm into the unit. Artifacts include wire and cut nails, bottle and window glass, a china button, mortar, and metal.

Level 3: The soil consists of mottled red and brown clay loam with the soil becoming more reddish clay at the bottom of the level. Artifacts include mortar, window glass, cut nails, and screws.

Level 4: The soil consists of red clay with numerous chert rocks. Artifacts found include window glass, nails, and ceramic pottery fragments.

Level 5: The soil consists of reddish clay which contained much gravel but no artifacts.

Excavation Unit 14

This unit is a 1 x 1 m test unit on the west side of the Ray house immediately west of the basement window.

Level 1: The soil consists of a humus level, and a dark brown root level combined. Artifacts found include a brick in the west wall. Other artifacts include stoneware, wire and cut nails, mortar, bottle and window glass, cement, and shingles. An unusually large amount of nails were noted.

Level 2: The soil consists of orange brown clay silt with a fairly friable texture and mottled appearance. Artifacts observed include mortar, cement, nails, window and bottle glass, ceramic pottery fragments, and wire. A concrete ledge was left in place along the foundation wall with a cluster of rocks appearing in the northwest corner of the unit.

Level 3: The soil consists of orange brown silt clay with numerous rocks. The cement along the foundation was found about 20 cm. The rock concentration found in the northwest corner of the unit was left in situ. Artifacts include cut nails, shingle, ceramic pottery fragments, bottle and window glass, and metal.

Level 4: The soil in this level, beneath the upper rock scatter, was dark brown and then changed to light red-brown clay at 25-30 cm. Artifacts found include ceramic pottery fragments, mortar, a nail and bottle, and window glass.

Level 5: The soil consists of a reddish brown clay. Artifacts include mortar, window glass, and crockery. The mortar concentration was left standing in the east wall of the pit along the house foundation.

Level 6: The soil consists of red brown clay with small rocks. The cement/mortar was left in the east wall and no artifacts were recovered.

BACK PORCH UNITS

Excavation Unit 2

This test unit was ca 75 cm east-west and 69 cm north-south due to a large rock at the west end that prevented the unit from being 1 m². The unit is in the extreme northwest corner of the back porch.

Level 1: The soil consists of reddish orange silty clay with numerous limestone and chert rocks. Soil and rock were interspersed in some areas (eastern portion) and were more compacted than other parts of the unit. The larger rocks were not saved, but a portion of the smaller stone was sampled. Artifacts include cut and wire nails, window and bottle glass, ceramic pottery fragments, walnut shells, fabric, string, a corncob, and bone.

Level 2: The soil consists of reddish orange silty clay with numerous limestone and chert pieces, bone, flakes, bottle and window glass, ceramic pottery fragments, cut and wire nails, and mortar. A large concentration of brick was found in the west side of the unit going into the next level.

Level 3: The soil consists of a darker red-brown more compact clayey soil with some charcoal fragments noted. A large stone slab

(38 cm x 20 cm) in the west portion of the unit was found tilting at about 30 degrees toward the house. Another tabular stone was sitting at an angle midway along the north wall. Artifacts found include window and bottle glass, cut and wire nails, a shoestring, and bone.

Level 4: The soil consists of reddish-brown silty clay with limestone and chert mixed throughout the bottom of the level. A slightly darker shade of gray was mottled at the bottom of the level with orange clay and charcoal flecks mixed in the very compact matrix. A concentration of mortar was found over the entire square about 38-40 cm bs. The large stone slab along the west wall was pedestled and left in place. Artifacts include ceramic pottery fragments, mortar, iron objects, glass, and small bone fragments.

Level 5: The soil consists of silty clay with charcoal flecks. Artifacts include bone, mortar, a screw, a cut nail, window glass, bone, and a corn cob.

Level 6: The soil consists of a wet reddish brown silty clay with many small angular chert and limestone fragments. Artifacts include mortar, bone, iron fragments, ceramic pottery fragments, and charcoal. While no color change is apparent, there seems to be a texture difference in the west side of the unit bracketing the larger tabular stone. This seems to be where the few artifacts recovered were found and may indicate a disturbance associated with the stone. Stratigraphy indicates a gray level that is continuous across the unit and probably everything above that level is mixed fill.

Excavation Unit 3

This is a 88 cm x 70 cm excavation unit under the back porch of the house. The unit is framed on two sides by floor joists from the porch.

Level 1: The soil consists of a dark reddish brown clay loam with a high content of decaying limestone. A limestone slab was left in situ. Artifacts include razor blade fragments, ceramic pottery fragments, charcoal, bottle and window glass, bone, buttons, a corn cob, styrofoam, and cut and wire nails.

Level 2: The soil contained a lot of clay with a dark reddish-brown clay loam matrix. The limestone slab was left in place. Artifacts include ceramic pottery fragments, bottle and window glass, brick, cement, a button, and cut and wire nails.

Level 3: The soil consisted of a reddish clay loam with gray limestone. Artifacts included red brick, cement, square nails, buttons, bone, bottle and window glass, and ceramic pottery fragments.

Level 4: The soil consists of red-brown clay with black clay at 40 cm. Artifacts found include ceramic pottery fragments, chimney glass, cut nails, and miscellaneous metal.

Level 5: The soil consists of black loam-clay with an abrupt transition to a gray/brown clay loam. Artifacts found include red brick, bottle glass, and ceramic pottery fragments.

Level 6: Initially the soil was dark clay then changed in the last 2-3 cm to red-brown clay and became very difficult to screen. Artifacts found in the top few cm of the level were one piece of mortar and one glass fragment.

Level 7: The soil consists of dark brown/black clay loam which turns to a red-brown clay loam at about 68-70 cm bs. One cut nail was recovered in this level.

Excavation Unit 4

This unit was approximately 70 cm (N-S) and 1 m (E-W) at a distance of two floor joists from the house under the back porch. The unit had an undulating surface due to many rocks from the house foundation.

Level 1: This soil consists of a red sandy clay with many rocks. Artifacts include wire nails, window glass, ceramic pottery fragments, mortar, and concrete.

Level 2: This soil consists of red sandy clay. Artifacts include mortar, crockery, glass, wood and, nails.

Level 3: The soil consists of rocky red sandy clay. Artifacts include brick, mortar, wire, thin window glass, bone, a button, wire and cut nails.

Level 4: The soil consists of red clay loam. Artifacts include a horseshoe, ceramic pottery fragments, window glass, and cut nails.

Level 5: The soil consists of red clay changing to a black slightly sandy soil. Artifacts found include window glass, ceramic pottery fragments, nails, brick, and bone.

Level 6: This soil consists of black clay loam changing to brown clay. Artifacts found include ceramic pottery fragments, bottle and window glass, and a cut nail.

Level 7: The soil was a reddish clay and contained no artifacts.

EAST SIDE UNITS

Excavation Unit 5

This is a 1 x 1 m test excavation on the east side of the house about 30 cm north of the north wall of the chimney. The west wall of the unit is the house foundation.

Level 1: The soil consists of a dark brown sandy loam. Artifacts found include brick and mortar, window and bottle glass, ceramic pottery fragments, and wire nails.

Level 2: The soil consists of a dark brown sandy loam. Artifacts found include a stove part, ceramic pottery fragments, wire nails, glass, bone, and mortar.

Level 3: The soil consists of a brown sandy loam except for the southwest corner which looks more disturbed with lighter brown soil and some reddish clay. Artifacts found include ceramic pottery fragments, cut nails, bottle glass, shingles, and mortar.

Level 4: The soil consists of a dark brown sandy loam on the east half of the unit and a red clay and brown sandy loam on the west with a mixed area of red clay changing to dark soil. Artifacts recovered include cut nails, ceramic pottery fragments glass, mortar, and a plastic (recent) cigar tip.

Level 5: The soil changed to a brownish clay with some red clay in the southwest corner. Artifacts include a possible prehistoric flake, ceramic pottery fragments, nails, and bottle glass.

Level 6: The soil consists of a reddish orange brown clay with no artifacts recovered.

Excavation Unit 6

This unit is a 1 x 1 m unit on the south side of the chimney next to the air shaft coming from the basement on the east side of the house.

Level 1: The soil in this first level was composed of a humus/brown sandy loam. Bricks and rock were found in the northwest corner of the unit along with a groundwire in the soil. Artifacts include an axe head in the west wall along with window and bottle glass, cut and wire nails, a shingle, mortar and cement.

Level 2: The soil changed to a dark brown clay loam with bricks and rock concentrated in the northwest corner. The artifacts recovered include cut and wire nails, wire, wood, bone and ceramic pottery fragments.

Level 3: The soil consists of a dark gray brown clay loam which is fine textured and loosely packed. The bottom of the level contained rock rubble associated with Feature A. This level stopped at Feature A and was not taken down in all areas to a full 30 cm below surface. Artifacts recovered include bottle glass, mortar, window glass, chimney glass, cement and cut nails.

Excavation Unit 7

This is a 1 x 1 m test unit on the east side of the Ray house.

Level 1: The soil in the first level is composed of a dark brown silt loam which is very friable. There was a concentration of cobbles along the west wall of the unit against the porch foundation. Artifacts found include shingles, wire, cut nails, window glass, pressed glass, and a metal latch.

Level 2: The soil is composed of a dark brown silt loam becoming more of a reddish clay toward the bottom of the level in that portion of the unit nearest the house foundation. Artifacts found include charcoal, a lead pencil, bottle glass, nails, fabric, an iron washer, and ceramic pottery fragments.

Level 3: The soil in this level changes from a friable dark brown clayey silt with gray mottling in the eastern edge of the pit, to more of a reddish brown clay loam. Artifacts recovered include cement, mortar, a cut nail, window and bottle glass, and ceramic pottery fragments. A distinctive line was observed in the eastern portion of the unit extending from the wall about 20 cm. Most if not all material was recovered from the darker soil, away from the foundation with the orange soil paralleling the foundation.

Level 4: The soil is composed of a dark loam with the western part of the unit exhibiting a reddish brown stain. The reddish stain changed to the dark loam at 36-38 cm bs. The stain had a cut nail and window glass in it.

Level 5: The soil changed to a yellow brown silty clay with numerous small rock fragments. One fragment of a tar shingle was recovered and may have come from the upper part of the level.

Excavation Unit 8

This unit is a 1 m (N-S) x 34 cm (E-W) "L" shaped test excavation on the east side of the house with its east and north wall along the chimney. It is the excavation unit immediately south of excavation unit six.

Level 1: The soil consists of a dark brown sandy loam with recovered artifacts consisting of ceramic pottery fragments, mortar and a wire nail.

Level 2: This soil consists of a brown sandy loam with more rocks being found in this level. Artifacts found include one wire nail, one brick fragment, one cartridge shell casing, and a lot of mortar.

Level 3: This soil consists of a dark brown sandy loam with some decomposed mortar in scattered spots. Rocks are starting to show evidence of a subsurface feature. Artifacts found include bottle glass and mortar. Rocks were left in situ and assigned to Feature A.

The soil beneath the rocks was a brown silty loam which was very friable and was excavated after the entire feature was examined. Stone slabs were found at the base of the chimney below the rocks and extended into the unit at about 28 cm bs. Rocks were relatively few and not compact in grouping. Artifacts found include ceramic pottery fragments, nails, mortar and tar paper roofing.

Level 4: This level is composed of the northern portion of XU 8 with the soil composed of a brown-orange silty clay which was mottled and seemed mixed with areas of bright orange and dark spots (charcoal?). Artifacts found were ceramic pottery fragments, cut nails and window glass. An additional large stone slab was found beneath the previous stone slabs that support the fireplace. At the base of these stones is a dark zone of soil that can clearly be seen in the profiles of adjoining test units. This soil zone lies beneath the stone slabs and at the contact between the house foundation and the subsoil. This might have been some type of prepared surface prior to building and fireplace construction.

Level 5: This soil was composed of a red clay in the east half and a friable brown clay-loam in the west. Feature A is apparent with stone slabs/rocks supporting the chimney. Orange clay on the east half of the unit and a disturbed friable brown clay-loam is located nearer the foundation, probably due to burying the metal cable found in this unit. Artifacts recovered included one piece of glass and one piece of mortar.

Excavation Unit 9

This is a 34 cm x 1 m test unit adjacent to the chimney on the east side of the house. XU 6 is to the south and XU 8 is to the north.

Level 1: The soil is composed of a dark brown clay loam which is fine and loosely packed. Artifacts include mortar, cement, cut nails, window glass, a button and shingles.

Level 2: The soil is composed of a dark brown clay loam with scattered rock at about 20 cm bs. Artifacts found were ceramic pottery fragments, cut nails, mortar, cement and bottle and window glass.

Level 3: This soil is a dark brown clay loam which is very fine textured. Artifacts found were window and bottle glass, mortar, nails and cement.

Excavation Unit 10

This is a 1 x 1 m test unit located south of and adjacent to XU 6. The west wall of the unit is the house foundation.

Level 1: The soil in this level is composed of a dark brown (humus) loam layer. Artifacts found include mortar, window glass, wire nails, ceramic pottery fragments, brick and metal. An axe head was

found in the floor of this level. The north side wall of the unit together with the southwest floor corner contained a concentration of bricks and rocks.

Level 2: The soil is composed of a dark brown sandy loam which was excavated around the rocks in the west half of the unit. The red clay is beginning to show at this point. Artifacts recovered include bottle and window glass, wire and cut nails, mortar, an axe head, ceramic (pottery) fragments, and miscellaneous metal.

Level 3: The soil is composed of reddish brown clay with rocks left in situ on the west and north side. Artifacts recovered were of a much lower density and include window glass and crockery.

Level 4: The soil is composed of a red clay changing to mottled black and red soil and appears very disturbed. Because of rocks in the west half only the east half of this level was excavated. Artifacts include metal, ceramic fragments, and window glass.

Level 5: This level consisted of a red clay mottled with black clay and appears very disturbed. Rocks and bricks were limited mainly to the west 1/4 of the unit and left in situ. One piece of mortar was the only recovered artifact.

Excavation Unit 15

This is a 50 cm x 1 m test unit adjacent to (east of) XU 8 on the east side of the house.

Level 1: The soil consisted of a brown silty loam. Artifacts were limited and included crockery, bottle glass, and one nail.

Level 2: The soil consists of a dark brown silty loam changing to brown sandy clay with rocks at the bottom of this level. Artifacts include nails, window glass, shell and ceramic fragments.

Level 3: The soil consists of a brown silty loam with charcoal flecks noted throughout this level. Rocks were concentrated along the west wall of the unit and in the southwest corner. Artifacts included mortar, window and bottle glass, and cut nails.

Level 4: The soil in this level consists of a brown clay with limestone rocks on the bottom of the level.

Excavation Unit 16

This is a 50 cm x 1 m unit south of XU 16 and east of XU 9 on the east side of the house.

Level 1: This soil consists of a dark brown sandy loam (humus). Artifacts include window glass, roofing tar paper, nails, and mortar.

Level 2: The soil in this unit consists of a brown silty loam with some small rocks (gravel) scattered throughout. Artifacts include glassware (stemware), cut nails, and window glass.

Level 3: The soil changed to a brown clay and the rock concentrations noted in XU 9 appeared to end. A similar situation is seen in the common wall shared by the unit and XU 15 and XU 8. Bottle and window glass were present in low density.

Level 4: The soil consists of a brown clayey loam, with rocks present in the southeast corner of the unit and along the west wall. Artifacts found include window glass, nails, and ceramic fragments.

Level 5: The soil changed to a reddish clay and produced cut nails, bottle and window glass, ceramic fragments, and bone.

RESULTS

In total, 16 test units were excavated, along with 33 shovel tests. Survey reconnaissance was conducted in the plowed fields surrounding the house. A map was made which included all excavation units, shovel test area, and concentrations of artifacts in the plowed field adjacent to the Ray house (see Figure 4A and B). Photographs were taken to document all phases of work. Objectives one through three as listed earlier were completed, four and five were not attempted, and objective six was initiated but not completed. Excavations on the east side of the house revealed a heavy stone support for the fireplace but no apparent old cellar entrance (see Figure 5 & 6). However, time limitations precluded complete excavation of the east wall along the foundation.

The archeological remains on the west side of the house gave no indication of a fireplace having been there or evidence that one had been removed (see Figure 7). Testing in the house and the basement was not initiated because of the need to answer more immediate management related concerns.

Twenty-four of the 33 shovel probes conducted in the proposed water tank area resulted in the recovery of historic artifacts indicating that archeological remains are present throughout the back yard of the house. This information is too sparse to indicate if this is a general backyard scatter or the result of a feature (e.g., privy).

A walkover of the plowed fields along the side and behind the Ray house exhibited additional archeological resources. To the west of the house was noted a preponderance of household items (e.g., bottle glass, crockery, and ceramic fragments), perhaps attributable to the Ray occupation. Farther south in this field a large dark stain filled with charcoal and some crockery and glassware was found. These concentra-

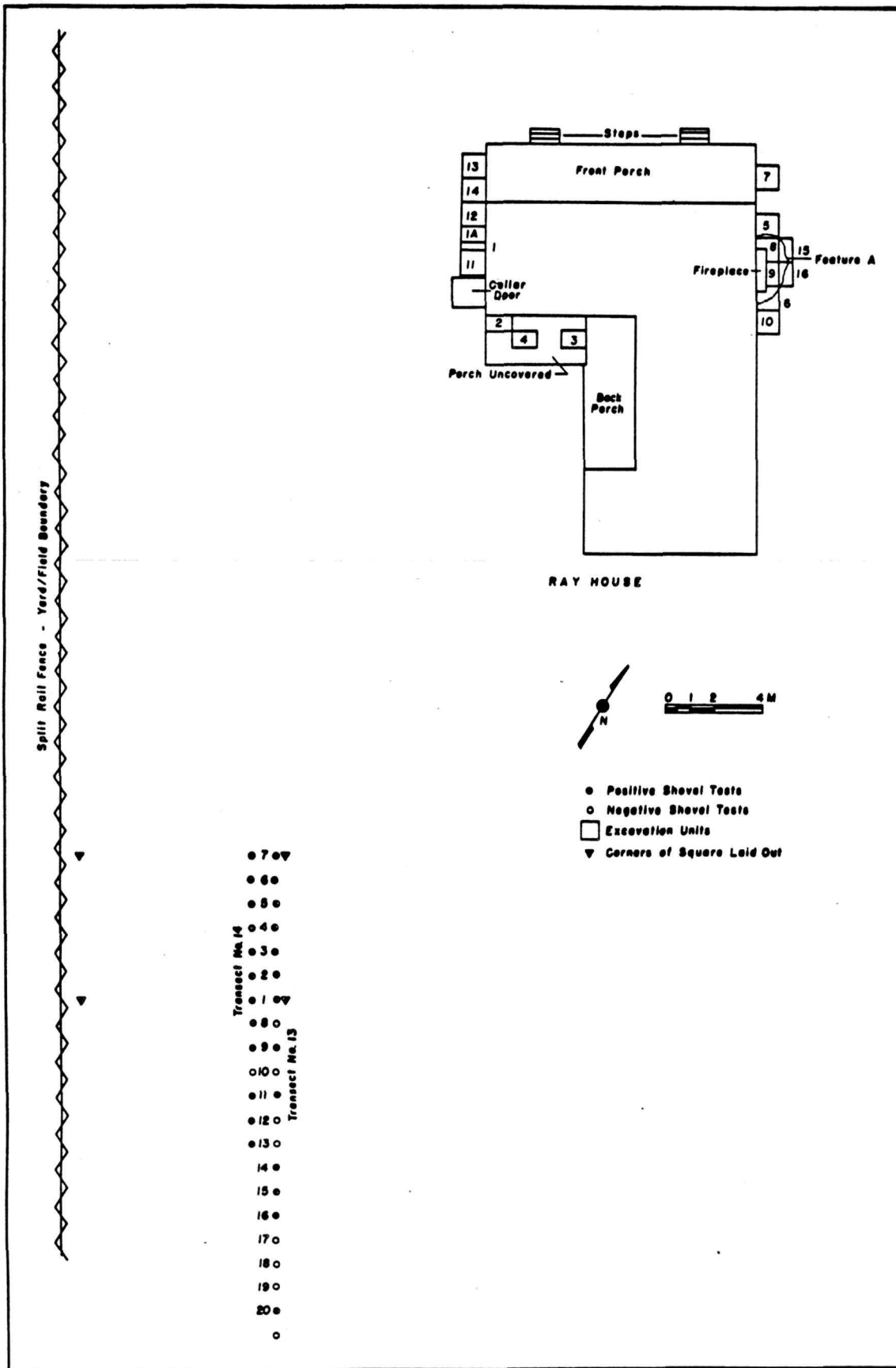


Figure 4A. Archeological testing at the Ray house, March 1983; including excavation units and shovel tests

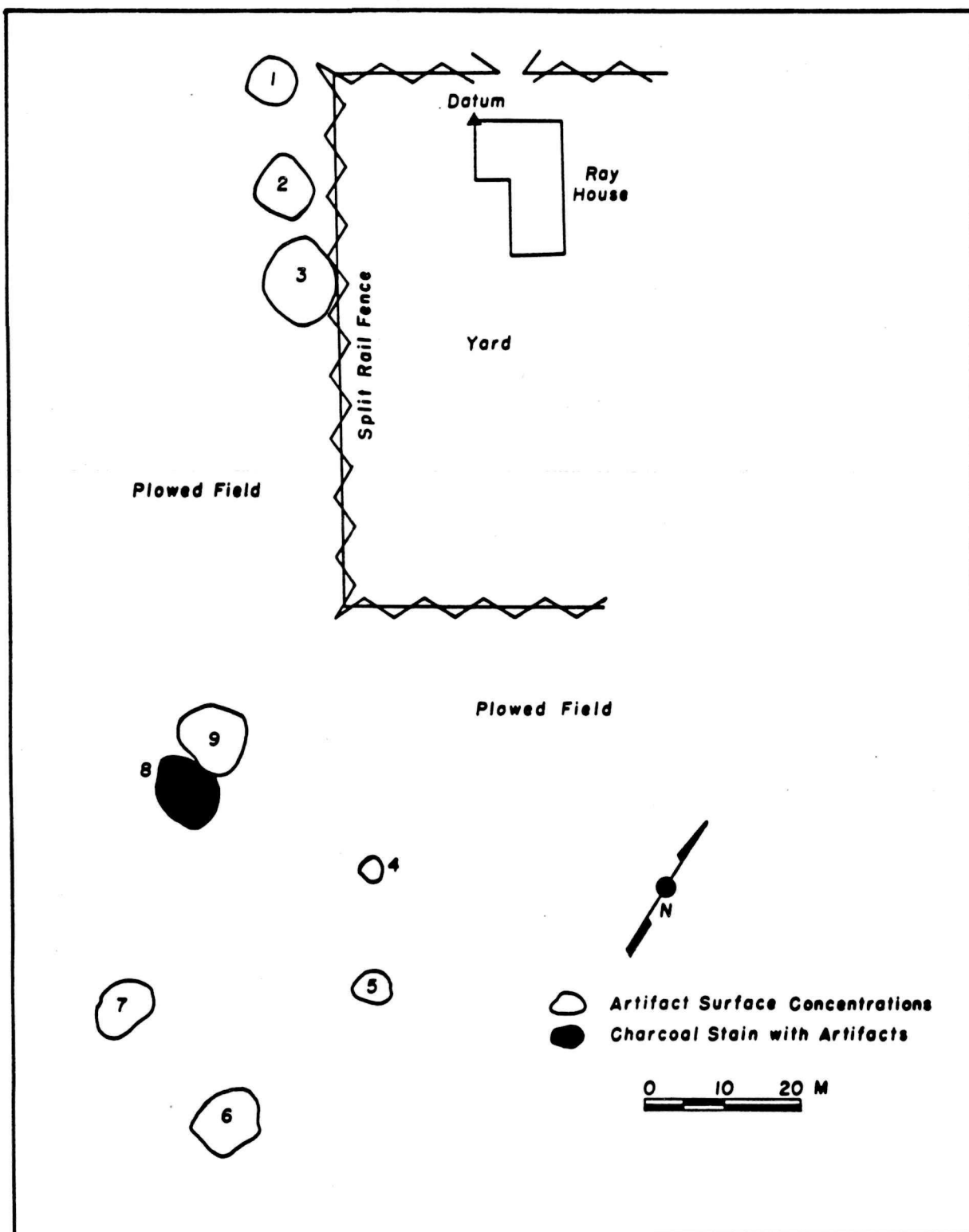


Figure 4B. Surface concentrations of historic artifacts located in plowed fields surrounding the Ray house

Key to Figure 4B Concentrations

- 1) Bottle glass, window glass, ceramic fragments, crockery.
- 2) Bottle glass, window glass, ceramic fragments, crockery.
- 3) Bottle glass, window glass, ceramic fragments, crockery.
- 4) Bottle glass, window glass, ceramic fragments, crockery.
- 5) Bottle glass, crockery.
- 6) Bottle glass, window glass, whiteware.
- 7) Gray crockery.
- 8) Crockery, charcoal.
- 9) Bottle glass, crockery.

tions of artifacts correspond to some degree with possible locations of outbuildings as suggested by Bray (1975) and seen in Figure 3. Pre-historic lithic materials directly to the south and east of the house were found scattered in the field. Also, to the northeast of the house a concentration of metal; some corrugated, along with cement and glassware was found. It is not feasible at this point to determine what these represent, but perhaps outbuildings (e.g., smokehouse, barn) were in this area. All of these concentrations of artifacts are currently in fields which are regularly plowed thus making the true picture of the Ray house less discernable over time.

Analysis

All removable artifacts were bagged and labeled with provenience information and taken to the Midwest Archeological Center for analysis. Artifacts recovered span a time period from the mid-nineteenth century until the present day. Bottle glass fragments, window glass fragments, ceramic fragments, nails, and metal were among the common types of material recovered. Prior to analysis, artifacts were organized as to primary function (e.g., domestic, architectural) and to artifact types (e.g. bottle glass, nails) within these functional categories. These categories facilitate a comparison of large numbers of artifacts along with smaller specific distinctions.

Window glass fragments were all measured in mm of thickness with a mean taken for the combined sample. This measurement allows a discussion on dating of specimens based primarily upon changes in thickness of glass over time. Ceramics and bottle glass were analyzed for dating as well as for purposes of examining socioeconomic levels of the Ray house occupants at the time of the battle and subsequent changes over time. Glass containers also provide a look at the consumption patterns of medicine, food, and drink over time. After a thorough cleaning and stabilization process, identifiable metal artifacts were examined for the purposes of dating and as economic indicators. Nails were analyzed in the same way separating cut from wire. Miscellaneous categories of artifacts were identified if possible. It was hoped that the entire recovered assemblage, though limited in size and scope would give an initial picture as to the occupations of the Ray house over the past 120 years. The analyzed artifacts were combined with available archival information to elicit as much information from the sample as possible.

Artifact Distributions

A total of 3634 specimens including the following groups; domestic, architectural, personal, miscellaneous, tools, and equipment were recovered from 16 excavation units surrounding the foundation of the Ray house (23Gr233). Of these remains, architectural specimens provided over 75% of the total (n=2730). The next highest group was domestic with 602 specimens for 16.5% of the total. Miscellaneous objects provided 233 specimens or 6.4% and personal (n=55) contributed 1.5%. Tools and equipment were quantitatively low with only 14 items identified for .38% of the total assemblage. These categories are all summarized in Table 1.

The percentage of total remains for each category was calculated. Mortar and cement contribute the largest sample (32%) to the total. This figure is misleading, however, in that a true representation of cement and mortar cannot be gleaned through the total numbers. The weight of all mortar and cement specimens was calculated and totaled 13 kg. Nails (17%) contribute the next highest percentage of remains with 10% square cut and 7% wire. Window glass closely follows contributing 15% of the total. The smallest group calculated is the ammunition, contributing a mere .2% to the total assemblage. The following table (Table 2) summarizes the total number of artifacts throughout the site according to provenience. This table gives a numerical overview of all artifacts and their totals. A discussion of specific artifact categories together with specific distributions follows in the next section. Shovel tests were not included in the above calculations.

Table 3 summarizes the recovered specimens according to primary function and site area. These areas include the east side, west side and back porch. Obvious differences emerge in patterns of recovered remains. Domestic artifacts (e.g., bone, bottle glass, ceramic fragments) predominate on the east side of the house yielding 229 artifacts or 16.8% of all specimens. Personal items (n=8, .6%), miscellaneous (n=36, 2.6%), and tools and equipment (n=7, .6%) contribute a small amount to items found on this side of the house. The west side of the house contained 182 domestic specimens for 12.4% of its total. Architectural items dominate the sample (consistent with the east side) providing 1210 remains or 82.4% of the total west side assemblage. A small number of tools and equipment were found in fairly even numbers throughout the site. The total specimen density for all three areas shows the east and west side fairly comparable in total number of specimens. However, the back porch specimen density shows nearly one and a half times the amount of recovered material compared to the first two areas. Miscellaneous specimens on the west wall contributed only 4.7% (n=70) to the total. Finally, personal items (n=3, .2%) and tools and equipment contributed a meager 4 specimens for .3% of the total west side assemblage. In distinct contrast to these first site areas, the back porch yielded a different sort of artifact assemblage. The back porch contributed 22% of all specimens.

Table 1. Summary of the Artifact Assemblage by Category from the Ray house, March 1983.

Category	Percentage
Fauna	2.1%
Bottle Glass	7.0%
Chimney Glass	0.8%
Buttons	0.3%
Flora	0.7%
Pressed Glass	0.6%
Pottery	5.2%
Ammunition	0.2%
Identifiable Metal	3.0%
Window Glass	15.0%
Nails	17.0%
Wire	7.0%
Square cut	10.0%
Other construction hardware	0.7%
Shingles	7.0%
Rubber	0.3%
Brick	1.1%
Mortar/Cement	32.0%
Miscellaneous	7.0%
TOTAL	100.0%

Table 2. A Summary of the Total Number of Artifacts by Provenience Recovered from the Ray House.

Provenience (XU)	Fauna	Misc.	Bottles	Chimney Glass	Buttons	Floral Pressed Glass	Ceramics	Shotgun	Bullets	Prehistoric Lithics	Identifiable Metal Artifacts	Window Glass	Horseshoes	Square Cut Nails	Wire Nails	Other Construction Hardware	Shingles	Rubber	Shell (unidentifiable)	Brick	(Mortar/Cement)	Total No. of Artifacts	
1	19	2	2				8			1		13		11	5	1	17				19	98	
1A	2	4	3		1		3				1	37		7	28	5					68	159	
2	15	69	20	9	1	19	7					12		31	31	5					24	243	
3	25	40	25	18	4	2	8	15	1		42	94		70	29	8	7		1	11	5	405	
4	6	13	3				19				3	17	1	23	7			8		12	43	155	
5	2	14	14				22			1	4	11		17	10	1	6			1	128	231	
6	1	13	6		2		1				1	31		7	17	1	69	1		5	133	288	
7		10	35	1			22				2	49		39	12		39	1			82	292	
8		3	5				6		1		3	5		7	4		16			2	58	110	
9			7		1	2	3					4		3	0		17				147	184	
10	1	4	8				7				6	15		4	11					1	9	66	
11		27	3				1				5	36		7	21		29				95	224	
12	1	13	27	1			10	5	1	1	5	57		27	23	2	41	1		2	124	411	
13		28	18		1		16			1	5	91		24	21	2	13			6	97	323	
14		9	39			1	3	15			8	43		43	31	1	8			1	51	253	
15		5	12				35				8	6		10	1						18	95	
16	4	6	16				1	12			1	21		18	2		8		1		7	97	
TOTAL	76	260	243	29	10	24	22	197	1	2	4	94	542	1	348	253	26	270	11	2	41	1178	3634

Table 3. Summary of Recovered Specimens according to Primary Function and Site Area.

Primary Function	SITE AREA			TOTAL	
	East Wall	West Wall	Back Porch		
Domestic	No.	229	182	191	602
	% Row	38%	30.2%	31.8%	100.0%
	% Col.	16.8%	17.4%	23.8%	16.6%
Architectural	No.	1082	1210	438	2730
	% Row	39.7%	44.3%	16%	100.0%
	% Col.	79.4%	82.4%	54.5%	75.1%
Personal	No.	8	3	44	55
	% Row	14.5%	5.5%	80.0%	100%
	% Col.	0.69%	0.29%	5.5%	1.5%
Miscellaneous	No.	36	70	127	223
	% Row	15.5%	30%	54.5%	100.0%
	% Col.	2.6%	4.7%	15.8%	6.4%
Tools and Equipment	No.	7	4	3	14
	% Row	50%	28.5%	21.5%	100.0%
	% Col.	0.6%	0.3%	0.4%	0.4%
Area Total	No.	1362	1469	803	3634
	% Row	37.5%	40.4%	22.1%	100.0%
	% Col.	100.0%	100.0%	100.0%	100.0%

Miscellaneous type artifacts (e.g., wire, metal, and unknown objects) are concentrated under the back porch with 127 (54.5%) specimens found here. While architectural specimens still dominate the sample (n=438, 54.5%), personal items contributed 44 specimens for 5.5% of the total.

Tools and equipment again provided a small sample with 3 specimens or .49% of the total back porch excavated artifacts. Domestic items especially faunal remains are concentrated under the back porch. The percent of total artifacts was also figured for each excavation unit separate from the rest. These figures were then ranked from highest to lowest excavation unit (see Table 4). Unit 12 contained the most specimens (n=411, 11.1%), closely followed by unit 3 (n=405, 11%). The lowest ranked unit (10) contained 66 specimens for a mere 1.8% of the total assemblage.

Table 4. Percent of Artifact Totals by Excavation Unit.

Unit	No. of Specimens	Percent of Total	Ranking
1	98	3.0%	14
1A	159	4.4%	11
2	243	7.0%	7
3	405	11.0%	2
4	155	4.3%	12
5	231	6.4%	8
6	288	7.9%	5
7	292	8.0%	4
8	110	3.0%	13
9	184	5.0%	10
10	66	1.8%	17
11	224	6.2%	9
12	411	11.1%	1
13	323	8.6%	3
14	253	7.0%	6
15	95	2.6%	16
16	97	2.7%	15
TOTAL	3634	100.0%	

ARTIFACT INVENTORY

This discussion is aimed at examining the entire artifact assemblage recovered from the excavation units; primary emphasis being on descriptive and datable attributes. The following section will examine the descriptive aspect of the analyzed assemblage:

Domestic

The total of 602 domestic specimens were recovered from excavation units around the Ray house. Figure 5 shows examples of recovered bottle glass and ceramic fragments. The predominate artifact types include faunal remains (76 specimens), ceramic fragments (195 specimens) and bottle glass (243 specimens). These items are all specifically itemized in Appendix A, Tables 1, 2, and 3 respectively.

Fauna. A total of 76 specimens accounts for the 12 taxa which were identified. The following table (Table 5) summarizes the identified vertebrate remains found during the March 1983 investigations. The recovered sample is too small to make definitive conclusions regarding the socioeconomic level of either the mid-nineteenth century Ray family occupation or the individuals living in the house since then. Also, the identified remains were not in a condition to offer knowledge regarding the cuts of meat or butchering techniques used.

Twelve taxa were identified from a total identifiable count of 28 specimens. Thirty-two percent of the total were bird; composed of Canada goose, chicken/turkey, a member of the finch family, and unidentifiable bird. Mammal remains (68% of total; n=19) were represented by the hare family, new world rat family, Norway rat, cat, Artiodactyla, pig and cow. This assemblage is a fairly typical grouping of fauna from a nineteenth century farmstead. None of the remains offer other than the obvious clues (e.g., they ate cow and pig) toward highlighting the subsistence of the Ray family. The domestic specimens also are devoid of information regarding butchering patterns. Also, due to the mixed context in which they were recovered it is not possible to say which period of occupation of the Ray house they result from.

Key to Figure 5 Artifacts

- A. Mocha decorated ceramic rim fragment.
- B. Hand painted ceramic fragment.
- C. Blue spongeware rim fragment.
- D. Coarse earthenware fragment.
- E. Lime green fluted pressed glass.
- F. Hazel-Atlas glass jar with cross-hatching.
- G. Shoulder/neck/lip fragment with a rough and irregular lipping tool finish technique.
- H. Glass jar with a Duraglas makers mark, dated 1949.

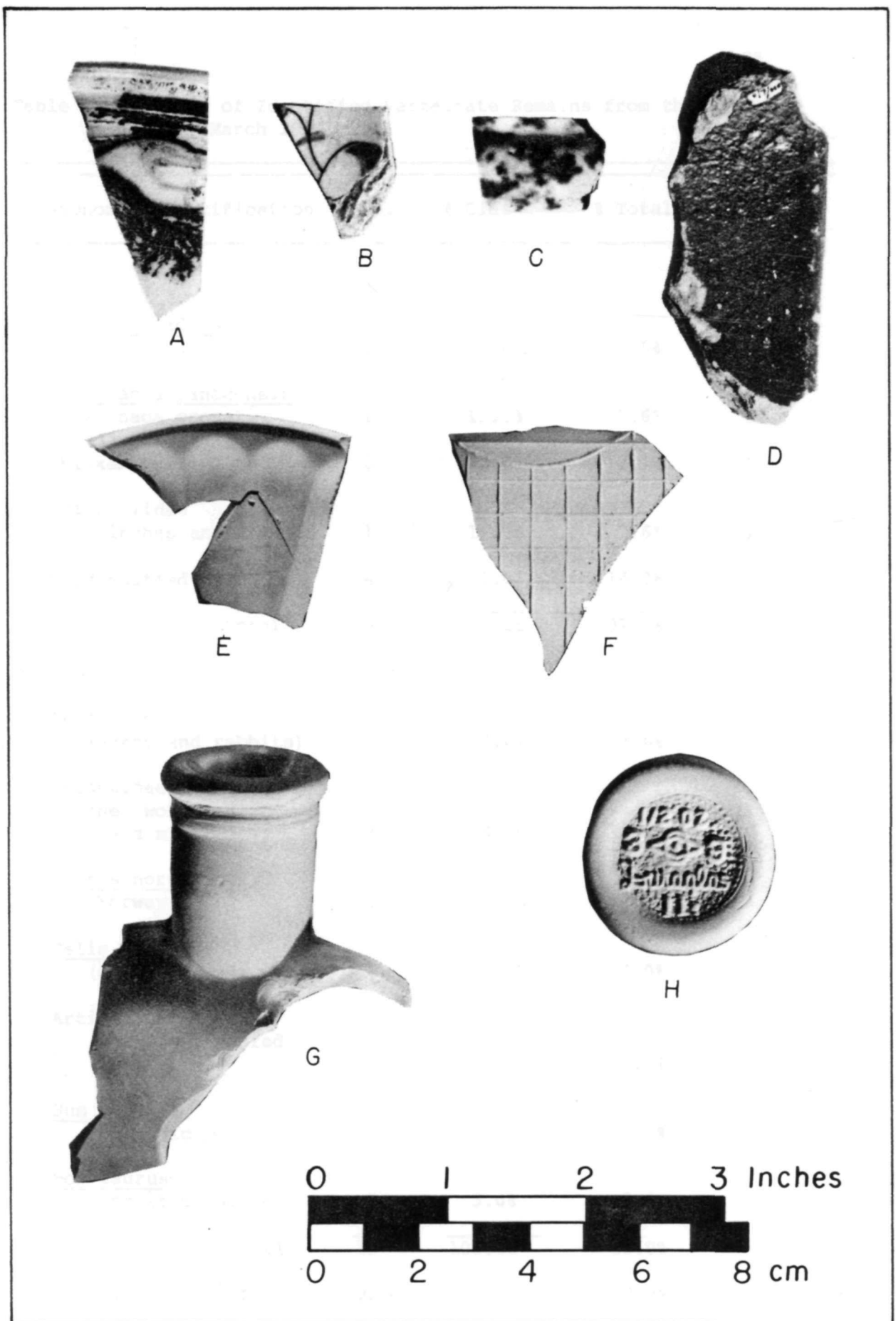


Figure 5. Recovered domestic remains, including bottle glass, ceramics and pressed glass.

Table 5. Summary of Identified Vertebrate Remains from the Ray House, March 1983.

Taxonomic Identification	No.	% Class	% Total	MNI
BIRD				
<u>Branta canadensis</u> (Canada goose)	1	11.0%	3.6%	1
cf. <u>Branta canadensis</u> (Canada goose)	1	11.0%	3.6%	1
Chicken/turkey	2	22.0%	7.1%	1
Fringillidae (Finches and allies)	1	11.0%	3.6%	1
Unidentified bird	4	45.0%	14.3%	1
Subtotal	9	100.0%	32.0%	
MAMMAL				
Leporidae (Hares and rabbits)	1	5.0%	3.6%	1
Cricetidae (New world rats and mice)	3	16.0%	11.0%	2
<u>Rattus norvegicus</u> (Norway rat)	1	5.0%	3.6%	1
<u>Felis catus</u> (domestic cat)	4	21.0%	14.0%	1
Artiodactyla (even-toed hoofed mammal)	6	32.0%	21.0%	1
<u>Sus scrofa</u> (domestic pig)	3	16.0%	11.0%	1
<u>Bos taurus</u> (domestic cattle)	1	5.0%	3.6%	1
Subtotal	19	100.0%	68.0%	
TOTAL	28	---	100.0%	

Bottle Glass. A total of 243 specimens were recovered from excavations around the Ray house. The predominate number of glass fragments were not identifiable or datable. A positive date was placed on only one recovered item; a round, green medicinal (ointment?) bottle manufactured by the Owens-Illinois Glass Company. The Duraglas mark shown on the base of the bottle was made after 1940, with this specific specimen dated 1949, from plant three, Fairmont, West Virginia (Toulouse 1972:403). This specimen was recovered from excavation unit three, level one.

A fragment of a white Boyd lid was recovered from excavation unit 13, level one and was manufactured by the Diamond Glass Company, Royersford, Pennsylvania, after 1924 (Toulouse 1972:550). This is a second item found positively dating after the initial occupation of the Ray house.

One patinated neck and finish fragment with a smooth prescription finish formed with a lipping tool was recovered from unit 14, level 4 and indicates a pre-1920 time period. This piece again post-dates the Ray family occupation.

The remainder of the bottle glass and chimney glass fragments are summarized in Appendix A, Table 3. Over half (54.3%) of all bottle specimens exhibited patination indicative of a weathering process.

Pressed Glass. A total of 22 pieces of pressed glass were recovered from excavation units 3, 12, 14 and 16. This category includes five fragments of a light green glass with an inside flute and rounded top, possibly from a small vase, thirteen frosted clear embossed body fragments from a glass or jar, one clear stem from a goblet, and three clear octagonal shaped glass fragments. This small sample indicates at least three possibilities; 1) sampling biases, 2) occupants of the Ray house were curating and saving items of pressed glass, 3) or glass items were rare in this household.

Ceramic pottery fragments: A total of 195 refined and coarse earthenware specimens were recovered from all excavation units. Ceramic types span a time period of pre-Civil War, ca. 1830, all the way to the present day. The predominate number of specimens are plain whiteware, especially common is the thicker variety representative of a later (post-Civil War) period. No makers marks were recovered thus enabling only rough time periods to be given. Most of the recovered remains fit into the time frame suggested for the building and use of the Ray house--post 1850. Each specimen is discussed in detail in Appendix A, Table 2.

Architectural

A total of 2730 architectural specimens were recovered and represent 75.1% of the total Ray house assemblage. Mortar/cement contributed 1178 specimens or 43.1% of the total number of architectural items and weigh approximately 13 kg. This was followed by window

glass (n=542, 19.8%) and nails; both wire and cut varieties (n = 253, 9.2%; n = 348, 12.7% respectively). Other construction hardware and building materials including brick and miscellaneous building articles contributed the remaining 15.2%.

Metal. Analysis of the recovered metal from the Ray house excavations was easily accomplished. However, it is safe to say that at least 85% of the assemblage was extremely rusted or corroded. This fact necessitated the grouping of metal into four classes: nails, identifiable metal artifacts, other construction hardware (which includes numerous classes of artifacts), and miscellaneous. There were no datable objects from the recovered assemblage. The following sections will discuss nails and other identifiable metal artifacts. Figure 6 shows metal artifacts including square cut and wire nails and razor blade fragments.

Nails. Over 56% of all recovered nails were square cut; both common and finish. Of these 340 specimens, 191 (56.5%) are fragments of common cut nails and could not be assigned pennyweight (length). All of the nails are summarized by type and pennyweight in Table 6. A majority of this assemblage are size 8d or smaller. According to Fontana and Greenleaf the usual forms of square cut nails (from an 1881 source) suggest the following uses:

Customarily, however 4d cut nails were used for shingling and slating; 6d for clap boarding; 6 and 8d for finish; 8 and 9d for flooring; 9 and 10d for boarding; and 40d and larger for framing (Fontana and Greenleaf 1962:5760).

The most common cut nail (6d) was often used in light framing as well as in boxes and wooden crates (Fontana and Greenleaf 1962:57). Square cut finishing nails represent a mere .89% of the total cut nail assemblage. Wire nails were also found at the site with common finish and plasterboard nails representing nearly 44% of the total nail assemblage. By approximately 1890 wire nails start to outnumber cut nails in frequency due to the automation advances in making wire nails (Fontana and Greenleaf 1962:55). At the Ray house, wire nails occur in all vertical proveniences except those in unit 9 and suggests a thorough mixing of the sites' assemblage. This also shows there have been numerous construction projects at the house over its span of existence.

Brick. A total of 41 brick fragments were recovered from nine excavation units. Most of these were small pieces with no identifying marks. The large bricks associated with the fireplace support were all left in place and not collected. The recovered assemblage was fairly uniformly distributed around the house and evidence no distinct pattern of use.

Window Glass. In the recent past, several studies have attempted to correlate a chronological scale for window glass, based upon its ranges of thickness. This is based upon a belief that glass

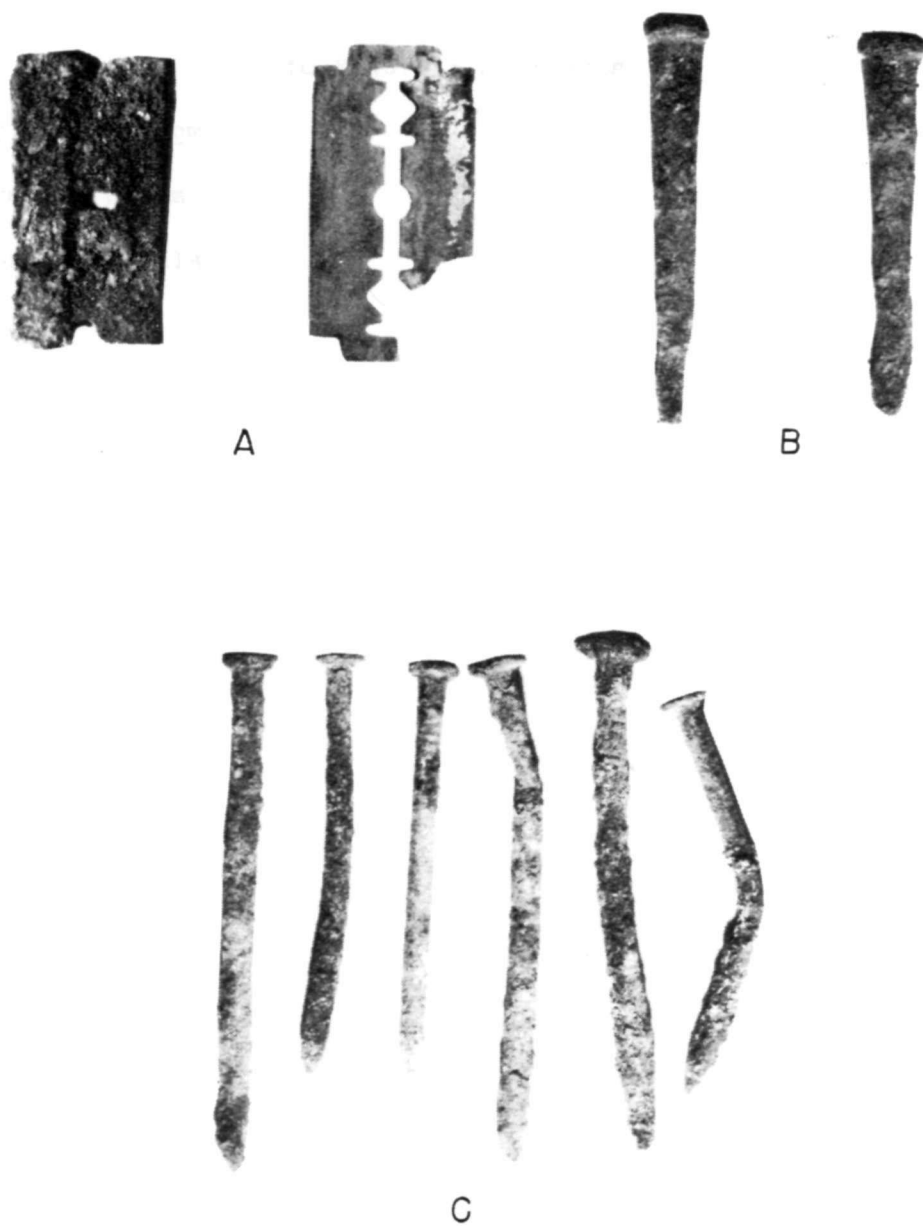


Figure 6. Metal artifacts, including square cut, wire nails and razor blade fragments.

Key to Figure 6 Artifacts

- A. Razor blade fragments.
- B. Square cut nails.
- C. Common wire nails.

Table 6. Summary of Recovered Nails, both square cut and wire according to Pennyweight recovered from the Ray house, March 1983.

	2	3	4	5	6	7	8	9	10	12	16	20	Frag- ments	TOTAL	% of TOTAL
Square cut, Common	3	24	32	2	55	5	19		3		2	1	191	337	56.0%
Square cut, Finish	1			1	1									3	.5%
Wire, Common	5	36	8	2	60	3	50		3	7	6	3	51	234	39.0%
Wire, Finish		1	4		2	1				2	1			11	1.9%
Wire, Plasterboard	1	2	8	5										16	2.6%
TOTAL	10	63	52	10	118	9	69		6	9	9	4	242	601	100.0%

consistently became thicker over time throughout the nineteenth century. Roenke (1978) and Walker (1971) are the primary sources for such an analysis. Basically, these studies suggest that mean thickness of window glass correlates with the date of construction for nineteenth century buildings.

All pieces of flat glass from the Ray house excavations were measured. Minimum, maximum, and mean thicknesses were calculated for each level within each unit. Colors of glass were also noted. Mean thickness (see Appendix B, Table 1) ranged from 1.0 to 2.6 mm in thickness. Roenke (1978:116) suggests age ranges for window glass thickness in use in the Pacific Northwest during the 1800s. According to his table (converted to metric) the average range of dates from the Ray house flat glass is between 1845-1855 and post 1915. While this is quite a broad range it does fit in with the overall building scheme of the Ray house. It must be realized, however, that Roenke's study is on a geographic area far removed from the Ozarks and may not be the best representative of this region. Walker (1971) suggests another chronology which varies from Roenke. Walker derives his results from data from various regions of the U.S. According to Walker (1971:78) no glass thinner than 1.6 mm is found on sites dating after 1845. This would suggest that some of the Ray house glass was constructed prior to 1845. This is in contrast from Roenke's results. Again, this difference could be from sampling biases or regional differences. To date no studies have been undertaken suggesting mean window glass chronologies for the western Ozark region. Until then the data will be presented here in the hopes of its future use in further archeological studies.

Personal

This category of specimens makes up the second lowest ranked group of recovered remains. A total of 55 specimens for 1.5% of the total were recovered. Personal items are predominately buttons (n = 10, 18.1%).

Buttons. A total of ten buttons were recovered from the March 1983 excavations. Unit 1-A, level 2, contributed one ferrous metal button to the collection. This piece appears to be a trouser or coveralls button decorated with raised stars circling the outer edge and is 5/8-inch in diameter. Unit 2, level 1 contained one ferrous metal coat button with a shank. The top side of the button had a decoration with lettering which is no longer discernable. It also is 5/8 inch in diameter. Four buttons were recovered from unit 4, levels 1, 2, and 3. Two specimens are small white china four hole sew-through porcelain buttons. These items date approximately 1860s-1890s (Luscomb 1967). The third specimen is a brass button fragment which appears to be part of a two-piece button with the backside missing. It is a two-hole sew-through with the following letters on the top " * MODE * DE PARIS " and is 1/2-inch in diameter. The last piece is a 5/8-inch in diameter aluminum button which is a two-hole sew-through painted with a matte gray finish

that has worn off the edges. The bottom side is convex while the top side is flat. Unit 6 contained two small white opaque china buttons in level one. One specimen has no decoration and the other has the remnants of a blue calico transfer pattern on the outer ring. Both are four-hole sew-through. These specimens date approximately 1860s-1890s (Luscomb 1967). Unit 9, level 1, contained one white opaque glass men's collar button 3/8-inch in diameter. Unit 13, level 2, contained one four-hole sew-through small china button with an outer ring painted with a dark green/gray color. This specimen has a 7/16-inch diameter and dates possibly from the late 1880s-1890s (Luscomb 1967). As with the other datable material, buttons correlate with dates assigned to the occupation of the Ray house in post Civil War times.

Tools and Equipment

This represented the smallest number of recovered artifacts by category. A total of 14 artifacts or .38% of the total recovered specimens were of this category.

Ammunition. Three specimens fall into this class of artifacts. Unit 8 contributed one brass center fire cartridge with head stamped markings "W.R.A. Co. 38 S & W." There is no firm date for this cartridge, however, according to White and Munhall (1977:156), the label indicates a date of possibly early twentieth century. The caliber and size indicates that it was in a handgun- .38 special or .38 Smith and Wesson. Unit 12 contributed one brass .22 short cartridge with no headstamping. It possibly was used as a handgun, however, and dates from 1857 to the present. One shotgun shell base was recovered from unit 3. The headstamping read "W.R.A. No. 8 STAR." The base is somewhat bent and offers no dating evidence. No military artifacts, in this case weapons, lead balls, etc., were recovered in any test unit or shovel test during the March 1983 excavations. This lack of Civil War artifacts indicates the disturbed and altered nature surrounding the Ray house and probably the entire battlefield area.

Prehistoric Lithics

Three pieces of prehistoric lithic material were recovered from three separate test units. Unit 5, level 5, contributed one flake. Unit 12 also had one flake, and unit 13 produced one biface fragment. Surface collection of the fields immediately to the east and to the south (back) of the house provided a more varied prehistoric sample. The east field yielded one proximal flake and one fragment of a stemmed projectile point with a broken base and two biface fragments. The field behind the house produced one flake, one straight or contracting stem projectile point with a broken tip and base, and one lanceolate point base with grinding on at least one side. These remains indicate a broad span of time of occupation for the land surrounding the Ray house, and are shown in Figure 7.

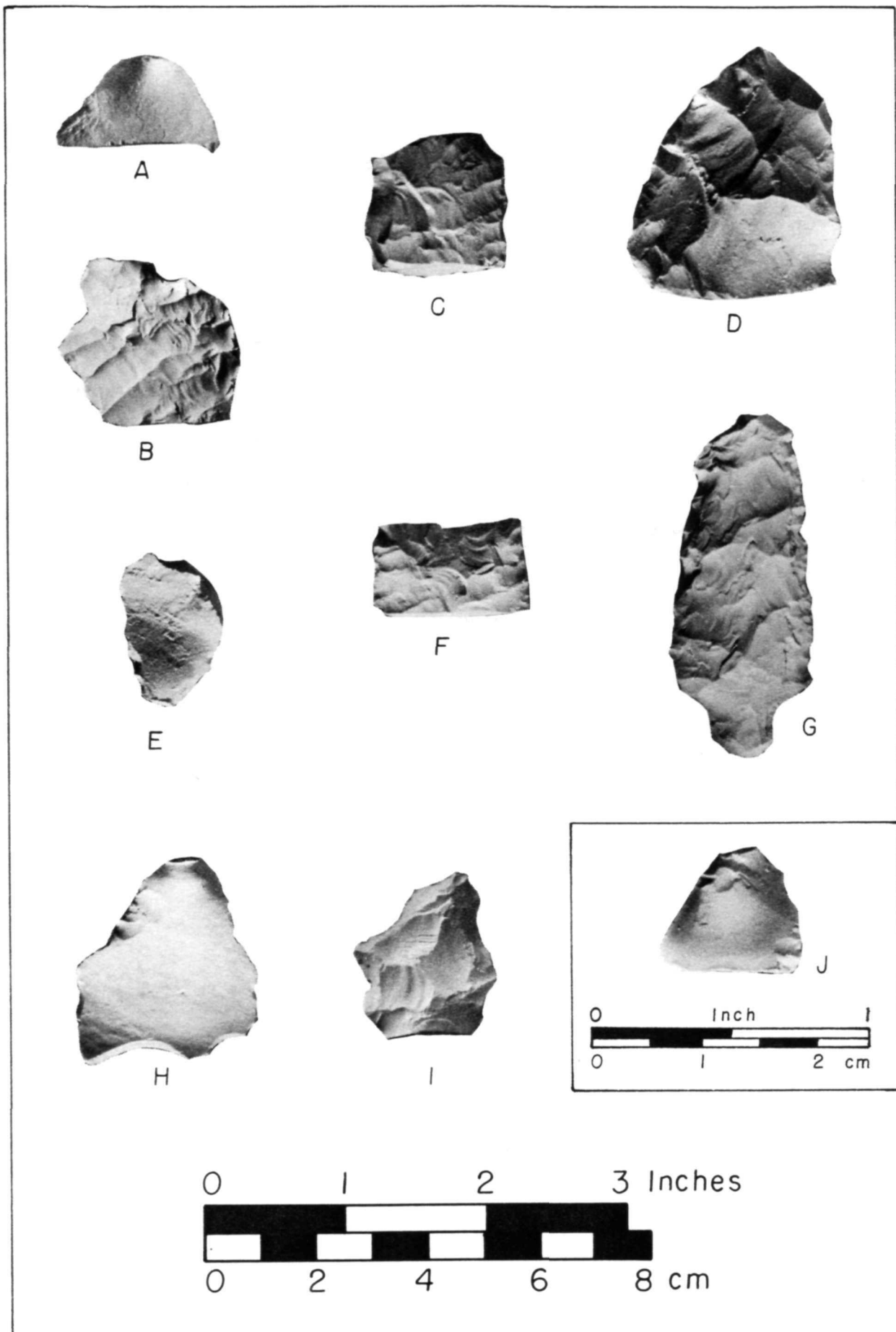


Figure 7. Prehistoric lithics recovered at and around The Ray House

Key to Figure 7 Artifacts

Surface Collection

- A. Prehistoric flake.
- B. Prehistoric biface fragment.
- C. Prehistoric fragment of a stemmed projectile point.
- D. Prehistoric biface fragment.
- E. Prehistoric flake.
- F. Prehistoric lanceolate point base.
- G. Prehistoric straight or contracting stem projectile point.

Excavation Units

- H. Prehistoric flake.
- I. Prehistoric biface fragment.
- J. Prehistoric flake.

Miscellaneous

The final category discussed contains 233 specimens for a total of 6.4% of the total assemblage. Included in this category are all items not fitting into the other specific classes or are not identifiable at this time.

Identifiable Metal. A total of 94 specimens of identifiable metal artifacts (e.g., stove parts) were recovered from 14 test units. Appendix C, Table 1 summarizes identifiable non-construction metal artifacts. The artifacts in this category ranged from recent motor vehicle light plugs to a John Deere tractor part, to numerous ferrous metal wires and hooks. Many of the above items were severely rusted and even upon cleaning were identifiable only to the point to say "metal hook" and no further. No items gave an early date to the recovered assemblage.

ARCHITECTURAL REMAINS

Perhaps more interesting from a historical viewpoint, than the cultural assemblage, is the lack of architectural remains associated with a fireplace on the west side of the house. Excavation initiated on the east side of the house disclosed a heavy stone base for support of the chimney overlain by a scattering (concentrated) of small rocks. Such a stone support is needed to maintain the support of the fireplace along the house (Figures 8 and 9). Excavation units on the west side of the house showed no such remains. There were also no indications of the rocks having been removed. No stains or color changes in the soil indicative of such a disturbance were found. From the archeological perspective, no fireplace ever stood on the west side of the Ray house (Figure 10). The following photographs elucidate the differences between excavation units on the east and west sides of the house. According to Brann (1976:138) a masonry fireplace and chimney foundation must go under ground below the frost level. Brann goes on to suggest a reliable fireplace foundation scheme (see Figure 11) which would be essential in supporting a fireplace and chimney. If this plan or a similar one were used at the Ray house for the "missing" west fireplace, archeological evidence would certainly have been noted. No such evidence was found.



Figure 8. Test Excavations along the east wall of the Ray House showing upper level chimney foundation stones.

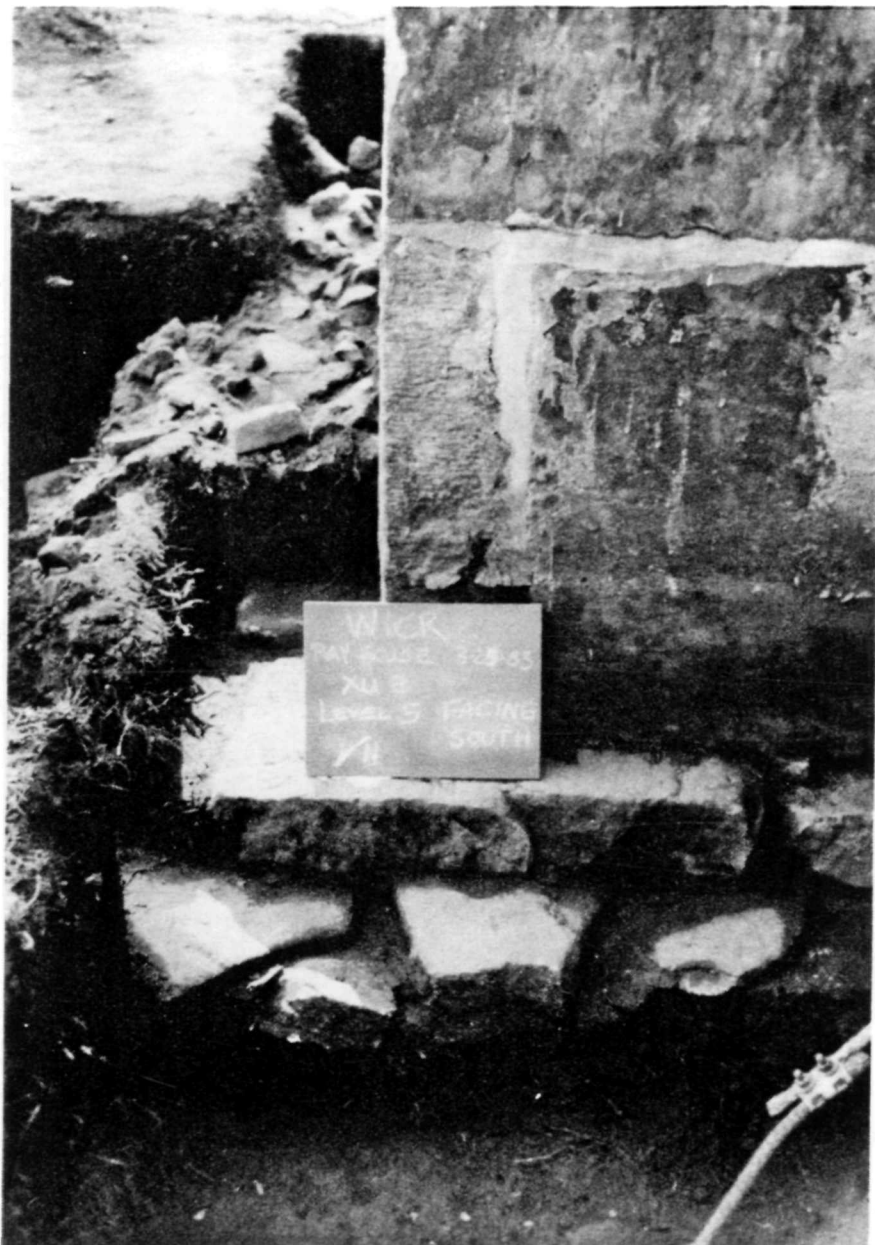


Figure 9. Excavation Unit 8 showing the stone foundation for the East Fireplace.

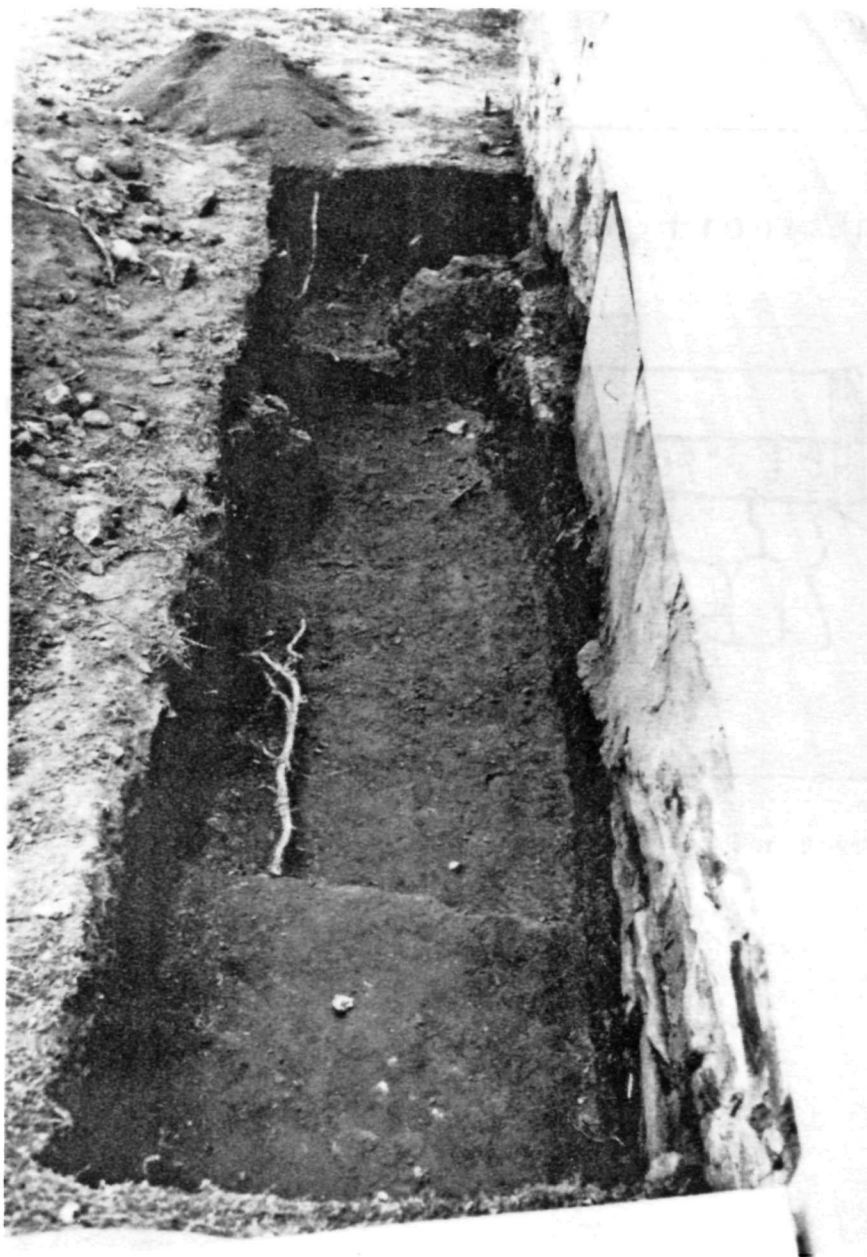


Figure 10. Test Excavations along the west wall of the Ray house.

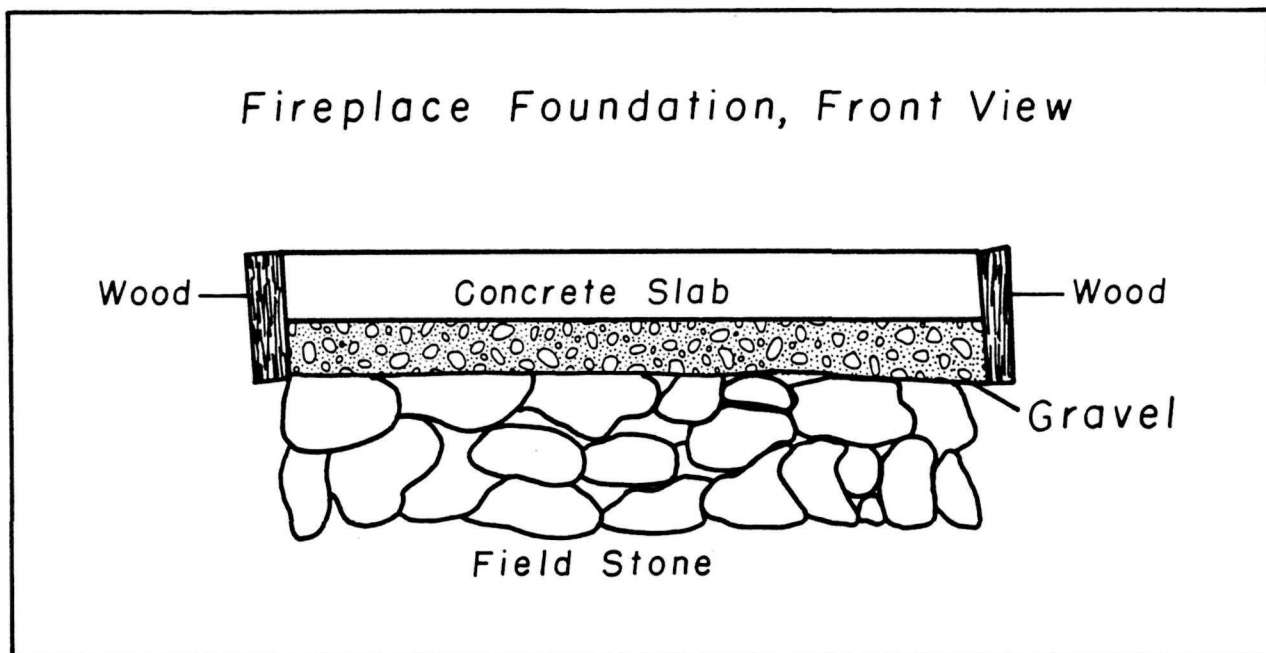


Figure 11. Suggested structural profile to prevent frost from cracking foundation (taken from Brann 1976:133).

INTERPRETATION AND SUMMARY

The Ray house excavations took place in March of 1983 to examine two basic questions resulting from management needs involving building stabilization. These questions involve determining specific behavioral activities of the Ray family from extant cultural remains and to determine archeologically if a fireplace ever stood on the west side of the house. The collected body of data is inconclusive as to the nature of the Ray family's life but does give a general indication of refuse disposal over time. Most recovered remains indicate a post Civil War time period. In fact, no remains directly associated with the Civil War itself were recovered. Some earthenware can be said to be manufactured prior to 1860 but no firm dates can be given on any artifact. The excavation units on the west side of the house failed to turn up any evidence of the type of stone support found on the extant fireplace which would have been needed to support such a structure.

Testing of an area in the immediate back yard of the house for the proposed water tank provided positive shovel tests in 3/4 of the units. This indicates two possibilities: 1) we discovered the general backyard garbage scatter that has accumulated over time or 2) a feature (e.g., chicken coop, privy) was encountered. At this time no definitive answer can be given and further archeology is suggested to determine the backyard situation. The plowed fields surrounding the Ray house also offer high potential in assessing the nature and location of the Ray outbuildings. It has been shown that present day surface concentrations correlate to a certain degree with locations of buildings as suggested by Bray (1975). Furthermore, continued plowing will further obliterate any evidence of the Ray's outbuildings. In an earlier note, prehistoric lithics were also recovered in three excavation units and on the surface of the plowed fields. In fact, one broken lanceolate point base is perhaps the earliest artifact found in the entire park and represents a pre-Archaic time horizon. The foundation around the Ray house offers insights into the overall lifeways spanning at least 100 years but gives no direct evidence that a Civil War battle ever took place. This information alone suggests the disturbed nature of the house. Only when combining the limited archival information with the archeological data is it possible to infer past lifeways at the Ray farm. The positive shovel tests, abundant surface material in the plowed fields combined with accumulated data offer new insights into the layout of the entire Ray farmstead. The information presented in this report is substantial enough to indicate the untapped potential of historic archeology in Wilson's Creek National Battlefield.

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Appendix A

Summary of Domestic Remains

Appendix A Table 1. Summary of Unmodified Vertebrate Remains for all size grades, from the Ray House, March 1983.

Excav. Unit	Level	Catalog Numbers	Weight in Grams*				Total
			Grade 1	Grade 2	Grade 3	Grade less than 3	
XU1	2	101/002			2		2
	4	101/004			3		3
XU1A	4	101A/004			1		1
XU2	1	102/001		8	1		9
	2	102/002		1	2		3
	3	102/003				*	*
	4	102/004				1	1
	5	102/005		7	*	*	7
	6	102/006		3			3
XU3	1	103/001	22	50	2	1	75
	2	103/002		1	1	*	2
	3	103/003		*	2	*	2
XU4	1	104/001			2		2
	3	104/003			3	*	3
XU5	2	105/002		6			6
	3	105/003			*		*
XU6	2	106/002			*		*
XU10	2	110/002			1		1
XU16	2	116/002				*	*
	5	116/005			2		2
Total			22	76	22	2	122

*Weight is to the nearest gram. *Asterisk indicates less than 1 gram.

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983.

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
REFINED EARTHENWARE							
XU 3	3	103/003	whiteware (1)	hand painted	green, brown	unknown	1830s-1860s (C. Price 1982:21).
XU 8	3	108/003	whiteware (1)	hand painted	green, blue, black	saucer	sprig design 1830s-1860s
XU 15	3	115/003	whiteware (1)	hand painted	purple	unknown	only annular design showing 1830s-1860s
XU 16	5	116/005	whiteware (1)	hand painted	green	unknown	annular design showing 1830s-1860s
XU 3	2	103/002	whiteware (1)	annular ware	blue, white on yellow	bowl	common on utilitarian wares during Civil War and post Civil War
XU 3	3	103/003	whiteware (2)	annular ware	blue, white on yellow	bowl	one piece is a rim sherd, dates to Civil War and post Civil War
XU 14	4	114/004	whiteware (1)	annular ware	cream color band on yellow	bowl	Civil War and post Civil War
XU 14	4	114/004	whiteware (1)	mocha ware	mocha	rimsherd of bowl	Civil War and post Civil War
XU 16	5	116/005	whiteware (1)	mocha ware	mocha	bowl	Civil War and post Civil War

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
REFINED EARTHENWARE con't.							
XU 4	2	104/002	whiteware (2)	stamped	red	saucer or plate	both pieces fit to- gether 1850s - 1870
XU 5	1	105/001	whiteware (1)	stamped	blue	unknown	thicker than most of the recovered ceramics, burned 1850s-1870
XU 12	1	112/001	whiteware (1)	stamped	red	unknown	1850s-1870
Shovel Test 14-3		027/000	whiteware (1)	stamped	green	unknown	1850s-1870, leaf pattern
XU 1	3	101/003	whiteware (2)	sprigware	1 brown, 1 blue	bowl	1850s-1870
XU 1	4	101/004	whiteware (2)	spongeware	1 red, 1 green	(1) rimsherd	1850s-1870 (C. Price 1982:19)
XU 2	4	102/004	whiteware (2)	spongeware	blue	plate rim sherds	1850s-1870
XU 4	1	104/001	whiteware (1)	spongeware	green, red	unknown	1850s-1870
XU 4	4	104/004	whiteware (1)	spongeware	blue	plate	1850s-1870 may be from same vessel as in XU 2 level 4
XU 4	5	104/005	whiteware (1)	spongeware	red	unknown	1850s-1870
XU 4	6	104/006	whiteware (1)	spongeware	green	cup	1850s-1870

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
REFINED EARTHENWARE con't.							
XU 8	4	108/004	whiteware (1)	spongeware	light blue	bowl	same pattern in XU 1 level 3 pre & post Civil War
XU 10	2	110/002	whiteware (1)	spongeware	blue	bowl	pre & post Civil War, 1850-1870
XU 13	1	113/001	whiteware (1)	spongeware	blue	bowl	pre & post Civil War, 1850-1870
XU 15	4	115/004	whiteware (1)	spongeware	blue	bowl	1850s-1870
Shovel test 13-6		017/000	whiteware (1)	spongeware	blue	crock or bowl	later end of 1830s'-1870
Shovel test 14-3		027/000	whiteware (1)	spongeware	blue	crock or bowl	may be part of vessel from 017/001
XU 1	4	101/004	whiteware (1)		white	unknown	Civil War & after*
XU 1	2	101/002	whiteware (1)		white	unknown	" " " "
XU 1A	3	101A/003	whiteware (1)		white	unknown	" " " "
XU 2	1	102/001	whiteware (2)		white	large bowl/ basin	" " " "
XU 2	6	102/006	whiteware (1)		white	cup?	" " " "

* Undecorated whiteware vessels were most common in the period following the Civil War (C. Price 1982:22)

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
REFINED EARTHENWARE con't.							
XU 3	1	103/001	whiteware (1) porcelain (1)		white	unknown plate	rim sherd, 1860s- 1880s
XU 3	2	103/002	whiteware (4)		white	cup	Civil War & after all from same vessel
XU 3	4	103/004	whiteware (1)		white	unknown	Civil War & after, 1860-1880
XU 3	5	103/005	whiteware (1)		white	unknown	" " " "
XU 4	2	104/002	whiteware (1)		white	cup	" " " "
XU 4	1	104/001	whiteware (1)		white	plate	" " " "
XU 4	3	104/003	whiteware (1)		white	plate (?)	" " " "
XU 4	5	104/005	whiteware (2)		white	unknown	one is body sherd; the other is rim sherd
XU 5	1	105/001	whiteware (1) porcelain (1)		white	plate plate	Civil War & after Civil War period
XU 5	2	105/002	whiteware (1)		white	unknown	rimsherd
XU 5	3	105/003	whiteware (5)		white	plate	(4) rimsherds from plate
XU 5	4	105/004	whiteware (8)		white	cup, plate	(1) is a cup rim, another is from plate, all other are body sherds

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
REFINED EARTHENWARE con't.							
XU 6	2	106/002	whiteware (1)		white	plate	1860s-1880s
XU 7	2	107/002	whiteware (8)		white	plate?	all pieces in 1860s- 1880s, poor condition
XU 7	3	107/003	whiteware (7) pearlware (1)		white white	plate plate	1860s-1880s
XU 7	4	107/004	whiteware (3)		white	unknown	1860s-1880s
XU 8	3	108/003	whiteware (2)		white	(1) plate, (1) unknown	1860s-1880s
XU 9	2	109/002	whiteware (1)		white	unknown	1860s-1880s
XU 10	1	110/001	whiteware (1)		white	plate?	1860s-1880s
XU 10	2	110/002	whiteware (2)		white	unknown	1860s-1880s (1) sherd is charred
XU 10	5	110/005	whiteware (2)		white	(1) plate (1) unknown	1860s-1880s
XU 11	4	111/004	whiteware (1)		white	unknown	1860s-1880s
XU 12	1	112/001	whiteware (1)		white	plate	eroded condition 1860s-1880s
XU 12	2	112/002	whiteware (1)		white	plate	1860s-1880s

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
REFINED EARTHENWARE con't.							
XU 13	2	113/002	whiteware (4)		white	plate	1860s-1880s
XU 13	3	113/003	whiteware (3)		white	(2) unknown (1) cup	1860s-1880s
XU 13	4	113/004	whiteware (2)		white	plate?	1860s-1880s
XU 14	1	114/001	whiteware (2)		white	cup	1860s-1880s
XU 14	3	114/003	whiteware (3)		white	plate?	1860s-1880s
XU 15	2	115/002	whiteware (18)		white	(1) plate	Rim in good condition while others in poor condition 1860s-1880s
XU 15	3	115/003	whiteware (8)		white	(1) plate	(3) specimens show charring 1860s-1880s
XU 15	4	115/004	whiteware (1)		white	unknown	1860s-1880s
XU 16	2	116/002	whiteware (1)		white	unknown	small & eroded 1860s-1880s
XU 16	4	116/004	whiteware (6) porcelain (1)		white white	plate, cup	(1) whiteware sherd is heavily burned 1860s-1880s

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
REFINED EARTHENWARE con't.							
ST 13/2		013/000	whiteware (1)		white	plate	1860s-1880s
ST 13/3		014/000	whiteware (2)		white	plate, cup	1860s-1880s plate fragment was burned
ST 13/5		016/000	whiteware (2)		white	unknown	1860s-1880s
ST 13/6		017/000	whiteware (1)		white	unknown	charred 1860s-1880s
ST 14/2		026/000	whiteware (1)		white	cup	good condition
ST 14/4		028/000	whiteware (1)		white	unknown	1860s-1880s
ST 14/9		032/000	whiteware (1)		white	plate	1860s-1880s
ST 14/1		033/000	whiteware (1)		white	plate	1860s-1880s
XU 1	4	101/004	whiteware (1)	transfer print	red	cup	pre-Civil War
XU 1A	3	101A/003	whiteware (2)	transfer print	red blue	plate cup	pre-Civil War
XU 3	1	103/001	whiteware (2)	transfer print	green	(1) plate	1850s-1860s

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
REFINED EARTHENWARE con't.							
XU 5	3	105/003	whiteware (1)	transfer print	blue glaze	cup	pre-Civil War
XU 13	4	113/004	whiteware (1)	transfer print	red	cup	pre-Civil War
XU 14	2	114/002	whiteware (1)	transfer print	red	cup	pre & post Civil War
XU 15	2	115/002	whiteware (1)	transfer print	black	plate	1850s-1860s
XU 15	3	115/003	whiteware (1)	transfer print	blue glaze	cup	?
XU 16	4	116/004	whiteware (1)	transfer print	red	cup	pre-Civil War
XU 1	5	101/005	whiteware (1)	gold edged		plate	post-Civil War
XU 12	4	112/004	whiteware (1)	blue glaze? annular ware?	?	?	?
XU 13	2	113/002	whiteware (2)	rockingham glaze		bowl	vessel is charred 1850s
XU 13	4	113/004	whiteware (2)	rockingham glaze		unknown	1850s
XU 15	1	115/001	whiteware (1)	repousse decoration	cream	bowl	decoration also called relief moulding. Popular after 1860 (Derven: 1980:125)

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
COARSE EARTHENWARE							
XU 2	2	102/002	coarse earth- enware (2)	albany slip		(1) bowl (1) lid to jar	This decorative type dates no earlier than 1803 (Ketchum 1970:12) and was shipped west about 1830 with its use dropping sharply after 1940 (Derven 1980:123)
XU 4	1	104/001	coarse earth- enware (1)	albany slip		jar lid	
XU 4	2	104/002	coarse earth- enware (2)	albany slip		jar lid	
XU 4	3	104/003	coarse earth- enware (1)	albany slip		bowl	"
XU 5	1	105/001	coarse earth- enware (1)	albany slip		bowl	"
XU 5	3	105/003	coarse earth- enware (2)	(1) albany slip (1) salt glaze		jar	"
XU 7	2	107/002	coarse earth- enware (1)	albany slip		bowl	"
XU 8	3	108/003	coarse earth- enware (1)	albany slip		bowl	"
XU 8	4	108/004	coarse earth- enware (1)	salt glazed		bowl	"

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
COARSE EARTHENWARE con't.							
XU 9	1	109/001	coarse earth- enware (1)	albany slip		bowl	post 1830
XU 9	2	109/002	coarse earth- enware (1)	albany slip		bowl	"
XU 10	4	110/004	coarse earth- enware (1)	albany slip inside salt glaze outside		bowl	"
XU 12	3	112/003	coarse earth- enware (1)	albany slip		bowl	"
XU 14	1	114/001	coarse earth- enware (1)	albany slip		bowl	"
XU 14	2	114/002	coarse earth- enware (2)	(1) albany slip (2) albany slip inside salt glaze outside		bowl	"
XU 14	3	114/003	coarse earth- enware (2)	albany slip		bowl	"
XU 14	5	114/005	coarse earth- enware (1)	salt glazed		bowl	"
XU 15	1	115/001	coarse earth- enware (1)	albany slip		bowl	"

Appendix A, Table 2. Summary of all Ceramic Fragments recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CAT #	WARE & NUMBER	DECORATION	COLOR OF DESIGN	VESSEL FORM	DATE/COMMENTS
COARSE EARTHENWARE con't.							
XU 15	2	115/002	coarse earth- enware (1)	albany slip		crockery base of bowl	post 1830
XU 16	4	116/004	coarse earth- enware (1)	albany slip		bowl	"
XU 16	5	116/005	coarse earth- enware (1)	albany slip		bowl	"
ST 13/2		013/000	coarse earth- enware (1)	albany slip		bowl	"
ST 13/6		017/000	coarse earth- enware (2)	(1) glaze (1) albany slip		?	"
ST 13/7		018/000	coarse earth- enware (1)	albany slip inside salt glaze outside		jar base	"
ST 14/5		029/000	coarse earth- enware (1)	albany slip inside salt glaze outside		?	"
ST 14/12		034/000	coarse earth- enware (1)	albany slip		?	"

Appendix A, Table 3. Summary of Bottle Glass according to provenience, recovered from the Ray House, March 1983.

PROVEN- IENCE	LEVEL	CATEGORY & NUMBER	COLOR	FORM	FINISH	MOLD	DATE/COMMENTS
XU1	2	bottle: (1)	brown	?			neck and shoulder fragment
	3	bottle: (1)	clear	?			body fragment, patinated
XU1A	1	bottle: (1)	clear	?			body fragment
	3	bottle: (1) foodstuff	clear	fruit jar			body fragment, this piece contains 1/4 inch cross- hatching and is similar to a jar made by the Hazel-Atlas Glass Co. of Wheeling, West Virginia (Toulouse 1977:36)
	4	bottle: (1)	clear	?			body fragment, patinated fragment
XU2	1	bottle: (1) foodstuff	aqua	fruit jar			of a shoulder seal mason jar, patinated
	1	bottle: (3)	clear	?			body fragments, patinated
	1	chimney glass (7)	clear	chimney			fragments, patinated
	2	chimney glass (2)	clear	chimney			fragments
	2	bottle: (1)	cobalt blue	?			body fragment, patinated
	2	bottle: (1)	clear with purple tint	?			body fragment
	2	bottle: (1)	aqua	?			body/base fragment, patinated
	2	bottle: (1)	white	milk glass			lip/collar fragment

? indicates uncertain function

Appendix A, Table 3. Summary of Bottle Glass according to provenience, recovered from the Ray House, March 1983
(continued).

PROVEN- IENCE	LEVEL	CATEGORY & NUMBER	COLOR	FORM	FINISH	MOLD	DATE/COMMENTS
XU2	3	bottle: (1)	cobalt blue	?			base fragment with a letter "B", patinated
	4	bottle: (2)	clear	?			body fragments
	5	bottle: (2)	clear	?			body fragments, patinated
XU3	1	bottle: (3)	aqua	?			body fragments, patinated
	1	bottle: (4)	light green	? ?			body fragments, patinated
	1	bottle: (7)	clear	?			body fragments, patinated
	1	bottle: (1) medicinal	green	round	contin- uous thread	machine	patinated ointment (?) bottle manufacturer by Owens-Illinois Glass Co. Duraglas mark made since 1940, specimen dated to 1949 from plant 3, Fairmont, West Virginia (Toulouse 1972:403).
	2	bottle: (4)	clear	?			(3) body fragments, (1) base fragment
	2	chimney glass (1)	clear	chimney			patinated fragment
	2	bottle: (1)	aqua	?			body fragment, patinated

? indicates uncertain function

Appendix A, Table 3. Summary of Bottle Glass according to provenience, recovered from the Ray House, March 1983 (continued).

PROVEN- IENCE	LEVEL	CATEGORY & NUMBER	COLOR	FORM	FINISH	MOLD	DATE/COMMENTS
XU3	2	bottle: (1)	clear with green tint	?			body fragment
	3	bottle: (4)	clear	?			body fragments, patinated
	3	bottle: (1)	aqua	?			body fragment
	3	chimney glass (8)	clear	chimney			fragments, patinated
	4	chimney glass (9)	clear	chimney			fragments, patinated
XU4	5	bottle: (1)	clear	?			body fragment
	1	bottle: (1)	clear	?			body fragment
	3	bottle: (1) alcohol	brown			brandy	collar fragment, patinated
	5	bottle: (1) perfume?	aqua	perfume?			neck fragment, very narrow and patinated
	6	bottle: (1)	light green	?			body fragment, patinated
XU5	1	bottle: (2)	lime green	?			body fragments
	1	bottle: (1)	brown	?			body fragment, patinated
	2	bottle: (1)	lime green	?			body fragment
	2	bottle: (1)	olive green	?			body fragment
	2	bottle: (1)	clear	?			body fragment, patinated
	3	bottle: (3)	aqua	?			body fragment, (2) are patinated

? indicates uncertain function

Appendix A, Table 3. Summary of Bottle Glass according to provenience, recovered from the Ray House, March 1983
(continued).

PROVEN- IENCE	LEVEL	CATEGORY & NUMBER	COLOR	FORM	FINISH	MOLD	DATE/COMMENTS
XU5	3	bottle: (1)	clear	?			body fragment, patinated
	3	bottle: (1)	lime green	?			body fragment
	4	bottle: (1)	aqua	?			body fragment, patinated
	4	bottle: (1)	olive green	?			body fragment, patinated
	5	bottle: (1)	lime green	?			body fragment
XU6	2	bottle: (2)	clear	?			body fragments, (1) is patinated
	2	bottle: (1)	light purple	?			body fragment
	2	bottle: (1)	light green	?			body fragment, patinated
	3	bottle: (2)	aqua	?			(1) lip fragment, (1) body fragment; both are patinated
XU7	1	chimney glass (1)	clear	chimney			fragment
	1	bottle: (1)	dark green	?			body fragment, patinated
	1	bottle: (6)	aqua	?			body fragment, patinated
	1	bottle: (2)	pale aqua	?			body fragment, patinated
	1	bottle: (1)	clear	?			body fragment, patinated
	2	bottle: (12)	aqua	?			(1) push up bottle base fragment, patinated; (11) body fragments

? indicates uncertain function

Appendix B

Summary of Window Glass Thickness

Appendix B, Table 1. Summary of window glass recovered from the Ray house, March 1983.

Provenience Level	Color				Total No. Patinated	Minimum thickness (mm)	Maximum thickness (mm)	Mean thickness (mm)	
	Green	Aqua	Clear	Yellowish/ Green					
XU1	1	1	2	0	0	2	2.3	2.8	2.6
XU1	2	0	4	0	0	1	1.3	2.8	2.2
XU1	3	1	0	0	0	0	2.4	2.4	2.4
XU1	4	5	0	0	0	2	1.9	2.5	2.0
XU1A	1	1	2	0	0	0	1.5	2.5	2.3
XU1A	2	2	8	5	0	1	1.5	2.8	2.1
XU1A	3	6	0	0	0	2	1.6	2.8	2.3
XU1A	4	8	3	1	0	1	1.5	2.8	2.6
XU1A	5	1	0	0	0	0	2.6	2.6	2.6
XU2	1	0	2	0	0	2	2.0	2.2	2.1
XU2	2	2	1	0	0	3	2.0	2.0	2.0
XU2	3	3	1	0	0	4	1.6	2.6	2.0
XU2	5	0	3	0	0	2	1.7	2.0	1.9
XU3	1	4	17	53	0	74	1.9	2.6	2.3
XU3	2	3	5	3	0	11	1.4	2.3	1.8
XU3	3	3	3	2	0	8	1.2	1.8	1.3
XU3	5	0	0	1	0	1	2.3	2.3	2.3
XU3	6	0	0	1	0	1	2.3	2.3	2.3
XU4	1	0	0	1	0	1	1.9	1.9	1.9
XU4	2	2	0	0	0	2	1.9	2.5	2.2
XU4	3	6	0	0	0	6	1.8	2.7	2.1
XU4	4	2	1	1	0	3	1.3	1.8	1.6
XU4	5	0	2	0	0	2	1.8	2.0	1.9
XU4	6	2	0	0	0	2	1.4	1.6	1.5
XU5	1	1	2	0	0	2	1.5	2.1	2.0
XU5	2	2	0	0	0	2	1.9	2.5	2.2
XU5	3	0	1	0	0	1	1.2	1.9	1.6
XU5	4	1	2	1	0	3	1.9	2.3	2.0
XU5	5	0	1	0	0	1	1.6	1.6	1.6

Appendix B, Table 1. Summary of window glass recovered from the Ray house, March 1983 (continued).

Provenience Level	Color				Total No. Patinated	Minimum thickness (mm)	Maximum thickness (mm)	Mean thickness (mm)	
	Green	Aqua	Clear	Yellowish/ Green					
XU6	1	1	4	21	0	1	1.8	2.6	2.3
XU6	2	0	0	3	0	0	1.7	2.3	2.1
XU6	3	0	0	2	0	0	2.3	2.3	2.3
XU7	2	22	5	9	0	5	1.4	2.7	1.9
XU7	3	0	13	0	0	0	1.8	2.8	2.0
XU7	4	1	1	1	0	2	1.6	1.8	1.7
XU8	3	0	1	3	0	1	1.7	2.6	2.0
XU8	5	0	1	0	0	1	1.6	1.6	1.6
XU9	1	0	0	1	0	0	2.2	2.2	2.2
XU9	3	1	1	1	0	1	1.8	2.2	2.1
XU10	1	0	5	2	0	0	1.6	2.3	1.9
XU10	2	0	3	3	0	1	2.3	2.5	2.4
XU10	3	0	0	1	0	0	2.6	2.6	2.6
XU10	5	0	1	0	0	1	2.0	2.0	2.0
XU11	1	4	0	0	0	0	2.6	2.8	2.7
XU11	2	1	4	2	0	3	1.5	2.7	1.9
XU11	3	0	19	2	0	0	1.5	2.8	2.2
XU11	4	1	2	0	0	3	1.9	2.3	2.1
XU11	5	1	0	0	0	0	1.7	1.7	1.7
XU12	1	3	3	8	0	1	1.7	2.8	2.3
XU12	2	0	20	9	0	21	1.4	2.7	2.1
XU12	3	0	2	10	0	12	1.5	1.9	1.8
XU12	4	0	3	0	0	2	2.3	2.5	2.4
XU13	1	8	0	1	0	3	1.8	2.7	2.3
XU13	2	7	0	1	0	5	1.9	2.7	2.3
XU13	3	3	0	1	0	3	1.8	3.0	2.2
XU13	4	38	21	6	7	64	1.4	1.7	1.5

Appendix B, Table 1. Summary of window glass thickness recovered from the Ray house, March 1983 (continued).

Provenience	Level	Color				Total No. Patinated	Minimum thickness (mm)	Maximum thickness (mm)	Mean thickness (mm)
		Green	Aqua	Clear	Yellowish/ Green				
XU14	1	1	10	4	0	2	1.4	2.8	2.0
XU14	2	7	1	2	0	10	1.7	3.1	2.0
XU14	3	2	0	0	0	2	1.7	1.8	1.7
	under rocks								
XU14	3	5	8	0	0	14	1.5	3.1	1.9
XU14	4	1	0	0	0	1	1.9	1.9	1.9
XU14	5	1	0	0	0	1	1.7	1.7	1.7
XU15	2	0	1	1	0	1	1.7	2.2	2.0
XU15	3	1	1	0	0	2	2.2	2.4	2.3
XU15	4	0	1	1	0	0	1.5	2.8	2.1
XU16	1	0	3	7	0	0	2.0	2.5	2.3
XU16	2	0	2	1	0	3	2.0	2.9	2.5
XU16	4	2	2	0	4	4	1.6	2.2	1.9
XU16	5	1	0	2	0	0	1.9	2.0	1.9
ST. 4	0	0	1	0	0	0	2.2	2.2	2.2
ST. 5	0	0	1	0	0	0	1.7	1.7	1.7
ST. 6	0	2	0	0	0	0	1.9	2.0	1.9
ST. 7	0	0	0	1	0	0	1.5	1.5	1.5
ST13/6	0	0	0	1	0	1	2.5	2.5	2.5

Appendix C

**Summary of Identifiable
Non-construction Metal**

Appendix C, Table 1. Summary of Identifiable Non-construction Metal Artifacts, Ray house March 1983.

PROVENIENCE	NO. OF SPECIMENS	DESCRIPTION/COMMENTS
XU 1A	1	Ferrous metal screw cap-heavy rust damage
XU 3	1	Ferrous metal ring - handmade, visible weld mark. Rim width $\frac{1}{2}$ inch, ring diameter - 2 inches
XU 3	1	Ferrous metal D ring - usually used in conjunction with straps. Appears to be handmade $\frac{3}{4}$ inch long, $\frac{15}{16}$ inch wide
XU 3	1	Thin lead washer $\frac{1}{2}$ inch diameter, very corroded
XU 3	1	Ferrous metal washer - heavily rusted, $\frac{3}{4}$ inch diameter
XU 3	1	Fragment of a ferrous metal fruit jar lid seal
XU 3	1	Brass rivet and washer - heavy corrosion
XU 3	35	Razor blade fragments
XU 3	1	Ferrous metal washer - heavily rusted - $\frac{1}{2}$ inch diameter
XU 4	1	Metal buckle, $\frac{7}{8}$ inch wide, $\frac{1}{2}$ inch long, ferrous
XU 4	1	Piece of wire - looped on both ends. 4 inches long
XU 4	1	Wire hook fragment. Very heavy rust damage $1\frac{1}{2}$ inches long and 1 inch wide
XU 5	1	Tail light base for a motor vehicle - recent

Appendix C, Table 1. Summary of Identifiable Non-construction Metal Artifacts, Ray house
March 1983 (continued).

PROVENIENCE	NO. OF SPECIMENS	DESCRIPTION/COMMENTS
XU 5	1	Ferrous metal stove part fragment. Very heavy rust. Probably part of stove lid
XU 5	1	Stove part fragment. Heavy rust
XU 5	1	Door lock part - probably part of the latching mechanism - no ID marks
XU 6	1	Piece of wire
XU 7	1	Ferrous metal latch - hook is missing with wire attached to other end
XU 7	1	Ferrous metal appears to be a washer - hole 1/16 inch - heavily rusted
XU 8	1	Tin or aluminum eyelet - probably from a piece of clothing - aperature diameter 1/8 inch, total diameter ¼ inch
XU 8	1	Fragment of a metal tong from a pitch fork or rake - heavily rusted 2-3/4 inches long and ½ inch wide
XU 8	1	Latch hook fragment. Heavily rusted 1½ inch long
XU 10	1	Ferrous metal concrete anchor pin fragment, about 2 inches in length
XU 10	1	Piece of black plastic coated electric wiring - recent

Appendix C, Table 1. Summary of Identifiable Non-construction Metal Artifacts, Ray house
March 1983 (continued).

PROVENIENCE	NO. OF SPECIMENS	DESCRIPTION/COMMENTS
XU 10	1	5 inch piece - looks like a rail head spike but the base has a slot for a cotter pin -- used in trailer hitches, etc
XU 10	1	Wrought iron (ferrous metal) door latch hook - seems to be handmade -- twisted pattern in the midsection. Is 7½ inches long
XU 10	2	Ferrous metal double bit axe head and handle wedge
XU 11	1	Ferrous metal machine part - specifics unknown
XU 11	3	Fragments of a small door hinge - heavy rust damage - 1½ inches wide
XU 11	1	Tin can turn key - similar to the ones on sardine cans and Spam - heavy rust
XU 12	1	Bottle screw cap - recent, within last 40 years
XU 12	1	Ferrous metal stove part - heavy rust - roughly triangular shape - no ID marks or letters
XU 12	1	Washer - heavy rust diameter 7/8 inch, hole 5/16 inch
XU 12	1	Ferrous metal part - machined, stamped with John Deere initials, exact function unknown
XU 12	1	Ferrous metal - one pound weight. Probably case as a single piece

Appendix C, Table 1. Summary of Identifiable Non-construction Metal Artifacts, Ray house
March 1983 (continued).

PROVENIENCE	NO. OF SPECIMENS	DESCRIPTION/COMMENTS
XU 13	1	Small fragment of 1/16 inch screen
XU 13	1	Grommet with attached hardened black rubber - 3/4 inch diameter, 1/4 inch hole
XU 13	1	Piece of wire - heavily rusted
XU 13	2	Fragments of a fruit jar lid seal - dates 1920s to present - heavily rusted
XU 14	7	Small pieces heavily rusted
XU 14	1	Small wire hook - possibly a door latch - 1 1/2 inches long
XU 15	1	Metal part of a piece of cutlery - possibly a knife handle with two rivets - looks repaired at one time, heavily rusted
XU 15	1	Broken chain link - heavily rusted 1-5/8 inches long, 1 inch wide
XU 15	1	Piece of wire - roughly circular with the two ends looped within each other - function unknown
XU 15	5	Pieces of ferrous metal - possibly fragments from a broken pipe collar (?)
XU 16	1	Ferrous metal D ring -- probably used to attach straps of leather, cloth, etc. 3/4 inch wide, 5/8 inch long

