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The Kansas Anthropologist

Journal of the Kansas Anthropological Association

KANSAS ANTHROPOLOGICAL ASSOCIATION

P.O. Box 750962, Topeka, KS 66675–0962; www.katp.org

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A NINETEENTH-CENTURY NATIVE AMERICAN BURIAL FROM THE KANSAS HIGH PLAINS: THE McKINNEY SITE (14SD301)

Jim D. Feagins
Belton, Missouri

More than 55 years ago on the High Plains of northwestern Kansas, a high school student, Don Rowlison, discovered a historic Native American burial eroding from the side of a gully. State Archeologist Thomas A. Witty at the Kansas State Historical Society (KSHS) was soon notified. On April 5, 1965, he spent approximately half a day at the site, aided by Rowlison, excavating remnants of the burial. Witty found that it had been greatly disturbed by occasional flash flooding, years of rodent activities, and probably a century or more of decay. A single layer of wooden poles had covered the interment. The skeletal remains and associated artifacts were badly fragmented, decayed, and rodent scattered. Glass beads, Prosser buttons, brass and iron objects, tinned-iron pieces, cloth, feathers, and leather were recovered. The collection contained more than 3,350 items of which 3,272 were beads. Not counting beads, over half of the specimens were retrieved prior to Witty's visit. Flash flooding had taken an unknowable toll.

In 2000 during laboratory analysis, pseudomorphs (impressions) of cloth, hair, and feathers were found on some of the metal artifacts, thus permitting additional interpretations. Also at that time the author consulted with experts in a variety of fields concerning portions of the collection. The results from this burial analysis were presented in a report (Feagins 2004f) as a small part of a Native American Grave Protection and Repatriation Act (NAGPRA) compliance and enhancement study, funded by the Kansas Legislature and administered by the KSHS. Since the original report was submitted, some further research has provided the background for additional interpretations.

BACKGROUND

Discovery of Burial

A postcard from Jon R. Rowlison (1965), a student at Kansas State University, informed Kansas State Archeologist Thomas A. Witty, Jr. about human skeletal remains and associated burial materials eroding from the east bank of a wide gully or arroyo (Figures 1 and 2). The burial had been discovered by Jon's younger brother Don, a student at Hoxie High School. He and his high school biology teacher had already removed many of the grave materials. These consisted of brass coils and bells, iron large buckle and ring, miscellaneous scraps of rusted metal, a "glass" button, shell hair pipes, small white and blue beads, a large faceted blue bead, and generally poorly preserved human bone (Afton 1965: 3–5; Witty 1965b:1–2, 1965c). Additional artifacts, including more of the same plus wood and small bits of cloth and leather, were recovered during Witty's excavation of the remainder of the burial on April 5th. The KSHS assigned trinomial site number 14SD301 to the McKinney site (Witty 1965c), and years later it was designated as Unmarked Burial Site number UBS1990-26.

Location

14SD301 was located east of the town of Hoxie and north of Sand Creek. This is in the central portion of Sheridan County in northwestern Kansas (Figure 3), a part of the High Plains (Buchanan 1984:8) and short grass prairie. From the burial site Sand Creek flows eastward before joining the South Fork of the Solomon River.

Figure 1. View east with arrow marking burial location in the side of a wide gully.

Figure 2. Burial partially exposed in gully wall before Witty started his excavation. The Rowlisons' dog looks on.

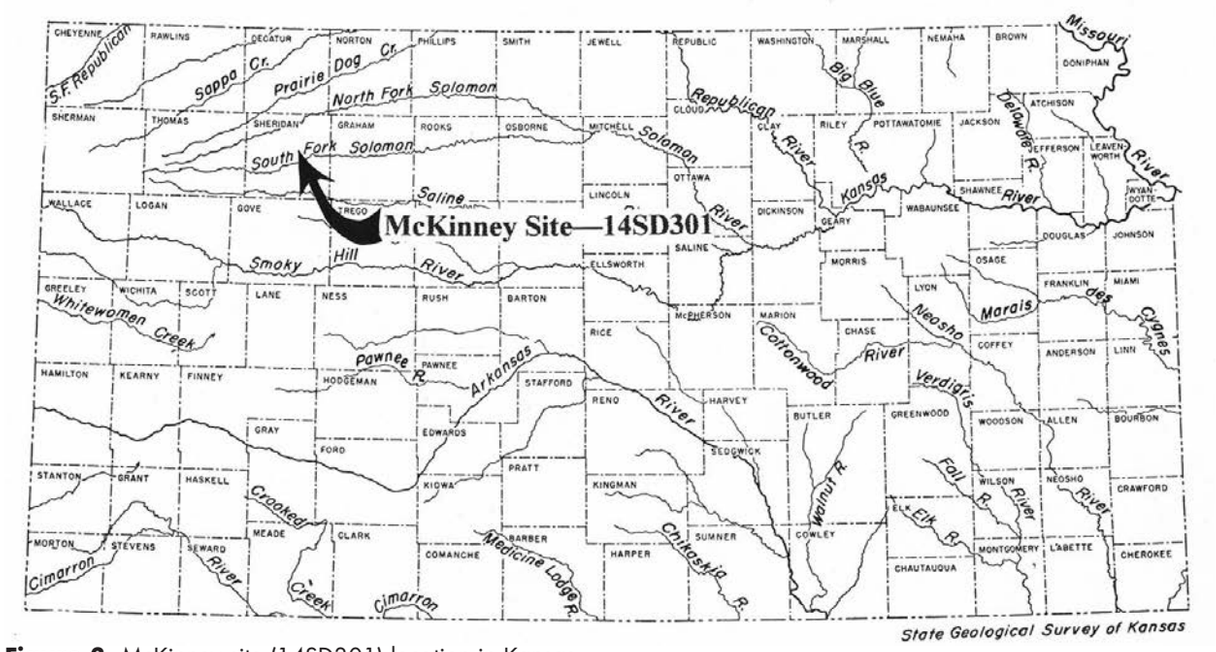

Figure 3. McKinney site (14SD301) location in Kansas.

Soils

The McKinney site is located in a pasture containing the Penden-Ulysses soil complex: two well-drained upland soils situated on often eroded side slopes (Angell et al. 1984:16). These two soils are quite mixed, therefore difficult to map in detail. Both are moderately alkaline (Angell et al. 1984:45). The secondary deposits of calcium carbonate found in the lab on a few of the bones and artifacts supports the calcareous nature of the soil at the burial location. However, the skeletal remains, shell, and other items from the burial are poorly preserved.

To further complicate the matter, in the lab the

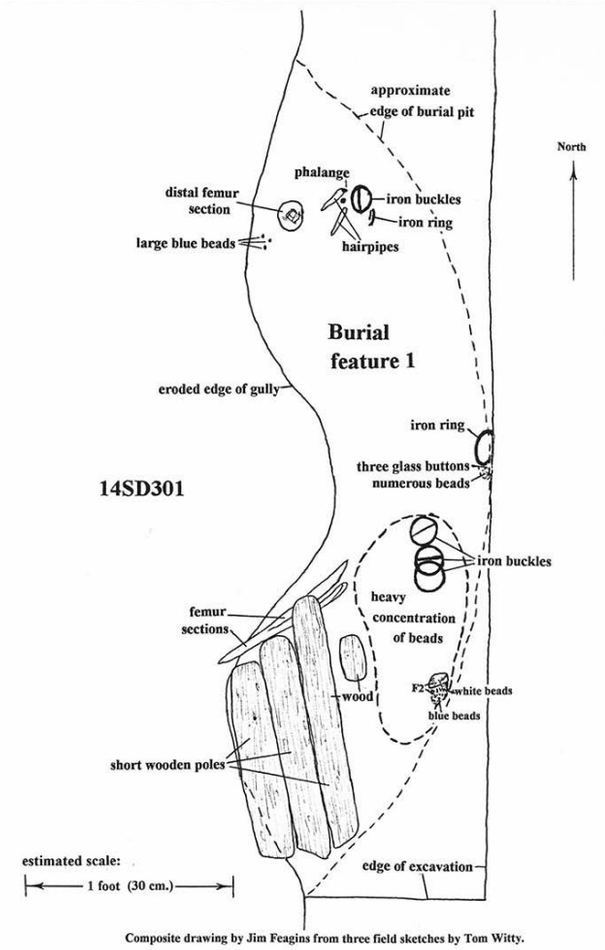

Figure 4. Sketch map of McKinney site burial, based on a composite of Witty's three field sketches (Feagins 2004f:52). Top is north.

author ran a pH test on a small sample of soil adhering to one of the three or four wooden poles that had been placed as a covering directly above much of the burial. This soil sample had a slightly acidic pH of 6.3. Perhaps what seems to be a conundrum can be explained by the abundant evidence of former rodent burrows and general rodent activity that Witty observed above and within much of the burial area. With heavy usage over time, the acidic accumulations from rodent urine could change the soil pH readings in localized areas along their many runs and nesting dens. Possibly the acidity was enough to increase the weathering of the skeletal material and the calcium carbonate from shell artifacts (Claassen 1998:59–60), such as occurred with the burial's hair pipes.

SITE EXCAVATION

On April 5, 1965, Witty drove from Topeka to Hoxie in Sheridan County. He met with Mr. and Mrs. Johnny R. Rowlison, their son Don, and Mr. Mickey, the farm tenant and a local mortician. He then called the landowner, received permission to excavate, and worked on the site for the remainder of the day, aided by Don Rowlison, the site discoverer. Witty made no mention of any attempt to screen soil, although some obviously bead-rich soil samples were collected. Witty (1965b:3–4) stated, "High winds and threatening rain storms forced the latter part of this excavation to be completed quite hurriedly." Another heavy rain could have disturbed any human or cultural remains left exposed. Witty had left Topeka at 7:30 A.M., drove 280 miles to Hoxie, made contact with various people, documented and finished the burial excavation as a thunderstorm approached, and then drove back to Topeka. He probably spent only about half a day at the site. Clearly, this was a salvage excavation in the truest sense of the term.

The burial (Feature 1) appeared as a thin, 4.5-ft (1.37-m) long horizontal line of human bone fragments, exposed in the side of a wide gully at a depth of 5.7 ft (1.74 m) below the top of the bank (Witty 1965a). (Note: The KSHS did not use the metric system for archeological fieldwork until about a decade later.) This line of bone contained part of a scapula and a small bleached distal segment of femur at the north end and several splinters of femur bones at the south end (Figure 4). Probably the distal femur had been displaced by heavy rodent activity. The width of the burial pit could not be determined as erosion had removed the western portion (Figure 4). The remnant occupied a maximum width of 1.6 ft (.49 m).

Prior to starting excavation of the burial proper, Witty searched through the talus soil on the bank below the burial, finding glass beads, bone splinters, and many small shell hairpipe fragments. Turning his attention to the removal of the overburden above the skeletal remains, he hoped to recognize some evidence of a burial pit. He identified a "zone of dryness" slightly above a burial-covering layer of wooden poles. Witty (1965b:3) felt that the margin of the dry zone marked the eastern edge of the grave shaft.

Figure 5. View south at remains of wooden poles (center) after overburden was removed.

Before reaching the depth of the poles, the excavators found a large iron ring and numerous scattered glass beads at a disturbed location on the eastern side of the burial. Apparently rodents had burrowed through the grave and scattered artifacts along their tunnels, even to elevations slightly above the burial level. The rodent species that caused this damage, if known, was not mentioned. Perhaps they were attracted by the bone and shell within the burial and by the disturbed soil that provided easier digging.

In addition to the small bone fragments described, green-stained phalanges from the left hand were encountered at the north end of the burial (Witty 1965b:3). The stain appeared to be from proximity to copper-bearing artifacts, such as the two brass coils also recovered there. Relatively nearby were four large, necklace-sized blue faceted glass beads, two hair pipes, an iron ring, and a large iron buckle (Figure 4).

Only a few small white glass beads were found in the northern part of the central section of the burial. At the eastern edge of the middle portion were numerous beads, a large iron ring, and three buttons.

In the southern third of the burial, femur shaft segments (large splinters) lay below the remnants of wooden poles (Figures 4–6). These poles and bones were quite weathered and fragmented. East of the femur remains a heavy concentration of beads and iron artifacts were designated as Feature 2, even though they were within the original burial and could have been considered a component of Feature 1. Some bead-rich soil samples were saved from inside and north of Feature 2 for later screening at the KSHS lab in Topeka (Afton 1965).

Feature 2 was of special interest because some of the small beads exposed in situ formed at least part of a pattern. Witty (1965b:3) noted, "F2 was a rusted complex of iron on which were found numerous beads lying in order. On this metal were at least four or five rows of white beads, working toward the south approximately an inch to an inch [and] one-half was a cluster of blue beads which appeared to be in either a diamond or a triangular shaped pattern." What "metal" Witty referred to is uncertain, although several large iron buckles and many iron tinklers were uncovered in Feature 2. His sketch map shows the buckles and the glass bead pattern at opposite ends of the feature. Witty did not specify which iron pieces were associated with the bead pattern, but they might be represented by some of the unidentified friable flat iron fragments in the collection.

SKELETAL REMAINS

The osteological analysis was conducted by Dr. Michael Finnegan of Forensic Anthropological Consultants, Manhattan, Kansas. The bones were generally in a poor state of preservation. The only exceptions were the nine phalanges and metacarpals from the left hand (Finnegan 1998), many of which

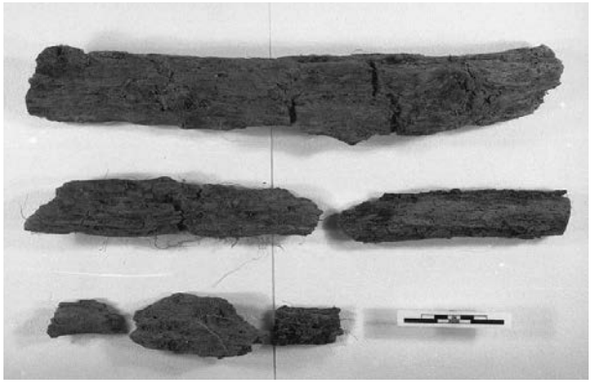

Figure 6. Decayed fragments of wooden poles used for the burial covering.

exhibited a green stain from being in contact with brass artifacts in the burial (Witty 1965b). Finnegan discerned the presence of one adult male, based on the epiphyseal union. His identifications included parts of the left femur, humerus, scapula, and ulna. Also, he indicated that "cervical, thoracic, lumbar and sacral segments are present in small numbers" from the vertebral column (Finnegan 1998).

Unfortunately, the fragmentary condition of the remains precluded determination of stature, age, general health, skeletal anomalies or pathology, presence of pathogens, ancestry, and cultural affiliation from the osteological material itself. Of course, the associated artifacts provide an exceedingly strong argument, leaving almost no doubt that a Native American was buried at this location. What can the analysis of the burial site and associated grave goods add to our understanding of the individual buried there?

CULTURAL MATERIALS

The artifacts were divided into six main categories: 1) wooden burial covering, 2) ornamentation, 3) harness equipment, 4) cloth and buttons, and 5) miscellaneous materials. In a few cases objects overlap categories. The burial yielded well over 3,300 artifacts; the vast majority were trade items produced by European Americans, primarily glass beads.

Burial Cover

The first consideration is how the family or companions attempted to protect the dead man's remains. Directly above the southern portion of the burial were extremely weathered remnants of three or more poles, with tiny pieces occurring elsewhere (Figures 4–5). Witty (1965b:2) noted that fragments were 2 or 3 inches in diameter (Figure 6). The poles had been placed in a generally north-south direction, covering a significant length, if not all, of the interment. Over the years as flash flooding caused the gully to intrude into the burial itself, rotted pieces of the poles likely were carried away.

Wood samples were examined by Lynn Barnickel (personal communication January 14, 2000), who was then forestry supervisor for the Missouri Department of Conservation in Jefferson City. The poles were in such a deteriorated state that specific species identification by visual means was not completely possible. However, enough characteristics were present that Barnickel, with references to Harlow and Harrar (1969), eliminated most species and concluded that cottonwood, willow, buckeye, and aspen could match the diagnostic traits that he observed in the specimens. As buckeye and aspen are not native to this area, eastern cottonwood (*Populus deltoids*) and willow (*Salix sp.*) are the most likely candidates for the grave coverings (Core et al. 1979:158; Preston 1961:120–137). Both are soft woods and subject to more rapid decay than hardwoods. Barnickel commented that wood rot had destroyed some of the wood's internal structure, thus making species identification more difficult.

As the burial needed an expedient covering, the burial party turned to what was locally available. Willow or young cottonwood trees of this size occur along certain streams in this region of the High Plains. Obviously, the poles had once been thicker and much longer than what remained at the time of excavation. This writer can only speculate that at the time of burial perhaps a blanket, bison hide, or other hides were placed over the poles in order to give additional coverage. Unfortunately, whatever the effort, it was not enough to discourage burrowing mammals.

Ornamentation

The ornamentation category is subdivided into 1) iron tinklers, 2) brass chain, 3) brass coils, 4) brass bells, 5) glass beads, and 6) breastplate. The vast

majority (3,272) of the decorative or ornamentation artifacts, mainly beads, came from Feature 2. Far fewer items are in the four other categories combined.

Tinklers

Tinklers, also called "tinkling cones," are small elongated cones, cut from various kinds of sheet metal and designed to shine and bump against each other to make a metallic clinking sound—pleasing to the eye and the ear. The opening at one end is quite small and at the opposite end is larger. These tinklers could be attached to cloth, hide, or other materials by cordage of sinew or plant fiber, leather thong, or hair and occur on a variety of artifacts.

Due to fragmentation, the total number of tinklers in the McKinney site burial is hard to estimate, but perhaps there were close to 70. Many are broken, and generally they are rusted and clumped together with the larger ends facing the same general direction (Figure 7). Evidently some had been suspended in clusters in contact with each other and possibly were attached to clothing. Thirty-eight tinklers from Feature 2 are described in Table 1. Other tinklers were recovered just north of this feature. Damaged ticklers from Feature 2 and those found elsewhere are not included in Table 1, but the metrics given there seem to be representative of the collection as a whole. The measurements include the ever-present rust; thus, the original dimensions would be slightly less than what is recorded. The measurable Feature 2 tinklers average 29.06 mm long and vary in length from 24.4 to 37.1 mm. The largest ends average 6.81 mm in maximum diameter, ranging from 5.3 to 8.1 mm. Rust prohibited accurate measurement of the openings, especially at the small ends.

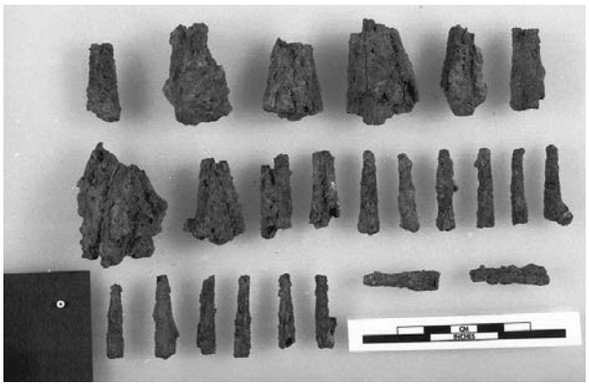

Figure 7. Sample of tinned-iron tinklers with associated white glass bead at lower left on dark background.

Examination under a binocular microscope proved interesting. On the few tinklers broken during excavation, a thin silver-gray layer was observed in cross section amid the abundant rusted iron. Many, possibly all, of the tinklers might have been cut from tin-plated iron sheets, probably recycled from discarded tin cans, although other sources for the metal, such as tinned kettles or pots, cannot be ruled out.

Tin-plated vessels were part of the fur trade, very early in the nineteenth century (Wheeler et al. 1975:99; Woolworth 1975:78–79) and probably much of the 1700s. Wagner (2001:92) stated, "Late eighteenth- and early nineteenth-century tin kettle forms included buckets and straight-sided pails with vertical walls." Cut pieces from these tin-plated iron containers have been found on many sites, including, for example, on a Potawatomi site in Illinois, dating approximately from 1815 to 1825 (Wagner 2001:166, 170). Tin-plated cans were developed much later than the tinned kettles, buckets, and other vessels. Tin cans for food storage and shipment were mass produced commercially in England by 1812 (Busch 1981:96) and were used by the U.S. military during and after the Civil War. However, they were expensive for common settlers' household use and would not have been plentiful on the Central Plains until after the Civil War (Pearson 2016). The eventual abundance of tin cans and the nature of their use and discard would have made them adaptable for recycling into tinklers and tubes. Tinned iron derived from these containers was available for Native Americans on the High Plains prior to and long after the 14SD301 burial took place.

Table 1 shows that these handmade tinkling cones varied considerably in size and cut-out shape. They were not standardized, which would be expected for manufacture by different indigenous individuals. By the time of this burial, tinkers had been popular in the Native American trade for many decades (Fox 2010:461; Hanson 1982:12–13).

Chain

A portion of a chain, containing eight links, is 8.3 cm long (Figure 8). Each link, made from brass wire that is 1.7 mm in diameter, is a standard size and

Table 1. Iron Tinklers from Feature 2.

Tinkler #	Length (mm)	Maximum diameter (mm)	Comments: Many broken tinklers not included in table; all quite rusted
1	30.15	7.40	Fragments of 2 others attached by rust
2	30.40	6.60	
3	27.65	7.20	Fragments of 2 others attached by rust
4	28.05	6.60	
5	30.50	8.00	
6	27.40	6.00	
7	29.80	6.60	
8	30.70	7.75	
9	28.70	7.65	Fragments of 2 others attached by rust
10	27.90	7.00	
11	27.60	5.40	Fragments of 2 others attached by rust
12	27.80	6.25	Fragments of 2 others attached by rust
13	28.40	6.40	Fragments of 2 others attached by rust
14	30.50	7.45	Fragments of 2 others attached by rust
15	27.60	7.05	1 other attached
16	27.80	5.90	#s 16 and 17 plus part of a third attached; largest ends all in same direction
17	27.40	6.05	Same as above
18	29.20	6.90	#s 18 and 19 plus part of a third attached; largest ends all in same direction
19	24.40	6.20	Same as above
20	25.70	5.30	#s 20-22 attached by rust; largest ends all in same direction
21	26.00	6.50	Same as above
22	31.40	7.10	Same as above
23	30.40	6.65	Portions of 4 others attached by rust
24	30.85	—	#s 24-27 attached by rust; largest ends all in same direction
25	28.60	—	Same as above
26	28.50	6.95	Same as above
27	29.15	6.65	Same as above
28	25.10	7.40	#s 28-32 attached by rust; largest ends all in same direction
29	26.50	6.60	Same as above
30	28.70	7.40	Same as above
31	26.45	5.85	#s 31 and 32 attached by rust; largest ends all in same direction
32	28.40	8.10	Same as above
33	30.35	6.75	#s 33-36 plus parts of at least 4 others attached by rust; largest ends all in same direction
34	29.15	7.10	Same as above
35	32.35	7.00	Same as above
36	31.10	7.15	Same as above
37	36.45	7.60	Fragments of 7 others attached by rust; largest ends all in same direction
38	37.10	–	Portions of 11 others attached by rust; largest ends all in same direction
Range	24.40–37.10	5.30–8.10	
Median	30.75	6.70	
Average	29.06	6.81	

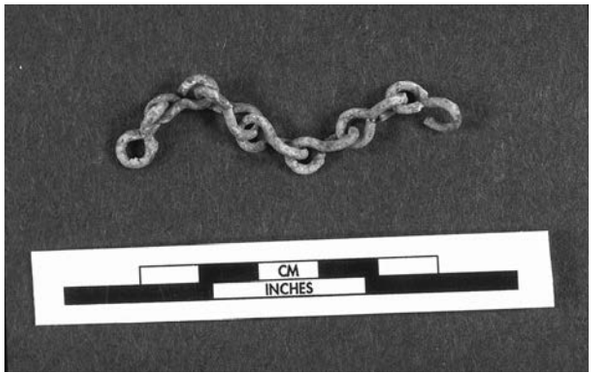

Figure 8. Brass chain.

Figure 9. Brass coils. Rowlison's name is misspelled on labels.

shape: 13.2 mm long and 6.65 mm wide. Each link contains two individual loops, which were twisted to form a 90-degree angle from each other. This mass-produced chain was found in talus slope soil directly below Feature 1, giving every appearance of having eroded from the burial.

A chain very similar to this one was recovered from the Battle of Wounded Knee site (Hanson 1975:79). A burial in northeast Kansas yielded another (Feagins 2004d). Chains of this type were often used as decoration by American Indians. Brass, an alloy of copper and zinc, is quite attractive. It can be worked in several ways, including casting, rolling, forging, and extruding (Rockett 1984:257). The latter process would have been used to create the wire to manufacture this chain. For decoration chains sometimes were suspended from the hair, ears, neck, or wrist or attached to clothing or a variety of other artifacts. Just how the chain in the burial was used is not known.

Coils

Two tight coils of brass wire were recovered from the burial (Figure 9). The largest is 21.5 mm long and 22.5 mm in maximum diameter and has a mass of 12.3 g. It contains 13 loops of wire, and each loop touches one or more adjacent loops. The wire is 1.6 mm in diameter, approximately 14 gauge. The second coil contains 8.5 loops, which again are touching each other. It is 14.5 mm long and 19 mm in maximum diameter and has a mass of 6.7 g. The constituent wire is 1.5 mm in diameter.

During the nineteenth century brass coils often were worn by American Indians as ear and hair ornaments or used as hair pluckers; those with a smaller number of loops (coils) could be worn as finger rings (Woodward 1976:23). As ear ornaments, wires sometimes were threaded through a series of holes spaced around the edge of the ear, resulting in the loops being spaced apart rather than touching each other. Another method was simply to make a slit along the edge of the ear in place of a series of holes. Larger diameter (gauge) coils usually were modified into bracelets and necklaces or for other uses.

Had the McKinney site coils been used as finger rings, one reasonably might expect them to have fewer loops and perhaps even been found surrounding at least one green copper-coated phalange. Witty encountered no such osteological material inside the coils, although he (Witty 1965b) did note a green stain on a phalange. However, this could be explained by the fingers being in close proximity to any brass or copper burial goods.

The inside surfaces of both coils exhibit pseudomorphs, which present a good clue as to how they were used. The term pseudomorph most commonly is used in several slightly different ways in mineralogy to describe the results of replacing the form of a mineral's crystal with a different mineral (American Geological Institute 1962:403; Ford 1932:205–206, 357–358). Pseudomorphs are also common in biology, paleontology, and archeology, as well as other fields. In archeology organic pseudomorphs are impressions of organic material that accumulates on the surface of metal objects as they corrode. "They may occur when metal artifacts are buried in contact with organics under damp soil" (Wikipedia 2020).

The inside surfaces of the coils appear to have

Figure 10. Four metal bells.

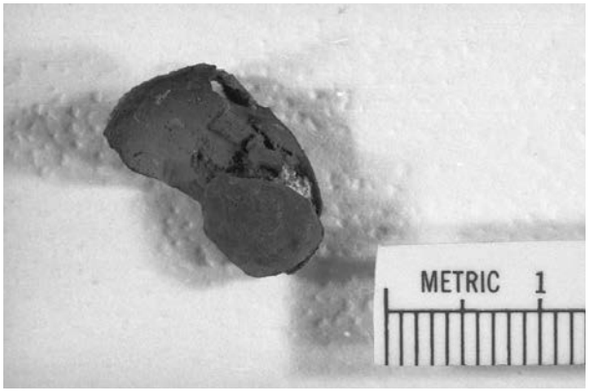

Figure 11. Interior view of bell fragment (65.37.67-B), showing inside attachment of loop handle at upper center and pebble rattle at lower right.

been in close contact with strands of hair, most likely from the buried individual. In other words, each coil once contained a small ponytail-like gathering of hair. The copper salts from the brass oxidized around each of the many individual hairs where they made direct contact with the inside coil surfaces. Although Witty did not mention hair in his notes, the impressions on the inside of each coil was observed readily in the laboratory. These imprinted pseudomorphs are oriented parallel to each other, arranged perpendicular to slightly diagonal. They are of a size and orientation that one would expect if a strand of human hair had a very slight or subtle twist inside a coil. Therefore, many individual hairs would be in direct contact with the brass as they oxidized with moisture and air over time, becoming lightly coated with a thin layer of copper salts to create the pseudomorphs. Only a portion of these delicate pseudomorphs remained on the coil interiors, and none was noted on the outside, as one might expect given this interpretation.

By the time of excavation, the hair itself was no longer preserved or was too fragile to be noticed by the excavators. After all, it probably was the same color of green as the soil within and immediately surrounding each coil. Nevertheless, the hair pseudomorphs provide a strong argument for the use of these coils as hair ornaments by the buried individual. Also, their locations and the proximity of the in-situ left hand bones have enabled a probable determination of the direction of the head within the burial. This will be discussed in more detail later.

Bells

Fragments of six metal bells were recovered from the burial (Figures 10 and 11). This type of globular-shaped bell, usually called a hawk bell or sometimes a sleigh bell, consists of two equal hemispheres joined in the middle, enclosing a loose metal clapper. Such artifacts often are associated with eighteenth- and nineteenth-century Native American burials and habitation sites within and near Kansas (Feagins 1999, 2002, 2004b, 2004c, 2004e; O'Shea and Ludwickson 1992:192–194; Reynolds 1987:77–78), as well as indigenous sites elsewhere in North America during this time period.

The McKinney site bells are manufactured from sheet brass or sheet copper. For the sake of simplicity, they will be referred to as brass. Although one example is in question, all probably are of the Flushloop variety of the Flush-edge type (Brown 1975, 1979; Connaway 2003, 2015). The latter reference contains useful information on hawk bell classification. The incomplete nature of the specimens make their specific nomenclature assignment somewhat difficult. More than one unnamed sub-variety may be represented in the collection. No maker's marks were observed on any, although fragmentation and green corrosion might have destroyed or obscured any such identification, if once present. For bell terminology see Weatherford (1971:12, 1980:27).

Catalog #65.37.68. The most complete bell is 16.7 mm in maximum diameter and, excluding the attachment strap, is 12.4 mm high. Thus, its width is greater than its height; its diameter/height index is 1.34674. Made from the same metal, the strap handle is mostly missing, but the remnant measures

.35 mm thick and 1.8 mm wide. The ends of the handle had been inserted through a hole in the top of the bell and then spread apart before brazing. When complete, these attachment handles are shaped somewhat like the Greek letter omega (Ω). In the upper hemisphere there were no holes, other than for the attachment handle. The maximum diameters of two holes in the lower hemisphere are 2.5 and 2.3 mm. The damaged slit is estimated to be 10.2 mm long.

The iron rattle was rusted to the inside of the shoulder of the upper hemisphere not far from the attached strap. A feather pseudomorph was discerned at the shoulder on the exterior surface. The position of the once-loose clapper, now attached by corrosion, effectively shows the bell's angle of repose in the burial—upside down from the way it would ordinary hang—and identifies the spot on the outside of the upper hemisphere where it rested on top of some object made from or decorated with feathers. Various other feather pseudomorphs from this burial will be discussed later.

This small bell is encircled by four finely incised lines, two above and two below the seam where the two hemispheres were attached. The thickness of the metal at the damaged slit is approximately .3 mm. In addition to the green corrosion, some calcium carbonate ($CaCO_3$) adheres to the side of the upper hemisphere. This artifact has a mass of 1.1 g.

Catalog #65.37.15. Small fragments from two diminutive bells will be described together. These may represent two unnamed sub-varieties of the Flushloop variety. One piece holds a quartz pebble clapper, attached to the inside wall with green corrosion. The somewhat rounded pebble is 5.65 mm long, 4.05 mm wide, and 2 mm thick.

These bells appear to be about the same size, and the maximum diameter of one is estimated at 17–18 mm. Both contain handles made from straps that are 1.7 mm wide and .6 mm thick, but only one strap loop is complete with a total length of approximately 17–18 mm. No slits remain for either. The thickness of the metal on one specimen is only .2 mm.

One bell segment bears three encircling finely incised lines located either above or below the seam. Thus, there might have been six such lines on the complete object, although none of the varieties described by Brown (1979) contained this many encircling lines. The lines could be decoration but more likely result from manufacturing methods. Another section, probably from a different artifact, shows only two lines near the seam. Still, the possibility exists that one or both bells had three incised lines around one hemisphere and two lines around the other. A few fragments contain $CaCO_3$ deposits from the soil in addition to the green and deep blue copper corrosion. Both colors are products of the same chemical composition [$Cu_2(CO_3)$-$(OH)_2$] but form different crystalline structures (American Geological Institute 1962:35, 304). Neither color is unusual, although green is much more common.

Catalog #65.37.67-A. The fourth bell, represented by 11 pieces, appears to be of the same variety as the others. One portion contains an iron clapper, attached by rust to the lower hemisphere between the slit and the seam. The clapper is 6.9 mm long and 6 mm wide. The artifact's overall dimensions cannot be determined with much accuracy, but it is wider than it is high and probably about 18 mm in diameter. A bent strap handle, similar to those on the other specimens, is made from a brass strip that is 1.55 mm wide and .35 mm thick. In the bottom hemisphere two holes are connected by a slit. One hole is 2.9 mm in diameter; the other could not be measured. Not including the holes at each end or the curvature, the slit is 9.3 mm long with a maximum width of .25 mm.

Examination of the fragments revealed no holes in the upper hemisphere except that for insertion of the strap handle. This bell is decorated with encircling incised lines, two above and two below the seam. The color of the brass suggests that there may be a smaller percentage of copper in this example, compared to the others. The thickness of the metal forming the bell is only .1 mm, and so it is no wonder that this item was easily broken.

Catalog #65.37.67-B. The fifth bell is also in fragments. It appears to be similar to the others already described. Based on extrapolation of its curve, the estimated diameter is 19–20 mm, and it was wider than high. The bent metal strip forming the handle is 1.55 mm wide and .4 mm thick. The metal is .2 mm thick.

Decoration consists of two encircling incised

lines near but possibly only on one side of the seam. Corrosion may obscure additional markings. A quartz pebble clapper is attached by corrosion to the inside of the bell not far from where the strap handle tabs were inserted (Figure 11). The rounded pebble is 7.7 mm long, 6.55 mm wide, and 4.6 mm thick. Thus, two specimens have pebble rattlers, clear examples of pebbles having replaced the lost iron clappers that were manufactured with the bells. Native Americans were making do with what was readily available for replacement.

On the outside of the upper hemisphere, feather pseudomorphs were formed by green to dark blue corrosion. The position of the clapper shows the artifact's angle of repose and, in conjunction with the pseudomorphs, clearly indicates that the bell was attached to or resting on an object that was decorated with feathers.

Catalog #65.37.67-C. The sixth bell consists of brass fragments plus the iron clapper. Extensive rust precluded accurate measurements, but its estimated diameter is 19–20 mm. One of the bottom holes is approximately 2.4 mm in diameter and located approximately 3.7 mm below the seam. Two finely incised lines encircle the lower hemisphere near the seam. Heavy green corrosion obscures any similar lines that might be present in the upper hemisphere, and calcium carbonate deposits cover a small area of the exterior surface. The thickness of the metal is .2 mm. A textile pseudomorph is present in one spot on the lower hemisphere exterior. The position of the clapper indicates that the bell was resting on cloth.

Bell Discussion

The six sheet brass bells were difficult to analyze because of corrosion, fragmentation, and missing pieces. All are of the Flush-Edge type and probably are sub-variations of the Flushloop variety. Several styles have been found in Kansas (Feagins 2004c), some with burials (Feagins 2004a, 2004b; Scott 1976; Wedel 1959:105). The best sources of information on bells are Brown (1975, 1979), Connaway (2015), and Weatherford (1971, 1980). Even so, there appear to be more variations than are usually described in the literature (Feagins 2004c).

As previously stated, iron clappers had been replaced with pebbles in two specimens. A hemisphere on each must have been separated at some point, allowing the iron clappers to escape. The bells were too valuable to be discarded, so a pebble was inserted inside and somehow the hemispheres reattached. These same artifacts bear feather pseudomorphs on portions of their outer surfaces. Also in the collection are two very small unattached feather fragments with small amounts of green corrosion adhering (Figure 12). These probably came loose from the surfaces of the bells. The feathers were not downy feathers but rather small pieces of either wing or contour (body) feathers from medium-sized birds, or they could have been from the distal portions of feathers from larger birds. Perhaps the feathers and bells were attached to the same object, but within a burial context the feathers need not be attached to the bells themselves. The bells could just as easily be sitting on top of some other item decorated with feathers. While the feathers could have served simply as decoration, more likely they also served a religious or ceremonial function prior to and probably including their accompaniment with the burial.

The last bell described above has a textile pseudomorph that covers most of one of the holes its the bottom hemisphere. If the artifact was not resting on the textile, perhaps cloth covered it, although in that case the imprint might be expected to be larger. Either this pseudomorph was quite weathered or the original cloth or cordage from which it had formed was so worn (or both of these factors occurred) that analysis was very difficult. The fibers appear to have been S-spun, and a knot may have been present. The original wear, degree of preservation, and amount of magnification did not allow more to be learned at this time.

Figure 12. Copper-coated feather fragments.

Beads

A total of 3,272 glass beads were recovered from the burial (Figures 13–18). The vast majority were obtained in the laboratory by fine screening the soil samples that Witty had collected from within and near Feature 2. It seems likely that many of the beads originally included in the burial were not found because of previous flash flooding, the hurried nature of the excavation, and the relatively small size of most beads.

The principal references used in this bead analysis were Billeck (2000, 2010), DeVore (1992), Harris (1987), Johnson (1977), Kidd and Kidd (1970), Ross (2000), and Sprague (1991). Kidd and Kidd, Billeck, and others have worked to greatly improve or refine glass bead classification. Because of sheer numbers and variations in size, shape, methods of manufacture, colors, pairing of colors, and many other subtle differences, glass beads are more difficult for archeologists to categorize than some other classes of historic artifacts, especially depending on which criteria are emphasized and considered most important. Factors often used are 1) manufacturing techniques, 2) shape, 3) colors and their combinations, 4) diaphaneity, and 5) size. Diaphaneity has to do with the amount of light that can pass through a substance, i.e., opaque, translucent, or transparent. Most beads were produced in Venice, Italy. Many bead books describe manufacturing processes. Authors emphasize different attributes or expand on certain attributes in their classification systems. Kidd and Kidd (1970) were innovative with the use of a flow chart, which is almost a necessity in order to understand their classification symbols.

Regarding size criteria, it is acknowledged that the term "pony bead" is somewhat out of favor. The

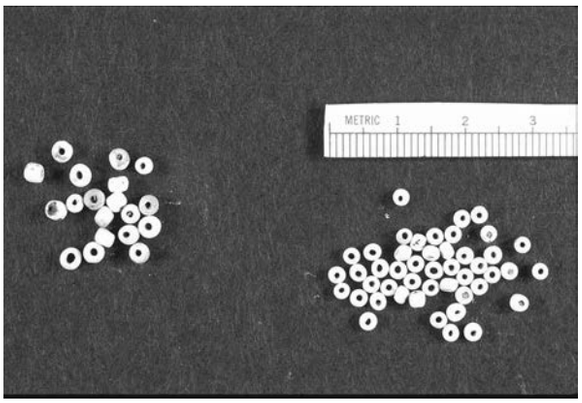

Figure 13. White porous-textured beads at left and white glass beads at right.

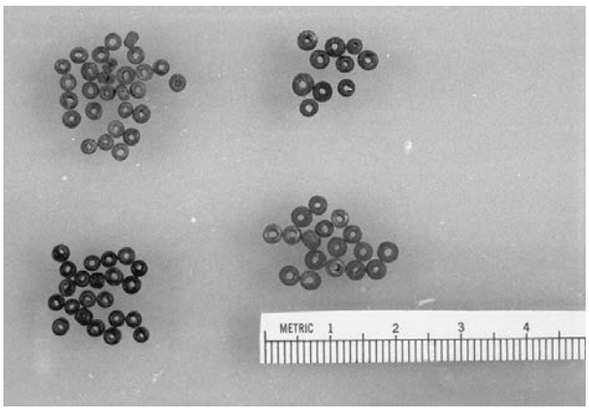

Figure 14. Glass beads: black beads at upper right, blue/blue-green beads at upper left, blue beads at lower right, and reddish-brown beads at lower left.

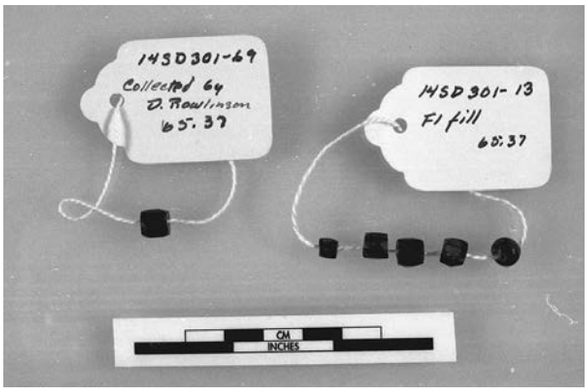

Figure 15. Larger glass beads: five tube-drawn faceted beads on left and one mandrel wound plain bead on far right. Rowlison's name is misspelled on label.

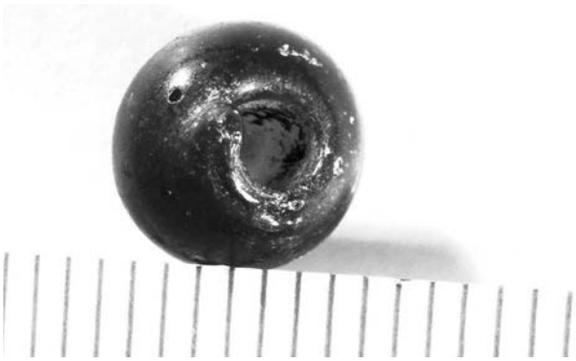

Figure 16. Detail of purple-blue, mandrel-wound bead. Scale is in millimeters.

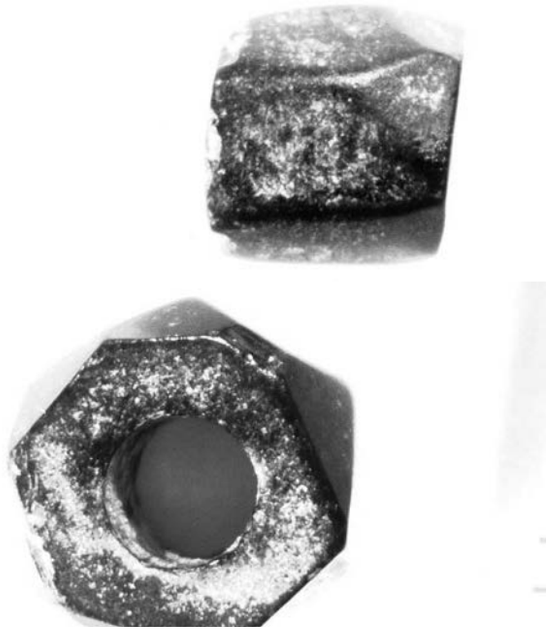

Figure 17. Details of black (upper) and blue (lower) faceted glass beads. Hole diameter is 3 mm.

Figure 18. Details of faceted beads. Edge of scale at lower left is in millimeters.

name probably had nothing to do with being transported on horseback. Furthermore, no distinct break separates intermediate (2–3 mm) from slightly larger pony beads; rather measurements often display a size continuum. Nevertheless, the descriptor is retained here in a secondary role, as it still has some use as a general size indicator and is ingrained in the literature.

In this study bead sizes are classified according to diameters after Kidd and Kidd (1970), Billeck (2000, 2010), Karklins (1985), and other researchers: very small (< 2 mm), small (2–4 mm), medium (4–6 mm), large (6–10 mm), and very large (>10 mm). Bead diameter is measured perpendicular to the perforation, while length is measured parallel to the perforation.

Small Beads

The vast majority (n = 3,266; 99.82 percent) of the McKinney site beads are in the small range, but none are seed bead size (< 2 mm). The seven categories described below are small in size and fit within the Kidd and Kidd (1970) classification as a Type IIa. All have been heat-rounded after being tube (cane)-drawn and segmented. Almost all came from Feature 2 and the area immediately north (Afton 1965), suggesting that perhaps Feature 2 should have encompassed a slightly larger area.

White Weathered and Stained Beads. A total of 245 beads were consigned to this category; of that number, 225 (91.8 percent) were from Feature 2. These tube-drawn, heat-rounded white beads make up 7.49 percent of all the beads collected. They were separated from another category of white bead primarily, but not exclusively, because their chemical makeup appeared to be quite different, based on the way they had reacted to their environment. These doughnut-shaped beads appear to have an opaque white layer on top of an opaque white layer and look "chalky" compared with other bead categories. Many seem to exhibit wear from adjacent beads; however, that appearance may be due to different chemistries of the inner and outer layers. Higher technological studies would be useful in determining this. Some specimens appear to be soil stained. A random (blind) sample of 30 beads is described in Table 2. Maximum lengths range from 1.85 to 3.05 mm with an average of 2.28 mm. The holes are round to slightly oval, and the minimum hole diameters range from .7 to 1.25 mm with an average of .92 mm. All are small (pony to intermediate) in size and fall within the Type IIa manufacturing classification of Kidd and Kidd (1970) and Karklins (1985). The average maximum diameter is 3.02 mm with a range of 2.45 to 3.5 mm, which is slightly larger than the other category of more typical white beads shown in Table 7. White beads often can have differing chemical makeups (McCabe and Billeck 2018).

Black Beads. Twelve small (pony to intermediate-sized) black beads were recovered, more than

Table 2. White, Opaque, Weathered and Stained, Small (Pony and Intermediate-Size) Glass Beads.

Bead #	Maximum diameter (mm)	Maximum length (mm)	Minimum hole diameter (mm)	Comments: Opaque, doughnut-shaped, holes round to oval, chalky and soft, some stained
1	3.00	2.20	.85	Pony bead
2	3.00	2.40	.80	Pony bead
3	2.80	2.00	.95	Intermediate bead
4	2.85	2.60	.70	Intermediate bead
5	3.15	2.05	1.25	Pony bead
6	2.90	2.30	.75	Intermediate bead
7	3.15	2.30	.95	Pony bead
8	2.95	2.10	.75	Intermediate bead
9	2.95	2.05	.85	Intermediate bead
10	3.00	2.05	1.15	Pony bead
11	2.80	2.25	1.05	Intermediate bead
12	3.20	2.15	1.00	Pony bead
13	3.20	2.60	1.05	Pony bead
14	2.80	2.40	.80	Intermediate bead
15	3.20	2.40	1.05	Pony bead
16	3.00	2.25	.85	Pony bead
17	3.00	2.50	1.00	Pony bead
18	3.40	2.35	1.10	Pony bead
19	3.10	1.95	1.00	Pony bead
20	3.15	2.00	1.05	Pony bead
21	3.10	2.15	.90	Pony bead
22	2.90	2.45	.85	Intermediate bead
23	2.95	2.10	.80	Intermediate bead
24	3.10	2.45	.75	Pony bead
25	3.00	2.40	.80	Pony bead
26	2.90	2.45	.85	Intermediate bead
27	3.15	2.50	.95	Pony bead
28	2.45	1.85	.75	Intermediate bead
29	3.50	3.05	1.15	Pony bead
30	2.80	2.20	.85	Intermediate bead
Range	2.45-3.5	1.85-3.05	.70–1.25	
Median	2.98	2.45	.98	
Average	3.02	2.28	.92	

91 percent from Feature 2 (Figure 14, upper right; Table 3). They are opaque, doughnut shaped, and often bear brownish-gray surface deposits from chemical reactions in the soil. These beads were manufactured with the tube-drawn method and have been heat-rounded. They are classified as IIa in the Kidd and Kidd (1970) and Karklins (1985) system, and Billeck (2010:14) described a similar bead as Variety 6.

Blue Beads. Thirty-four small (pony and intermediate-sized) opaque blue beads (Figure 14, lower right) were found in Feature 2. These doughnut-shaped beads were tube drawn and later heat rounded. They are somewhat irregular in shape, and a few have an occasional flat area on their otherwise curved surfaces, perhaps suggesting that they came into contact with a flat surface a little too soon after heat rounding. Their color is listed as a 2.5PB 5/8 in

Table 3. Black, Opaque, Small (Pony and Intermediate-Size) Glass Beads.

Bead #	Maximum diameter (mm)	Maximum length (mm)	Minimum hole diameter (mm)	Comments: Opaque, doughnut shape, holes round to slightly oval
1	3.25	2.20	1.11	Pony bead
2	3.40	2.25	1.08	Pony bead
3	3.10	2.25	.95	Pony bead
4	3.00	2.30	.76	Pony bead
5	3.10	2.20	.89	Pony bead
6	3.10	2.20	1.05	Pony bead
7	3.15	2.25	.93	Pony bead
8	2.85	2.20	1.12	Intermediate bead
9	2.80	1.90	.82	Intermediate bead
10	2.65	1.60	.83	Intermediate bead; no brown crust on surface of bead
11	2.45	2.15	.62	Same as above
12	2.80	1.95	.85	Same as above
Range	2.45–3.40	1.60–2.30	9.62–1.12	
Median	2.93	1.95	.87	
Average	2.97	2.12	.92	

the *Munsell Book of Color* (1976). They have quite a bit of pitting, and most have a thin silver sheen layer from weathering in the soil. A random (blind) sample of 30 of these beads is shown in Table 4. Maximum diameters range from 2.8 to 3.35 mm with an average of 3.05 mm, and the average maximum length is 2.24 mm. The holes vary in shape from round to oval and have an average minimum diameter of 1 mm. In the Kidd and Kidd (1970) and Karklins (1985) classification, they are IIa.

Blue to Blue-Green Beads. At least 237 blue to blue-green beads are represented in this collection (Figure 14, upper left); almost 78.5 percent were found in Feature 2.. Some are cracked and broken. These opaque, small (intermediate-sized), doughnut-shaped beads were manufactured by tube drawing, followed by heat rounding. Their color varies, even on the same specimen, from10B 3.5/8 to 5BG 5/6 (Munsell Color 1976). Table 5 describes 30 randomly selected beads of this type. They range from 2.5 to 2.85 mm in maximum diameter with an average of 2.67 mm. Their average maximum length is 1.75 mm within a range of 1.35–2.15 mm. The holes vary in shape from round to oval, and the minimum hole diameter ranges from .79 to 1.13 mm with an average of .93 mm. They are classified in the Kidd and Kidd (1970) and Karklins (1985) system as IIa and are somewhat similar to Billeck's (2010:17) Variety 15.

Reddish-brown Beads. The reddish-brown beads are described as a 7.5R 3/5 (Munsell Color 1976) and are the only type of small beads from this collection that are translucent (Figure 14, lower left). These small (intermediate-sized), doughnut-shaped beads are tube drawn. A total of 278 of these beads were recovered from the McKinney site burial, and from this number, almost 83.5 percent (n = 232) were from Feature 2. A random sample is described in Table 6. They range from 2.45 to 2.8 mm in maximum diameter with a 2.65-mm average. The average maximum length is 1.98 mm within a range of 1.6–2.2 mm. The holes vary in shape from round to oval, and minimum hole diameters range from .68 to 1.04 mm with an average of .82 mm. These beads match the Kidd and Kidd (1970) and Karklins (1985) manufacturing code IIa. They may be similar to but larger than Billeck's (2010:16) Variety 11.

White Opaque Beads. This category comprises 2,460 opaque white intermediate-sized beads (Figure

Table 4. Blue, Opaque, Small (Pony and Intermediate-Size) Glass Beads.

Bead #	Maximum diameter (mm)	Maximum length (mm)	Minimum hole diameter (mm)
1	3.35	2.05	1.13
2	2.85	2.40	.97
3	3.30	2.35	1.03
4	3.15	1.95	1.02
5	3.10	2.40	.83
6	2.90	2.20	.95
7	3.20	2.10	.97
8	3.00	2.30	.95
9	3.20	1.95	.97
10	3.00	2.30	.95
11	2.90	2.70	1.15
12	3.10	2.20	.87
13	3.20	2.00	1.14
14	3.20	2.40	.88
15	3.35	2.15	1.00
16	2.80	1.90	1.11
17	3.15	2.05	1.23
18	3.00	2.50	.87
19	3.10	1.80	1.05
20	3.00	2.90	.74
21	3.00	1.85	1.10
22	2.95	2.35	1.00
23	3.05	2.30	.97
24	2.85	2.70	.98
25	2.90	2.35	.98
26	2.80	2.50	1.02
27	3.00	2.45	1.02
28	2.95	2.20	1.03
29	3.30	1.75	1.17
30	2.90	2.00	1.00
Range	2.80–3.35	1.75–2.70	.74–1.23
Median	3.08	2.23	.99
Average	3.05	2.24	1.00

Table 5. Blue/Blue-Green, Opaque, Small (Intermediate-Size) Glass Beads.

Bead # 65.37.2-	Maximum diameter (mm)	Maximum length (mm)	Minimum hole diameter (mm)
1	2.75	1.95	.88
2	2.75	1.35	1.12
3	2.80	1.55	.82
4	2.75	1.65	1.13
5	2.80	1.95	.77
6	2.60	1.75	.98
7	2.75	1.45	1.06
8	2.55	1.75	.80
9	2.60	1.85	.83
10	2.60	1.80	.82
11	2.75	1.75	1.03
12	2.50	1.80	.98
13	2.85	1.60	1.11
14	2.70	1.75	.85
15	2.60	1.85	1.02
16	2.70	1.60	.79
17	2.70	1.70	.88
18	2.50	1.80	.88
19	2.55	1.75	.99
20	2.85	1.80	.98
21	2.75	1.85	1.02
22	2.60	1.70	1.00
23	2.85	1.75	.88
24	2.55	1.75	.70
25	2.60	1.60	1.02
26	2.75	1.75	.84
27	2.50	1.70	.89
28	2.60	2.15	.86
29	2.75	1.75	1.10
30	2.55	1.90	.97
Range	2.50–2.85	1.35–2.15	.79–1.13
Median	2.68	1.75	.96
Average	2.67	1.75	.93

13). Of this number, 1,371 beads (55.73 percent) were obtained from Feature 2. A random sample is described in Table 7. These doughnut-shaped, tube-drawn beads have a maximum average diameter of 2.54 mm with a range of 2.35–2.75 mm. Their average maximum length is 1.89 mm in a range of 1.55–2.45 mm. The holes are round to somewhat flattened in shape. Their minimum diameters range from .65 to 1 mm with an average of .79 mm. Kidd and Kidd (2010) and Karklins (1985) would assign this bead to Type IIa. The two categories of small white beads described above make up more than 75 percent of the glass beads obtained from this site.

Larger Beads

While not used exclusively on necklaces, larger necklace-sized beads usually were strung or attached to a cord rather that sewn directly on an item as

Table 6. Reddish-brown, Translucent, Small (Intermediate-Size) Glass Beads.

Bead # 65.37.2-	Maximum diameter (mm)	Maximum length (mm)	Minimum hole diameter (mm)
1	2.70	2.10	.80
2	2.45	1.85	.80
3	2.75	2.05	.90
4	2.50	2.10	.75
5	2.75	2.05	.82
6	2.50	1.85	.78
7	2.55	2.00	.84
8	2.60	2.05	.83
9	2.50	2.10	.70
10	2.60	2.20	.80
11	2.80	1.70	1.04
12	2.70	1.60	.95
13	2.75	2.00	.80
14	2.55	2.05	.84
15	2.70	2.00	.83
16	2.65	1.90	.96
17	2.75	1.80	.96
18	2.45	2.10	.72
19	2.60	2.10	.68
20	2.70	1.90	.89
21	2.70	1.90	.87
22	2.60	1.90	.70
23	2.60	2.20	.83
24	2.75	2.10	.75
25	2.70	1.95	.70
26	2.80	2.10	.81
27	2.55	1.90	.73
28	2.70	1.85	.86
29	2.75	2.00	.80
30	2.70	1.90	.85
Range	2.45–2.80	1.60–2.20	.68–1.04
Median	2.63	1.90	.86
Average	2.65	1.98	.82

Table 7. White, Opaque, Small (Intermediate-Size) Glass Beads.

Bead #	Maximum diameter (mm)	Maximum length (mm)	Minimum hole diameter (mm)
1	2.50	1.85	.80
2	2.50	1.95	.75
3	2.50	2.00	.75
4	2.40	1.80	.75
5	2.60	1.55	.95
6	2.60	1.90	.95
7	2.50	2.00	.70
8	2.40	1.90	.75
9	2.60	1.95	.75
10	2.70	1.55	.80
11	2.60	1.90	.95
12	2.65	1.80	.65
13	2.50	2.15	.70
14	2.60	1.55	1.00
15	2.65	1.90	.75
16	2.40	1.85	.85
17	2.65	1.95	.75
18	2.60	1.90	.70
19	2.45	1.85	.80
20	2.60	1.90	.80
21	2.45	2.05	.85
22	2.40	2.15	.75
23	2.50	1.80	.70
24	2.60	2.05	.75
25	2.35	1.95	.85
26	2.40	2.45	.65
27	2.40	2.05	.80
28	2.60	1.55	.80
29	2.60	1.70	.80
30	2.70	1.85	.80
31	2.75	1.70	.90
Range	2.35–2.75	1.55–2.45	.65–1.00
Median	2.55	2.00	.83
Average	2.54	1.89	.79

were embroidery beads. The collection contains six such beads, representing five types (Figures 15–18). At least three were recovered from the north end of the grave; the original location of the others is not known, although apparently none of them were from Feature 2. All but one of these beads are faceted. Measurements, including hole dimensions, are maximum dimensions.

Purple-Blue Mandrel-Wound Bead. In glass bead making, a mandrel is a metal rod or bar, sometimes slightly tapered, used as a core around which glass is wound, a process often referred to as wire wound. This bead is considered to be in the large (6–10 mm) range (Billeck 2010:9). It is opaque to slightly translucent (Figure 15, right); the translucence is seen only near the ends of the hole. This somewhat

doughnut-shaped bead clearly shows the winding marks of molten glass as it was wrapped around a wire (Figure 16). Its purple-blue color is a 7.5PB 3/4 (Munsell Color 1976). This bead is 7.75 mm in diameter and 6.65 mm in length; its hole diameter is 2.7 mm. Its manufacturing method code is WId (Kidd and Kidd 1970; Karklins 1985).

Purple-Blue Faceted Bead. One slightly translucent faceted bead had been collected from the site by Don Rowlison (Figure 15, left). Its purple-blue color is 7.5PB 2.5/4 (Munsell Color 1976). It was tube drawn and contains 18 handmade facets. Its manufacturing method code is IIf (Kidd and Kidd 1970; Karklins 1985). The edges of the facets are somewhat rounded (Figure 17). The facets were most likely ground and then heat-rounded, or perhaps they were pressed in the presence of heat. The bead has a diameter of 7.15 mm, a length of 7.0 mm, and a hole diameter of 2.6 mm.

Blue Faceted Bead. The third of the large beads is blue (7.5PB 3/7), translucent, and contains 18 facets (Figure 15, second from right). The rounded-edge facets are irregularly shaped and spaced and correspond to the IIf manufacturing code (Kidd and Kidd 1970; Karklins 1985). The bead is 6.8 mm in diameter and 6.3 mm long. It has a round hole with a diameter of 3.35 mm.

Dark Purple-Blue Faceted Beads. Two large beads are opaque and dark purple-blue (7.5PB 2/3.5). One of these beads exhibits a thin iridescent film from chemical interaction with the soil. The 18 and 19 well-made and spaced facets with slightly rounded edges (Figure 15, center) are consistent with the IIf manufacturing method code (Kidd and Kidd 1970; Karklins 1985). The diameters of the two beads are 6.85 and 7.45 mm, and the lengths are 6.7 and 6 mm (Figure 18). The diameters of the round and oval holes are 3.1 and 2.85 mm.

Black Faceted Bead. The last of these larger beads is slightly smaller than the others. It is black, opaque, tube drawn, and contains 15 irregularly shaped and spaced facets (Figure 15, second from left). The facets are handmade, and their edges are somewhat rounded (Figure 17, upper). The bead diameter is 4.8 mm, and its length is 4.75 mm. The maximum diameter of its oval hole is 1.95 mm. The facets appear to have been manufactured in the same manner as the other larger beads: an IIf manufacturing code (Kidd and Kidd 1970; Karklins 1985).

Bead Discussion

Recovered from Feature 2 were 2,059 small (pony and intermediate-sized) beads (Table 8) or 62.93 percent of the total 3,272 glass beads. An even larger percentage might have been present there except for rodent disturbance scattering them slightly outside of the feature. In this area near the femur sections, Witty (1965b:3) noted four or five rows of white beads in situ adjacent to a diamond or triangular pattern of black beads that were undisturbed by the varmints. This type of bead would have been attached to articles of clothing, such as leggings or moccasins, or to leather or cloth containers or to other objects made of similar materials. Evidently some or all of these beads were sewn on to something. As is typical at many Native American sites dating to the 1800s, white beads are the most abundant color. They make up more than three-fourths (75.18 percent) of all recovered beads (Figure 9).

Interestingly, no seed (very small, < 2 mm in diameter) beads were found in the burial. While no soil screening was conducted on site, the laboratory hand screening, probably with water, of the bead-rich soil from Feature 2 and the area immediately north of it (Afton 1965) should have been fine enough to capture seed beads had they been present. The use of the smaller bead sizes at various times was primarily one of personal and tribal preferences. On the Great Plains for several decades, some tribes used them; other tribes did not accept them until later. Their popularity seemed to fluctuate in different areas and among different tribes over a long period of time. Consumers' desires regulated what the traders kept in stock (Hanson 2005:147–149).

Shell Hair Pipe Breastplate

The first use of the term "hair pipe" referred to long silver beads or tubes, manufactured for the Indian trade in the latter half of the eighteenth century (Ewers 1957:40). Because of expense, shell eventually came to dominate the trade market at that time. Shell hair pipes are long tubular beads that taper toward each end. By Ewers' (1957:37) definition,

Table 8. Summary of All Glass Beads.

Bead categories	Beads from Feature 2		Beads outside of Feature 2		Total beads by category	Percent of total beads by category
	Totals	Percent*	Totals	Percent**		
Porous white	225	91.84	20	8.16	245	7.49
Black	11	91.67	1	8.33	12	.37
Blue	34	100.00	—	—	34	1.04
Blue to blue-green	186	78.48	51	21.52	237	7.24
Reddish brown	232	83.45	46	16.55	278	8.50
White	1,371	55.73	1,089	44.27	2,460	75.18
Large "necklace-size"	—	—	6	100.00	6	.18
Totals	2,059	62.93	1,213	37.07	3,272	100.00

* Percentage is calculated by dividing column 1 by column 5.

** Percentage is calculated by dividing column 3 by column 5.

these elongated beads measure 1½ inches or more in length at a minimum. They were first hair and ear ornaments (Ewers 1957:52–56), thus accounting for their name. Also they sometimes were used on chokers and longer necklaces.

"The center of commercial manufacture of shell hair-pipes for the American Indian trade was the little town of Pascack (now Park Ridge) in Bergen County, N. J." (Ewers 1957:42; Lees 1992:219–221; Wedel 1959:511). The William Campbell family soon came to dominate the manufacturing of shell hair pipes. Prior to and concurrent with their work in hair pipes, they manufactured wampum (tubular shell) beads. Starting as a cottage industry, the family operation evolved into a small factory, using crude machinery that they designed. By the mid-1800s the manufacture of hair pipes was considered one of the most important businesses in Bergen County. They were made from the lips of the West Indian or pink conch (*Strombus gigas*), a warm water species found between Florida and Venezuela (DeVore 1992:56). The Campbell operation was the source of the vast majority of shell hair pipes sold by almost all of the various trading companies.

Before 1880 small numbers of hair pipes were used as ear ornaments, hair ornaments, necklaces, including chokers, and breastplates (Ewers 1957:52–64). The Comanche may have invented their use on breastplates in the early 1850s (Pakes 2005:127). However, they did not become popular among most other Plains tribes until the latter half of the 1860s. Shell hair pipes were often easily broken when used on a breastplate, and many were required in its manufacture, even though the early breastplates were shorter than what eventually became common.

"The most striking and ingenious method of employing hair pipes in adornment was that of stringing considerable numbers of them on buckskin cords horizontally or diagonally in two or more vertical rows to form an elaborate breastplate" (Ewers 1957:58). Depending on how the breatplates are supported with suspension from the neck, the hair-pipe rows may sag, thereby taking on a V-shaped appearance. One of the earliest breastplates was collected in 1868. It had 30 shell hair pipes, each 4 inches long, in 2 vertical rows, separated with a few beads and a vertical strip of leather 3/8 of an inch wide and 1/8 of an inch thick. Ewers (1957:58) regarded this example as the type specimen for Plains hair-pipe breastplates, which were worn by men on dress-up occasions and often taken into battle.

By 1880 people determined that hair pipes could be manufactured from cattle bones more cheaply and with less breakage (Ewers 1957). Although not as white as the shell, bone soon took over the market. Others (Afton et al. 1997:363) suggested that bone hair pipes might have been introduced slightly prior to that date. McWilliams and Jones (1976:21) stated, "About 1878 bone replaced shell as the raw material . . ." for these artifacts. With the introduction of bone, breastplate popularity expanded.

Shell breastplates were composed mainly of long, somewhat fragile marine shell hair pipes. They were not sturdy enough to be considered as a shield for the chest; rather, their main purpose was for decorative male status. In the late 1800s a number of warriors were photographed wearing breastplates (Ewers 1957; Robotham 1994:31, 35, 56). Even after bone hair pipes replaced shell, they were not considered much physical protection.

Items of a sacred nature often were attached to breastplates, which was important in times of danger, such as warfare and intertribal raiding. Native American ledger art is filled with battle scenes depicting Plains warriors wearing breastplates. Their effectiveness against lance or arrow was minimal and against guns was nonexistent. Nevertheless, most warriors apparently considered personal ornamentation very important, and in some cases breastplates probably were considered crucial for spiritual protection.

Unfortunately, all ledger art and most historic photographs that depict breastplate-wearing warriors lack the detail necessary to study their construction. With a few exceptions, those images that show a little more breastplate detail are generally later in time, mostly after bone hair pipes became popular (Feder 1962:69; Nye 1968; Robotham 1994:31,35,56). In an interesting photograph, said to have been taken in 1880, *Utse-tah-wah-ti-an-kah*, an Osage, wears a breastplate that may be a mixture of shell and bone hair pipes (Taylor 2003:71). It contains three vertical columns of horizontal hair pipes. The middle column consists of shorter, more tapered hair pipes that one usually expects to be made of shell. Their use among the Osage was not nearly as common as among the High Plains tribes living farther west.

Some hair pipes were collected from the McKinney site burial by Rowlison and his biology teacher shortly after site discovery and before Witty's arrival. During the excavation some were found within the talus slope soils where they had eroded and slid down from the burial, and some were excavated from the north end of the burial. Primary provenience information, other than general Feature 1 fill, was given for only two hair pipes, shown on the excavation sketch map as redrawn in Figure 4. They were found in the general area where the body's head is thought to have been located. If this interpretation is correct, they could have been used as hair or ear ornaments and/or as part of a necklace. No hair pipes were recovered from Feature 2.

Of the 15 shell hair pipe fragments in the collection, 5 are almost complete. Some of the smaller fragments could be from the same specimens. A conservative estimate of the number of hair pipes represented is 11; however, others probably were once present. Many shell flakes, splinters, and dust, which were all that remained from additional ones, were uncollected and uncounted, and many pieces probably had washed away during flash floods. Obviously the environment, time, and rodent disturbance took a severe toll on the shell itself. Evidence of gnawing may have been removed by chemical and physical weathering (Figures 19 and 28). The metric information on the hair pipes is summarized in Table 9.

Leather Strip from a Breastplate

Clues, such as a damaged leather strap and scattered marine shell hair pipes, suggest that the individual buried at the McKinney site wore a breastplate. The 11 or so shell hair pipes generally would not be enough to manufacture a typical breastplate. However, the shape and construction of the leather segment, which would have held the rows of hair pipes in place, rule out almost any other usage (Figures 20–22). Some or perhaps all of the large glass beads, described above as necklace beads, might have been used as decorative spacers. The disturbed nature of the site makes this impossible to prove, but the leather band is the key to this interpretation.

Some years after writing the original report on this burial (Feagins 2004f), this author closely observed a Native American breastplate in a museum display and realized, especially after further research, that this uniquely crafted leather strip was typical of those that were used to assemble breastplates. Even the wear patterns on the leather match what one would expect from hair-pipe use in that manner. A fine view of such a leather strap in a breastplate containing bone hair pipes can be seen with magnification in a photograph of Two Hatechet, a Kiowa, taken in 1898 (Fleming and Luskey 1986:173.)

The 14SD301 narrow leather band seems to be made from a native-tanned hide. Both ends had

Figure 19. Shell hair pipes.

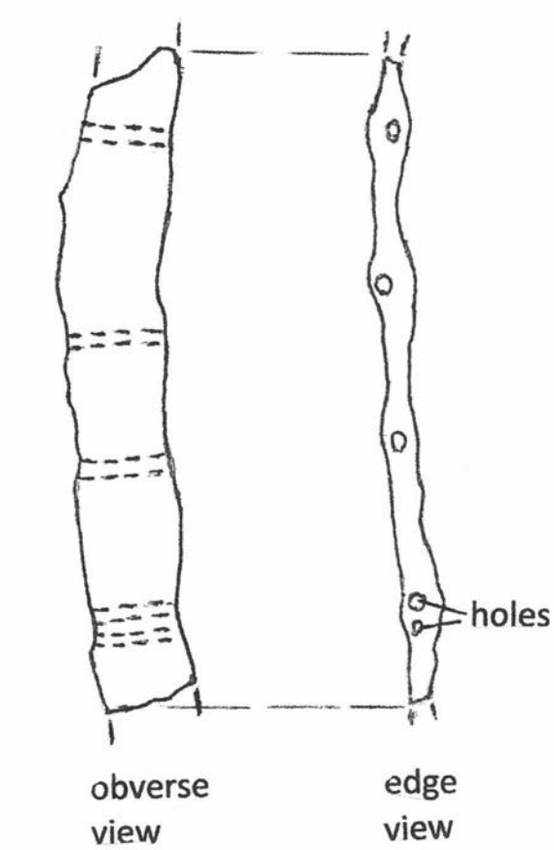

Figure 20. Sketch of obverse side and edge views of a fragment from a central leather strap used for spacing and attachment of shell hair pipes on the central part of a breastplate (Feagins 2000:32).

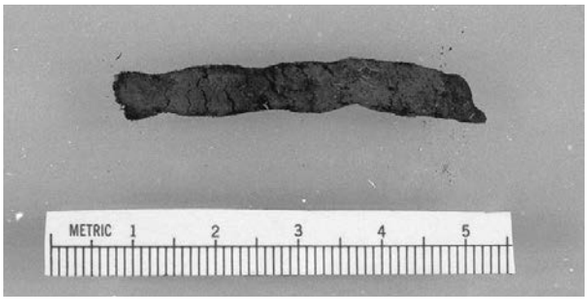

Figure 21. Front view of narrow leather strap used for attaching shell hair pipes to a breast plate. Note where the tapered hair pipes have pressed in from the sides on the edges of the leather. Scale is in millimeters.

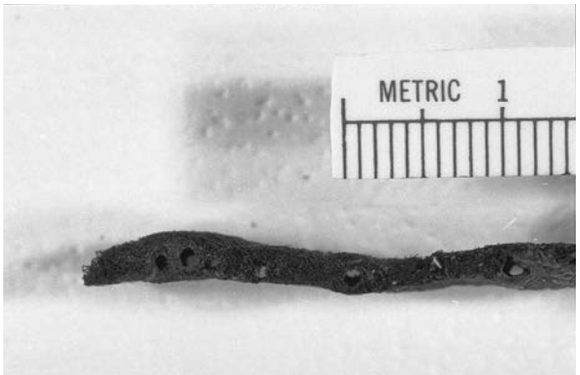

Figure 22. Detail of the edge of a small leather strap fragment, showing holes where shell hair pipes might have attached to a breastplate. Scale is in millimeters.

been torn or chewed off; thus, it was once longer in both directions. Presently it is 45.5 mm in length, 6.4 mm in maximum width, and 3.3 mm in maximum thickness. It contains five holes but not through the broadest part from front to back, as one might expect. Rather, the holes are through the sides, going from edge to edge (Figures 20–22). The width is narrowest at the individual holes,

Table 9. Shell Hair-Pipes.

Catalog #	Length (mm)	Diameter (mm)	Minimum hole end diameter (mm)	Maximum hole end diameter (mm)	Comments
65.37.53	99.1	8.50	2.25	2.50	Slight breakage one end; hole round
65.37.16	88.2*	8.20	2.10	2.10	Some breakage each end; cross section & hole round
65.37.51	79.5*	9.20	2.05	2.20	Breakage; cross section oval; hole round
65.37.42	44.6*	8.90	2.10	2.20	Breakage; cross section oval; hole round
65.37.41	79.7*	8.80	2.00	2.00	Breakage; cross-section & hole round
65.37.50	92.7*	8.55	2.30	2.40	Slight breakage each end; cross section & hole round
65.37.17	94.5*	7.50*	2.25	2.25	Breakage; cross section & hole round; quite weathered
65.37.52	90.5*	8.40	2.15	2.20	Breakage; cross section oval; hole round
65.37.40	42.7*	7.80	2.20	2.20	Major breakage; cross section oval; hole round
65.37.54	52.4*	6.50*	1.90	2.05	Major breakage; cross section oval; hole round; quite weathered
65.37.43	33.2*	7.65*	1.95	2.20	Major breakage; cross section oval; hole round; quite weathered
65.37.38-A	—	—	2.25	2.25	Major breakage & weathering
65.37.38-B	—	—	2.20	2.20	Major breakage & weathering
65.37.38-C	—	—	2.10	2.10	Major breakage & weathering
65.37.70	—	—	—	2.50	Major breakage & weathering
Range	—	7.80–9.20**	1.90–2.25	2.00–2.50	
Median	—	8.50	2.08	2.25	
Average	—	8.54	2.13	2.22	

*Broken or quite weathered

**Broken or severely weathered; data not included in totals

where both edges seem to have been pressed inward by hard objects, such as hair pipes. The maximum thickness is at the hole edges themselves because the holes have spread the leather fibers apart. It appears that they were expanded (thickened) where the tapered ends of the hair pipes applied pressure to the leather strip at the hole openings (Figure 20). Four of the holes are 1–1.5 cm apart and approximately 1 mm in diameter. The diameter of the smaller fifth hole is .7 mm. It is more adjacent to one of the other holes. Perhaps it represents where some hair pipes were better realigned on the breastplate. Witty did not note or collect any evidence as to the cordage used to construct the breastplate. Was it sinew or a trader-supplied thread that connected the hair pipes across from each other and through the leather strap? Regardless, the details indicate that the breastplate had been in service for quite some time, probably worn by the deceased, and certainly not newly manufactured to accompany the dead. Why this leather fragment was preserved when time was not so kind to other perishable materials in the burial is unexplained. No evidence of copper corrosion was noted on it.

Harness Equipment

Iron Buckles and Rings

Four large iron buckles, two containing pseudomorphs, and two large iron rings are considered to be horse tack, thus fitting under the category of harness equipment (Figure 23). They are described in Table 10. The ring portions and metal tongues are generally rounded in cross section except where they were bent around the ring to form the buckle. They show wear where the tips of the tongues rested on the opposite sides of the buckles. All are rusted.

The two largest buckles (catalog #s 65.37.45 and 65.37.11) contain clearly defined pseudomorphs, formed by rust around a set of back-and-

Figure 23. Iron harness buckles and rings.

Table 10. Large Iron Buckles and Rings.

Artifact/ catalog #	Ring or buckle diameter (mm)	Diameter of metal in buckle or ring (mm)	Length of tongue (mm)	Diameter of tongue (mm)	Mass (g)	Comments: Rust has increased the dimensions listed for the artifacts.
Buckle/ 65.37.45	92.05	10.8	92.90	10.2	165.9	Collected by Rowlison; pseudomorph of cordage strap fastened on both sides of tongue—29.7 mm & 34.4 mm
Buckle/ 65.37.11	90.20	10.3	99.60	12.3 (where attached)	140.5	Feature 1; pseudomorph of cordage strap fastened on both sides of tongue—30.3 mm & 31.6 mm
Buckle/ 65.37.9	81.50	7.8	90.75	13.5 (where attached)	108.5	Feature 1
Buckle/ 65.37.10	66.50	8.5	68.45	11.6 (where attached)	72.9	Feature 1
Ring/ 65.37.46	72.20	8.6	N/A	N/A	65.9	Collected by Rowlison
Ring/ 65.37.26	84.75	8.1	N/A	N/A	78.7	Found in level above poles in rodent disturbed area

forth-wound cords that created a wide cloth band, attached to either side of the tongues (Figure 24). This general type of cinch can be seen in Arco Publishing Company (1974:10); Hamley and Company (1995:64), Henderson (1998:97), Spector et al. (1985:164), and Ward (1958:218). Some of the actual cord fibers remain in association with the pseudomorph. No spin twisting was observed on these somewhat coarse fibers on an individual cord. The cord, composed of many fibers, was not fastened to the buckles with a series of hitches or cinch loops, as is common. Rather, the pseudomorphs suggest that the cords were braided together to form the cinch band (Figures 24 and 25). Perhaps the manufacturing technique was similar to that of a braided Navajo cinch, shown by Roessel (1983:512–513).

Figure 24. Braided cordage pseudomorphs on two iron buckles near the tongue attachments of each.

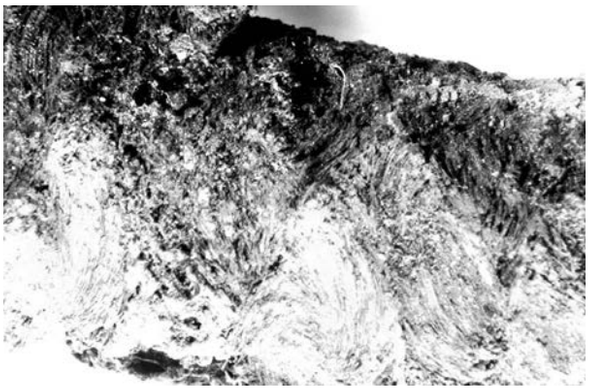

Figure 25. Detail of cordage pseudomorph on an iron buckle.

Considering that the curvature of the round buckles would squeeze the cords together, the widths of the pseudomorphs on each side of the buckles' tongues (Table 10) give only a general estimate of the original cinch band widths, which are estimated at approximately 7–8 cm.

These two buckles, discounting the rust, appear to be the standard 3½-inch buckles commonly found on saddle cinches (Hamley and Company 1995:64). Also called a saddle girth, the cinch is a wide band that goes under the horse's belly to hold the saddle in position (Ward 1958:216; Spector et al. 1985:164). Cinches can be made from various materials, but cordage bands and leather straps are among the most common. The cinch configuration may be single rigged or double rigged, depending on the type of saddle, which is partly determined by the anticipated steepness of the terrain in which it is to be used (Adams et al. 1963:337). The three largest buckles and the one largest ring suggest that some type of double rigging may have been employed. Usually the front cinch was made from cords, and the back or flank cinch was made of leather (Ward 1958:217; Spector et al. 1985:164). For a good view of this type of rigging, see Ball and Vebell (1991:86). While it also was not unusual for both cinches to be cordage (Moseman 1976:234–242), the pseudomorphs indicate that only one cord cinch was present. If this interpretation is correct, the cord cinch would have been fastened to the two buckles with the pseudomorphs, and the remaining largest buckle and ring would have been used to secure the leather flank cinch. Most of the cords and all the leather decayed.

Perhaps the smaller buckle and ring were part of the side rigging for a saddle, or they might have been adapted to serve some other unknown function. There probably was a lot of variation in the appearance of individual Native American-modified Euro-American saddles in the mid- to late-1800s (Wissler 1915). For certain, horses and the equipment used to manage them were extremely important to the Plains Indians during the eighteenth and nineteenth centuries (Allen 1967:183; Holder 1970; Roe 1955).

Additional Discussion of Interpreted Harness Equipment

The locations of the iron buckles and rings within the burial were not precisely described or shown by Witty. Recently an attempt was made to improvise a scale for his sketch map (Figure 4), based on the width he recorded for the burial remnant. This derived and admittedly inexact scale provided a rough estimate of the distance between the iron buckles at the north end of the burial and the iron buckles farther south near the bead concentration. The distance ranges from approximately 30 to 34 inches. This information is of interest because standard front cinches are 30 inches long, and most flank cinches are approximately 36 inches long (Spector et al. 1985:164). Of course, cinch lengths are longer or shorter than these dimensions, depending on the circumference of a given horse's midsection.

Is it possible that a front cinch and a flank cinch were laid out in a linear arrangement on the east side of the body? The spacing supports that argument. The buckles containing the cordage pseudomorphs are almost certainly from a saddle cinch, and other

aspects of this cinch-and-saddle scenario serve to explain the observed data. However, one cannot be completely confident that their arrangement in the grave is correct.

Cloth and Related Items

Buttons

Five Prosser buttons were recovered from the burial (Figure 26). These particular buttons are erroneously called glass, agate, or "chinas," but they actually are high-fired ceramic—not glass or agate, nor do they come from China (Albert and Adams 1970:14; Collison 2010:123–127). While these buttons are commonly called chinas by collectors, that term does not differentiate them from true glass buttons, so Prosser is the much preferred term. Prosser button characteristics are a glass-like appearance and a slightly rough and pitted center on the back (Sprague 2002:111). Under microscopic examination these buttons show the minute crystals that form their paste.

Prosser buttons were attractive, durable, and inexpensive to manufacture. They presented a fine appearance and soon became very popular. The revolutionary clay-dust process was developed by Richard Prosser in 1840 (Collison 2010:123). "The Prosser process of button manufacture involved the preparation of fine clay with the addition of quartz or finely ground ceramic wasters, a small amount of moisture, and then pressing this mixture into cast-iron molds" (Sprague 2002:111). The buttons were highly fired to approximate porcelain consistency. As the invention of the Prosser process is precisely dated and buttons are a common personal item in many historic sites, these buttons are useful in establishing chronology. According to Sprague (2002:111), the Prosser button ". . . gives an excellent *terminus post quem* of 1840."

All five of the McKinney site buttons are the white sew-through variety and contain four holes. They fit in Collison's (2010:124) Class IV, Type A. Four are quite similar plain buttons that have a well or recessed center on the face where the holes are located. They are of a size and type that one would expect to find associated with clothing, such as shirts. Their diameters are 11.8, 11.35, 11.2, and 11.45 mm; their thicknesses are 3.15, 3, 3.3, and 3.2 mm; their average mass is .45 g. One of the plain buttons contains slightly smaller holes that are spaced closer together than those on the other three.

The fifth Prosser button is white and decorated with 14 raised knobs around the perimeter of the obverse, which Collison (2010:126) calls a Hobnail pattern. Its edge has been chipped, removing one of the knobs from the face. A slightly raised ring surrounds a central well with four small holes. The convex back is plain except for the roughened surface around the holes in the center, typical for Prosser buttons. This artifact is 11.2 mm in diameter, 3.2 mm in thickness, and has a mass of approximately .5 g.

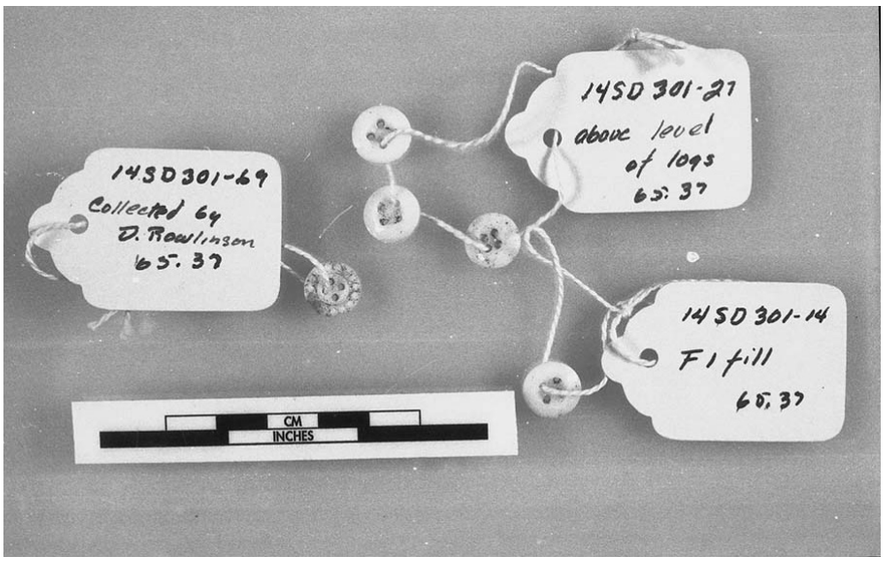

Figure 26. White Prosser buttons. Rowlison's name is misspelled on label.

Rowlison found the decorated button prior to Witty's arrival at the site, so it must have come from the western side of the burial. Of the remaining four buttons, one (catalog #65.37.14) came from the Feature 1 fill, and the other three (collectively assigned catalog #65.37.27) were recovered from above the level of the poles. These probably had been disturbed by rodents.

Textiles

A poorly preserved pseudomorph of a textile already has been discussed in association with one of the metal bells (catalog #65.37.67-C). Also previously described were the nicely preserved pseudomorphs of coarse cordage on two of the large iron buckles from a saddle cinch. In addition, other very small poorly preserved pieces of actual textile and another textile pseudomorph were recovered from the burial. They probably were preserved by being in contact with metal. Without something to aid in their preservation, these perishables undoubtedly would have been destroyed long before the burial was discovered.

The last textile pseudomorph was recognized on a few rusted small thin flat iron fragments. These pieces will be discussed latter. While the state of preservation does not permit much to be learned from the pseudomorph, it does suggest the nature of some of the textiles that once were in the burial. The weave pattern and thread count could not be determined, but the fibers were slightly S-spun and quite small in diameter. They were so tiny that the thread count per cm or per inch was high. Although uncertain, more than one type of weave, suggesting more than one type of cloth, might have been present on the iron segments. They were found in the rodent-disturbed area near three of the buttons from above the level of the poles covering the burial.

A finely woven black or extremely dark blue cloth (catalog #65.37.29) was fragmented and had been stained from contact with the brass artifacts (Figure 27). In the field the textile had been labeled as "decayed leather fragments." This misidentification had been maintained until the pieces were more closely examined. They had to be handled with great care and were hard to measure. The largest portion was only 7.7 mm long and 4.1 mm wide. When seen in cross section, the textile contained as many as nine layers of the same material. No spin was noted

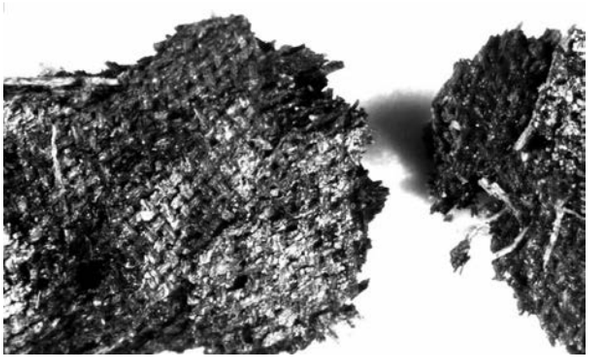

Figure 27. Textile fragments preserved by copper salts.

on any of the fibers. The weave was simple: one over, one under, etc. Three separate thread counts were made because of the difficulty of obtaining an accurate count, even with the use of a low-power binocular microscope. The average count was 63.2 threads/cm or 160.5 threads/inch. These cloth bits were found in a dirt sample along with a white intermediate-size glass bead. Identified simply as from Feature 1 in the area above the level of the poles, it is presumed that this location was rodent disturbed.

The final textile sample (catalog #65.37.12) also was described as being from "feature 1 fill." This trace of cloth was embedded in a small dirt clod; trying to remove it from the soil would have destroyed it. It also was black with a very fine but simple weave: one over, one under, etc. Since only four threads were continuous, the thread count of 53.3 threads/cm or 135.5 threads/inch is not precise. Considering the inaccuracy of the count and similarity of traits with the previously described cloth fragments, it is suspected that catalog #65.37.29 and #65.37.12 might be from the same textile.

All evidences of textiles from the burial are fragmentary. Nevertheless, these two samples and the pseudomorphs from the flat iron segments, the brass bell, and two iron buckles represent at least two types of textiles: one that was finely woven and a corded saddle cinch. One cannot help but wonder how many other perishable artifacts had decayed, leaving no trace.

Miscellaneous Materials

Several poorly preserved flat iron fragments were found in the disturbed area at a slightly higher

elevation than the wooden poles. A previously described textile pseudomorph was present on part of this rusted metal. The oxidized iron is still weakly attracted to a magnet but collectively weighs no more than .4 g. It is speculated that many of the smaller rust scales probably were lost or simply not collected. Some could be from a considerable range of possible objects, such as the remains of a knife blade or head of a lance.

Before Witty's arrival, Rowlison had collected two small elongated pieces of light-colored, "chalky" unindurated limestone (Figure 28, upper right). These most likely are Smoky Hill chalk from the Niobrara formation, which outcrops in north-central and northwestern Kansas (Merriam 1963:45–49; Stein 2005) and south-central Nebraska. They are similar in size and shape and have an average mass of only .25 g. They could have been intended to serve as a light-colored pigment, although there is no evidence of their having been modified or used in any manner.

The fractured distal end of a right femur from a bird was recovered from the burial (Figure 28, upper left). Dr. Mark B. Robbins, Collection Manager, Division of Ornithology, Natural History Museum at the University of Kansas, examined it. It is quite worn, and Robbins wondered if it had been intentionally ground. Due to fragmentation and wear, he could not determine the species. However, he observed that its morphology is close to an *Accipiter,* and its size is similar to a male Cooper hawk (*Accipiter cooperii*) or a female Sharp-shinned hawk (*Accipiter striatus*). Hawks were often admired and considered sacred to Native Americans. Although not proven, this bone might have served a sacred or ceremonial function prior to and/or within the burial. Perhaps it was part of a now mostly decayed medicine bundle or was attached to some other sacred object—perhaps the one associated with the feather fragment and the bell with the feather pseudomorph. While seeming logical, these speculations are most difficult to prove at this late date, given the preservation issues.

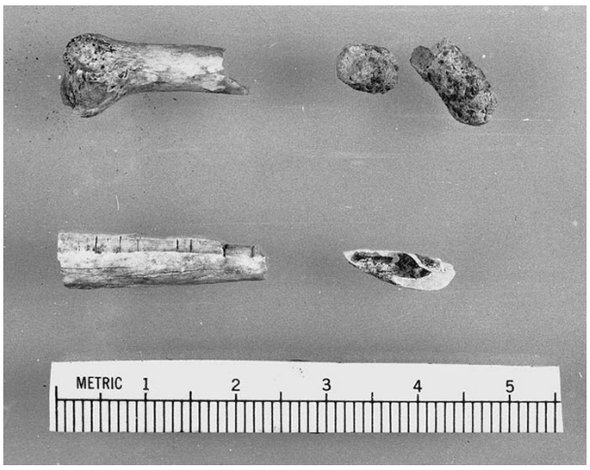

Figure 28. Bird bone of probable Accipiter at upper left), limestone (chalk) fragments at upper right, and additional hair-pipe fragments at bottom.

DISCUSSION AND SUMMARY

Despite the tremendous disturbances that had occurred to the burial site itself and the destruction of much of its contents, analysis of the surviving cultural materials, though fragmentary, yielded some important clues. They concerned 1) reaffirming a Native American presence, 2) understanding how certain environmental conditions affected the remains, 3) determining physical arrangements of some burial furniture, 4) recognizing examples of trading relationships with Euro-Americans, 5) identifying some artifacts buried with the dead, 6) interpreting how some of these items were modified and used by Native Americans, and 7) narrowing the time period in which the burial occurred.

The osteological analysis identified skeletal elements of an adult male, and the associated artifacts strongly support the presence of a historic American Indian male burial at this location. Witty stated that the length of the burial pit was approximately 4.5 feet. Located toward the north end the interment were the larger necklace-sized beads, hair pipes, leather strap fragment from a breastplate, *in situ* phalanges and metacarpals from the left hand, and brass hair coils with hair pseudomorphs. Collectively they support the supposition that the head was oriented toward that direction. Although most of these skeletal orientation indicators are based on circumstantial evidence, by far the best explanation for the evidence is that the individual was interred in a semi-flexed position with his head to the north.

The short length of the feature and the in-situ arrangement of the splintered femur shafts suggest that the individual was semi-flexed. The direction

that the burial faced is more problematic. This researcher leans toward the scenario that the corpse was placed at the bottom of the burial shaft on its left side (see Figure 4), facing east. Thereby the left hand would be lying in front of the face and not awkwardly placed behind the head. However, the direction in which the body faced is speculative. After all, there were no remains from the skull, ribs, or feet and few from many other parts of the skeleton.

Perhaps half of the grave was greatly impacted by erosion and occasional flash floods that degraded the bank, and a significant portion of the remainder had decayed and/or was disturbed by rodents. These irreverent mammals probably accounted for the damaged distal end of the femur, which seemed out of place on Witty's sketch map (Figure 4), and the main femur shaft splinters apparently in place at the opposite end of the grave.

The collection contained over 3,350 items of which 3,272 were beads. Not counting beads, more than half of the artifacts had been recovered by Rowlison and his teacher prior to Witty's visit (Afton 1965); plus an unknown amount may have been carried away by flash flooding. An approaching storm hurried the excavation and prevented Witty from documenting the proveniences of all the objects and bone fragments as carefully as he might have done otherwise. Fortunately he did have time to collect bead-rich soil for later fine screening in the laboratory. Bone preservation was quite poor generally except for the few individual bones that were in near contact with copper-containing metals. With the addition of rusted ferrous metals, the same can be said for the more perishable materials, such as cloth, feathers, and leather. However, some perishables were preserved. Also pseudomorphs represented fragments of other items that decayed and otherwise would have been undetectable with the field methods used.

The thousands of small (pony and intermediate-sized) glass beads would have been used as decoration, probably sewn on leather or textiles. Their chief concentration was in Witty's Feature 2, thought to be the area in front of the legs and feet, suggesting their possible use on leggings and/or moccasins, although many other possibilities exist, such as on artifacts laid beside the legs. This arrangement would place the iron rings and buckles, at least two of which were part of a corded saddle cinch, to one side of the skeletal remains.

The brass bells, brass chain, brass wire coils, and tinned-iron tinklers were used for decoration. The tinklers were cut individually, probably from tin cans. Pseudomorphs on the brass coils suggest that they likely were attached to the head as hair ornaments. Also the right femur from a bird (probably a hawk, *Accipiter* sp.), feather fragment, and feather pseudomorphs on some of the bells clearly demonstrate that one or more birds were associated with the burial possibly in several different ways. The feathers would have been decoration and, along with the bird bone, probably had religious significance. The shell hair pipes and especially the leather strip segment that held them in place has all the appearance of coming from a highly damaged breastplate.

Five Prosser buttons and small traces of textiles suggest that some type of finely woven cloth garment, probably a shirt, was worn or at least placed with the burial. Still, one must wonder why other textile fragments were nine layers thick. Apparently a textile with that many folds might not have been an article of clothing. Discussing other burials, Nassaney (2015:101) stated, "Some textiles were used to wrap the body prior to burial and possibly to wrap grave goods, since fabrics were [commonly] found adhering to . . . metal artifacts, though this might have been unintentional."

Fabric survival is extremely poor on Native American archeological sites, even though for many centuries a variety of textiles were the chief items that Euro-American traders kept in stock. "Despite its role as a cornerstone commodity, colonial trade cloth has received considerable less scholarly attention than more durable objects largely because very few textiles have survived into the twenty-first century" (Levine 2020:51). Thus, recording all details of these perishable trade goods, even though only fragments remain, is important.

Prosser buttons probably did not arrive on the Great Plains until shortly after 1840. The shell hair pipes likely were manufactured after 1862 and not likely manufactured after 1880 when bone hair pipes took over the trade. Bone was much cheaper and more durable. Notably no seed beads (very small, < 2 mm in diameter) were found in the burial. The time of their first introduction to Native

Americans on the Plains is arguable, but it occurred many decades earlier than this burial. The popularity of seed beads surged and shrank through time in different areas and among various tribes; thus, even if present, they might not have been particularly useful for dating purposes. If these tiny beads had been in the burial, some probably would have been recovered in the fine screening conducted on the soil brought back to the laboratory in Topeka. However, as the old saying goes, "Absence of evidence is not necessarily evidence of absence."

Considering that the Plains Indians were mostly removed from this region of Kansas and forced onto reservations in Oklahoma by the mid-1870s, a maximum range for the occurrence of this burial, based on artifacts and history, is most likely from the mid-1860s to the mid- or late 1870s. Unfortunately this less than two-decade span is not as narrow as one would like. Given the abundance of Euro-American-produced materials, this researcher speculates that this High Plains interment occurred during the latter part of that time range.

The mid-1800s saw a number of different tribes living, hunting, and raiding in northwestern Kansas. The Arapaho, Cheyenne, Kiowa, and Kansa (Bailey and Young 2001:463; Fowler 2001:841; Levy 2001:907; Moore et al. 2001:864) and probably the Comanche (Kavanagh 2001:887), Pawnee (Parks 2001:515), and Sioux used this portion of the High Plains from time to time. Some tribes only raided in this area. Also a host of immigrant tribes from the east had been pushed westward onto reservations and seasonally hunted bison on the High Plains. These tribes often came into conflict. While the first few tribes mentioned above are the most likely to be represented by the burial, at present none of those listed can be completely ruled out.

With the rapid development of DNA technology and its widespread use for genealogy and health research by individuals and their families worldwide, technological possibilities seem bright for the future. However, among some ethnic/cultural groups that knowledge is not always desired. Furthermore, obtaining this type of information from future burial discoveries in Kansas hinges on the consent and cooperation of the Kansas Unmarked Burial Sites (UBS) Board as it follows state and federal burial laws, coupled with tribal and other interests.

The 14SD301 burial speaks of a time when a whole way of life was changing in multiple ways. Bison herds were thinning and soon to be depleted. As Euro-Americans moved west, conflicts increased. They inadvertently carried pandemic diseases, which not only affected them in various degrees, but also to which Native Americans were especially ill adapted to resist. The remnants of various Native American cultures were slowly adapting to a changed and changing world—sometimes on their own terms but often not.

The warrior buried at the McKinney site undoubtedly experienced some of these changes, but many more were to come that he did not live to see. His burial story, while incomplete and somewhat difficult to interpret, is an interesting one. Perhaps in many ways it is a microcosm of the larger picture of Native American cultural change that encompassed this time period.

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John M. Connaway, archeologist with the Mississippi Department of Archives and History in Clarksdale, gave of his time as we worked together to improve the "Trade Bell Inventory forms" (Connaway 2015:26–27), which enabled the brass trade bells from the site and others to be recorded more systematically. His globular hawk bell expertise is impressive. I am always grateful to Lynn Barnickol, Forestry Supervisor with the Missouri

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The late former Kansas State Archeologist Thomas A. Witty kindly read a draft of the original report. Without Witty's efforts, along with the cooperation of Don Rowlison and his family, this study would not have been possible. Also of major importance were the efforts of my wife Peggy Feagins, who provided proofreading support, encouragement, and understanding during the analysis and writing. To all these individuals I give a heartfelt thank you! Any errors of fact or interpretation contained herein are the author's responsibility.

REFERENCES CITED

Adams, Ramon F., B. A. Botkin, Natt N. Dodge, Robert Easton, Wayne Gard, Oscar Lewis, Dale Morgan, Don Russell, and Oscar Osburn Wintfer
1963 *The Book of the American West*. Julian Messner, Inc., New York, New York.

Afton, Jean
1965 Catalog sheets for 14SD301, recorded intermittently May 4–20, 1965. Archeological site files, Archeology Office, Kansas Historical Society, Topeka.

Afton, Jean, David Fridtjof Halaas, Andrew E. Masich, and Richard N. Ellis
1997 *Cheyenne Dog Soldiers: A Ledgerbook History of Coups and Combat*. Colorado Historical Society, Denver, and the University Press of Colorado, Boulder.

Albert, Lillian Smith, and Jane Ford Adams
1970 Essential Data Concerning China Buttons. In *Guidelines for Collecting China Buttons*, by Ruth Lamm, Beatrice Lorah, Lester Lorah, and Helen W. Schuler, pp. 4–16. National Button Society of America, Hightstown, New Jersey.

Allen, Durward L.
1967 *The Life of Prairies and Plains*. McGraw-Hill Book Company, New York, New York.

American Geological Institute
1962 *Dictionary of Geological Terms*. Dolphin Reference Book C360. Doubleday & Company, Inc., Garden City, New York.

Angell, Raymond C., Bobby D. Tricks, Wesley L. Barker, and Vernon L Hamilton
1984 *Soil Survey of Sheridan County, Kansas*. Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C.

Arco Publishing Company
1974 *The Illustrated Glossary of Horse Equipment*. Arco Publishing Company, New York, New York.

Bailey, Garrick A., and Gloria A. Young
2001 Kansa. In *Plains*, edited by Raymond J. DeMallie, Pt. 1, pp. 462–475. Handbook of North American Indians, Vol. 13, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Ball, Robert W. D., and Ed Vebell
1991 *Cowboy Collectibles and Western Memorabilia*. Schiffer Publishing, Atglen, Pennsylvania.

Billeck, William T.
2000 Glass Bead Description. Manuscript supplied by author, December 16, 2000.
2010 Glass, Shell and Metal Beads at Fort Pierre Chouteau. In *The 1997–2001 Excavations at Fort Pierre Chouteau*, Vol. 2: *Material Culture*, edited by Michael Fosha and James K. Haug, pp. 1–100. Research Report No. 3. Archaeological Research Center, South Dakota State Historical Society, Rapid City.

Brown, Ian W.
1975 Historic Trade Bells. *Conference on Historic Site Archaeology Papers* 10(1):69–82.
1979 Bells. In *Tunica Treasure*, by Jeffrey P. Brain, pp. 197–205. Peabody Museum of Archaeology and Ethnology Papers No. 71. Harvard University Press, Cambridge, Massachusetts.

Buchanan, Rex (editor)
1984 *Kansas Geology: An Introduction to Landscapes, Rocks, Minerals, and Fossils*. University Press of Kansas, Lawrence.

Busch, Jane
1981 An Introduction to the Tin Can. *Historical Archaeology* 15(1):95–104.

Claassen, Cheryl P.
1998 *Shells*. Cambridge Manuals in Archaeology. Cambridge University Press, Cambridge, United Kingdom.

Collison, Patrick J.
2010 Button Assemblage from Fort Pierre Chouteau. In *The 1997–2001 Excavations at Fort Pierre Chouteau,* Vol. 2: *Material Culture*, edited by Michael Fosha and James K. Haug, pp. 101–169. Research Report No. 3. Archaeological Research Center, South Dakota State Historical Society, Rapid City.

Connaway, John
2003 More on Trade Bells. *Missouri Archaeological Society Quarterly* 20(3):10–12.
2015 Post-Contact Trade Bells Among the Indians of the Southeastern United States. *Flower World—Music Archaeology of the Americas* 4:11–29.

Core, Harold A., Wilfred A. Cote, and Arnold C. Day
1979 *Wood Structure and Identification.* 2nd ed. Syracuse University Press, Syracuse, New York.

DeVore, Steven Leroy
1992 *Beads of the Bison Robe Trade: The Fort Union Trading Post Collection*. Friends of Fort Union Trading Post, Williston, North Dakota.

Ewers, John C.
1957 *Hair Pipes in Plains Indian Adornment: A Study in Indian and White Ingenuity*. Anthropological Papers No. 50, Bulletin No. 164. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Feagins, Jim D.
1999 Notes on Artifacts from UBS 1991–8 Collection: A Historic Native American Burial Site (14LC307)—"The Copper Shield Site," Lincoln Co., Kansas. Notes on file with author.
2000 Notes on Artifacts from UBS 1990-26: A Native American Burial Site (14SD301), Sheridan Co., Kansas. Notes (with contributions by Lynn Barnickol and Tim E. Smith) on file with author.
2002 New Light on a Copper Shield from a Native American Burial in Central Kansas: An Example of Merchandising Failure in the Indian Trade. Paper presented at the 24th Annual Flint Hills Archaeological Conference, Kansas State University, Manhattan.
2004a Artifacts from an Historic Indian Burial Site Near Sylvia, Reno County, Kansas—UBS1991-87. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
2004b The Rush Site, 14DP432: An Historic Native American Burial Overlooking the Wolf River Valley in Northeastern Kansas—UBS2001-8. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
2004c The Trade Bell Inventory and the "Wolf River" Variety: A Proposed New Variety of Bell from Northeastern Kansas. Paper presented at the 26th Annual Flint Hills Archaeological Conference, St. Joseph, Missouri.
2004d The Coulter Collection (UBS1990-14): Materials from an Historic Native American Burial Site in Northeast Brown County, Kansas. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
2004e Artifacts from an Historic Indian Burial Site near Sylvia, Reno County, Kansas—UBS1991-87. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
2004f An Historic Indian Burial at the McKinney Site, 14SD301, in Sheridan County, Kansas—UBS1990-26. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.

Feder, Norman
1962 Plains Indian Metalworking with Emphasis on Hair Plates. *American Indian Tradition* 8(2):55–76.

Finnegan, Michael
1998 Results of Osteological Analysis, UBS1990-26. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.

Fleming, Paula Richardson, and Judith Luskey
1986 *The North American Indians in Early Photographs*. Dorset Press, New York, New York.

Ford, William E.
1932 *Dana's Textbook of Mineralogy.* 4th ed. John Wiley & Sons, Inc., New York, New York.

Fowler, Loretta
2001 Arapaho. In *Plains*, edited by Raymond J. DeMallie, Pt. 2, pp. 841–862. Handbook of North American Indians, Vol. 13, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Fox, Richard A. (with contributions by Patrick J. Collison)
2010 Personal Trade and Decorative Items at Fort Pierre Chouteau. In *The 1997–2001 Excavations at Fort Pierre Chouteau*, Vol. 2: *Material Culture*, edited by Michael Fosha and James K. Haug, pp.441–485. Research Report No. 3. Archaeological Research Center, South Dakota State Historical Society, Rapid City.

Hamley and Company
1995 *Cowboy Clothing and Gear: The Complete Hamley Catalog of 1942*. Dover Publications, Inc., New York, New York.

Hanson, Charles, Jr.
1982 Metal Tinkler Cones: A Popular Item from the Great Lakes to the Far Southwest. *Museum of the Fur Trade Quarterly* 18(4):12–14.

Hanson, James Austin
1975 *Metal Weapons, Tools and Ornaments of the Teton Dakota Indians*. University of Nebraska Press, Lincoln.
2005 When the Beads Changed. In *The People of the Buffalo*, Vol. 2: *The Plains Indians of North America. The Silent Memorials: Artifacts as Cultural and Historical Documents*, edited by Colin F. Taylor and Hugh A. Dempsey, pp. 147–151. Tatanka Press, Wyk auf Foehr, Germany.

Harlow, Milliam M., and Ellwood S. Harrar
1969 *Textbook of Dendrology: Covering the Important Forest Trees of the United States and Canada*. McGraw-Hill, New York, New York.

Harris, Elizabeth
1987 *A Bead Primer*. The Bead Museum, Prescott, Arizona.

Henderson, Carolyn (editor)
1998 *The New Book of Saddlery and Tack*. Howell Book House, New York, New York.

Holder, Preston
1970 *The Hoe and the Horse on the Plains: A Study of Cultural Development among North American Indians*. University of Nebraska Press, Lincoln.

Johnson, Judi
1977 The Manufacture of Glass Beads. *The Living Museum* 39(2):448–450.

Karklins, Karlis
1985 *Glass Beads: The Levin Catalogue of Mid-19th Century Beads; A Sample Book of 19th Century Venetian Beads; Guide to the Description and Classification of Glass Beads*. Studies in Archaeology, Architecture and History. National Historic Parks and Sites Branch, Parks Canada, Gatineau, Quebec.

Kavanagh, Thomas W.
2001 Comanche. In *Plains*, edited by Raymond J. DeMallie, Pt. 2, pp. 886–906. Handbook of North American Indians, Vol. 13, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Kidd, Kenneth E., and Martha A. Kidd
1970 A Classification System for Glass Beads for the Use of Field Archaeologist. *Canadian Historic Sites: Occasional Papers in Archaeology and History* 1:45–89. National Historic Sites Service, National and Historic Parks Branch, Department of Indian Affairs and Northern Development, Ottawa, Canada.

Lees, William B.
1992 An Historic Burial from the Southern Plains of Kansas. *Plains Anthropologist* 37(140):213–231.

Levine, Mary Ann
2020 The Fabric of Empire in a Native World: An Analysis of Trade Cloth Recovered from Eighteenth-Century Otstonwakin. *American Antiquity* 85(1)51–71.

Levy, Jerrold E.
2001 Kiowa. In *Plains*, edited by Raymond J. DeMallie, Pt. 2, pp. 907–925. Handbook of North American Indians, Vol. 13, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

McCabe, Kendra, and William T. Billeck
2018 To Bead or Not to Bead: Composition Variation of White Glass Beads Is the Question. Poster, National Museum of Natural History, Smithsonian Institution, Washington, D.C. Electronic document, https://naturalhistory.si.edu/sites/default/file/media/file/2018-mccabe-poster.pdf, accessed October 7, 2020.

McWilliams, K. Richard, and William K. Jones
1976 The Poafpybitty Site: A Late Nineteenth Century Kiowa Burial from Southwestern Oklahoma. *Plains Anthropologist* 21(71):13–28.

Merriam, Daniel F.
1963 *The Geologic History of Kansas*. Bulletin No. 162. State Geological Survey of Kansas, University of Kansas, Lawrence.

Moore, John H., Margot P. Liberty, and A. Terry Straus
2001 Cheyenne. In *Plains*, edited by Raymond J. DeMallie, Pt. 2, pp. 863–885. Handbook of North American

Indians, Vol. 13, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Moseman, Charles M.
1976 [1892] *Mosemans' Illustrated Guide for Purchasers of Horse Furnishing Goods*. C. M. Moseman and Brother, New York, New York. 1976 edition Arco, New York, New York.

Munsell Color
1976 *Munsell Book of Color*. Munsell Color, Baltimore, Maryland.

Nassaney, Michael S.
2015 *The Archaeology of the North American Fur Trade*. University Press of Florida, Gainesville.

Nye, Wilber Sturtevant
1968 *Plains Indian Raiders: The Final Phases of Warfare from the Arkansas to the Red River*. University of Oklahoma Press, Norman.

O'Shea, John M., and John Ludwickson
1992 *Archaeology and Ethnohistory of the Omaha Indians: The Big Village Site*. University of Nebraska Press, Lincoln.

Pakes, Fraser J.
2005 Dentalium and Plains Indian Aesthetics. In *The People of the Buffalo*, Vol. 2: *The Plains Indians of North America. The Silent Memorials: Artifacts as Cultural and Historical Documents*, edited by Colin F. Taylor and Hugh A. Dempsey, pp. 117–130. Tatanka Press, Wyk auf Foehr, Germany.

Parks, Douglas R.
2001 Pawnee. In *Plains*, edited by Raymond J. DeMallie, Pt. 1, pp. 515–547. Handbook of North American Indians, Vol. 13, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Pearson, Gregg Steven
2016 The Democratization of Food: Tin Cans and the Growth of the American Food Processing Industry, 1810–1940. Ph.D. dissertation, Department of History, Lehigh University, Bethlehem, Pennsylvania. Electronic document, https://preserve.lehigh.edu/etd/2756, accessed October 7, 2020.

Preston, Richard J., Jr.
1961 *North American Trees*. Revised ed. Massachusetts Institute of Technology, Cambridge.

Reynolds, John D.
1987 *The Archeology of Grove Reservoir, Kansas, 1969*. Anthropological Series No. 14. Archeology Department, Kansas State Historical Society, Topeka.

Robotham, Tom
1994 *Native Americans in Early Photographs*. Thunder Bay Press, San Diego, California.

Rockett, Frank H.
1984 Brass. In *McGraw-Hill Concise Encyclopedia of Science & Technology*, edited by Sybil P. Parker, p. 257. McGraw-Hill, New York, New York.

Roe, F. G.
1955 *The Indians and the Horse*. University of Oklahoma Press, Norman.

Roessel, Robert A., Jr.
1983 Navajo History, 1850–1923. In *Southwest*, edited by Alfonso Ortiz, pp. 506–523. Handbook of North American Indians, Vol. 10, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Ross, Lester A.
2000 *Trade Beads from Archeological Excavations at Fort Union Trading Post National Historic Site*. Midwest Archeological Center, National Park Service, Lincoln, Nebraska, and Fort Union Associations, Williston, North Dakota.

Rowlison, Jon R.
1965 Postcard, dated March 31, 1965, from Jon R, Rowlison, Manhattan, Kansas, to Thomas A. Witty. Postcard on file, Archeology Office, Kansas Historical Society, Topeka.

Scott, Douglas D.
1976 Ethnic Identification of an Historic Sac Burial from Northeastern Kansas. *Plains Anthropologist* 21(72):131–140.

Spector, David A., Barbara Burn, and Gail Rentsch
1985 *The Whole Horse Catalog*. Fireside Book, Simon and Schuster, New York, New York.

Sprague, Roderick
1991 Glass Trade Beads: A Progress Report. In *Approaches to Material Culture Research for Historic Archaeologists*, edited by George L. Miller, Olive R. Jones, Lester A. Ross, and Teresita Majewski, pp. 141–159. Society for Historical Archaeology.

2002 China or Prosser Button Identification and Dating. *Historical Archaeology* 36(2):111–127.

Stein, Martin
2005 *Sources of Smoky Hill Silicified Chalk in Northwest Kansas*. Anthropological Series No. 17. Archeology Office, Kansas State Historical Society, Topeka.

Taylor, Colin F.
2003 *The American Indian*. Salamander Books, London, England.

Wagner, Mark J.
2001 *The Windrose Site (11Ka326): An Early Nineteenth-Century Potawatomi Settlement in the Kankakee River Valley of Northeastern Illinois*. Reports of Investigations No. 56. Illinois State Museum, Springfield.

Ward, Fay E.
1958 *The Cowboy at Work: All About His Job and How He Does It*. University of Oklahoma Press, Norman.

Weatherford, Claudine
1971 Trade Bells of the Southern Plateau: Their Use and Occurrence Through Time. Unpublished Master's thesis, Department of Anthropology, Washington State University, Pullman.
1980 Trade Bells of the Southern Plateau: Their Use and Occurrence Through Time. *Northwest Anthropological Research Notes* 14(1):20–84.

Wedel, Waldo R.
1959 *An Introduction to Kansas Archeology*. Bulletin No. 174. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Wheeler, Robert C., Walter A. Kenyon, Alan R. Woolworth, and Douglas A. Birk
1975 *Voices from the Rapids: An Underwater Search for Fur Trade Artifacts, 1960–73.* Minnesota Historical Archaeology Series No. 3. Minnesota Historical Society, St. Paul.

Wikipedia
2020 Pseudomorph. Electronic document, https://en.wikipedia.org/wiki/Pseudomorph, accessed October 16, 2020.

Wissler, Clark
1915 *Riding Gear of the North American Indians*. Anthropological Papers Vol. 17, Pt. 1. American Museum of Natural History, New York, New York.

Witty, Thomas A.
1965a Excavation record for 14SD301. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
1965b Progress report for April 5, 1965, trip to Hoxie, Kansas. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
1965c Archeological Survey Site Report Form for 14SD301, April 6, 1965. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.

Woodward, Arthur
1976 *Indian Trade Goods*. 2nd ed. Oregon Archaeological Society Publication No. 2. Binford & Mort Publishing, Portland, Oregon.

Woolworth, Alan R.
1975 Description of the Artifacts Recovered by the Quetico-Superior Underwater Research Project. In *Voices from the Rapids: An Underwater Search for Fur Trade Artifacts, 1960–73*, by Robert C. Wheeler, Walter A. Kenyon, Alan R. Woolworth, and Douglas A. Birk, pp. 55–85. Minnesota Historical Archaeology Series No. 3. Minnesota Historical Society, St. Paul.

A NINETEENTH-CENTURY NATIVE AMERICAN CHILD'S BURIAL FROM MEADE COUNTY, KANSAS:

MANY QUESTIONS, SOME SPECULATIONS, AND FEW ANSWERS

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A metal coil, possibly a bracelet or armband, was recovered from a young child's skeleton by an unknown finder/collector, on an unknown date, at an unknown location near the town of Fowler in northeastern Meade County, Kansas. It was donated to the Kansas State Historical Society in Topeka in 1967 by Mrs. Merritt Beeson of Dodge City. Years later this artifact with its very limited documentation was assigned case number UBS1991-89. In 2004 Feagins wrote a brief report about this specimen and its background, which has been expanded here.

At the time of donation the thick wire coil was thought to be made of bronze; however, as part of the Native American-Euroamerican trade, it more likely was manufactured from brass. The item is described and additional, but still limited, background concerning the donation is presented along with various interpretations of how and why it might have come to be placed on the indigenous child's arm. Its manner of use appears to have been innovative and opportunistic.

This study provides a small example of how material culture aids cultural understanding through interpretation. It also gives a brief history of the evolution of archeology from its antiquarian origins and illustrates the importance of recording and curating adequate documentation.

A metal coil from a Native American burial was donated to the Kansas State Historical Society (KSHS) on March 15, 1967, by Mrs. Merritt Beeson. No skeletal remains or other grave goods were included in the donation. KSHS Archeologist Francis A. Calabrese (1967) wrote a brief note on a scrap of paper at the time of the donation. He stated, "Fowler, Kansas, Meade County. Bracelet? Bronze; was supposedly removed from the arm of Indian child burial" (some punctuation added). This summed up the data recorded at the time of donation. Apparently later researchers misread the word "arm" as "area" and used that when referring to Calabrese's comment. Others have questioned his tentative identification of the metal.

Twenty-four years after the Beeson donation, the artifact was formally transferred to the Unmarked Burial Sites (UBS) board, in accordance with the UBS Preservation Act of 1989. It also fell under the regulations of the federal Native American Graves Protection and Repatriation Act (NAGPRA) of 1990. KSHS Archeologist Randy Thies had been assigned the task of organizing related documentation and assigning UBS case numbers to all the KSHS unmarked burial site collections. Thus, on October 21, 1991, the metal coil with copies of its extremely sparse documentation, was assigned case number UBS1991-89. At that time Thies (1991) rightly questioned whether Calabrese's notation meant that the burial was found near the town of Fowler or that the donor's residence was in the Fowler vicinity. This issue and other background topics were not, or were but lightly, addressed in a short report (Feagins 2004). For example, only recent inquiry has discovered that Calabrese must have meant that the site location was near Fowler, as the donor lived in Dodge City in Ford County (Bell 2016; Kansas State Historical Society1961:601).

Recent Internet searches have supplied considerably more information about the Beeson family, giving insight into their deep interests in local history (Beeson 2011; Bell 2016; Boot Hill Museum 2017a, 2017b; Budda 1999; Slagle 2003; Wikipedia 2017). Donor Elizabeth Irene (Schaetzel) Beeson was born on January 17, 1892, in Appleton, Outagamie County, Wisconsin. On March 13, 1913,

she married Merritt L. Beeson (1878–1956); she was his second wife and 14 years his junior (Beason 2011). The Beesons were a well-known longtime Dodge City family. In 1915 Merritt and his brother Otero opened the Beeson Theater in Dodge City. In 1932 Merritt and Elizabeth Irene began operation of the Beeson Museum in the basement of their home. Eventually needing more space, the museum was moved to South Second Street. "The Beeson Museum was a repository for scholars studying the history of the area, and it was a Mecca for tourists" (Boot Hill Museum 2017b).

Merritt inherited his love for Dodge City history from his father Chalkley M. Beeson. Chalk Beeson was born in Marshalltown, Iowa, on April 24, 1848. At age 18 he became a cowboy in west Texas. From there he traveled to Colorado, and by 1872 he was guiding buffalo hunters. Among his clients were the Grand Duke Alexei Alexandrovich of Russia, General Phil Sheridan, and General George Custer (Boot Hill Museum 2017a; Wikipedia 2017). While successful at almost all he did, Chalk apparently craved variety and frequently embarked on different endeavors.

Tired of driving a stagecoach in Colorado, he settled down in Dodge City just a few years after the town was established. While there to collect a debt, he was handed the title to the Saratoga Saloon as a substitute for cash payment. His saloon was well patronized; it periodically featured a full orchestra. In 1878 Chalk took on partner William H. Harris to purchase the Long Branch Saloon. They soon established the COD Cattle Ranch, located quite some distance south of Dodge City (Boot Hill Museum 2017a). Being a fine musician himself, Chalk organized the Dodge City Cowboy Band in 1884. They were popular and performed in President Benjamin Harrison's inaugural parade on March 4, 1889. However, he soon sold ownership in the band, and it moved to Colorado (Wikipedia 2017).

Starting in 1891, Chalk was elected and reelected as sheriff of Ford County in which Dodge City is the county seat. He and his posse were most noted for tracking down a gang of bank robbers who had escaped to Oklahoma. After two terms as sheriff, he directed his energy to cattle ranching (Wikipedia 2017), although between 1903 and 1908 he served in the Kansas Legislature. Chalk had a horse-related accident on his ranch and died on August 9, 1912, ending the life of a colorful Kansan, who was quite interested in history and had himself lived a part of it.

Chalk's artifact collection relating to local history and his wife Ida's accumulation of family heirlooms and other historical objects made a major contribution toward the establishment of the Beeson Museum. "Chalkley loved Dodge City and because of his love of the town, he collected many items and memorabilia from its early days" (Boot Hill Museum 2017a). Over the decades this ever-growing museum in turn formed the nucleus of documents, photographs, and other artifacts that were purchased by the Boot Hill Museum (Bell 2016).

After Merritt Beeson died in 1956, Elizabeth Irene managed the Beeson Museum until it closed in 1964. She was 75 years old when she made the donation to the KSHS in 1967. In addition to the coil, the donation included five additional Native American specimens apparently from other regional sites: a metal projectile point, a grooved axe or pounding stone, and three notched stone projectile points (Good 1983). With one of the stone points was a note stating that it had been found on the Hamar Ranch near Fowler, Kansas.

Why did Mrs. Beeson choose to donate these materials to the KSHS in Topeka rather than to the Boot Hill Museum? Four factors that might have influenced her decision come to mind. 1) The Boot Hill Museum already had purchased thousands of local historical artifacts, mostly collected by the Beeson family, which had been in the Beeson Museum (Bell 2016; Boot Hill Museum 2017a, 2017b). 2) The stray items might have been discovered after the sale. 3) Mrs. Beeson could have judged that Native American materials were more appropriately curated within state collections. 4) If all the pieces were obtained from sites near Fowler outside of Ford County, as two of them certainly were, Mrs. Beeson might have considered them unsuitable for the Boot Hill Museum.

LOCATION AND ENVIRONMENT IN THE FOWLER AREA

Located in northeastern Meade County (Figure 1), the town of Fowler, with a current population of almost 600, is about 41 km (25 miles) south-southwest of Dodge City. The community is located in

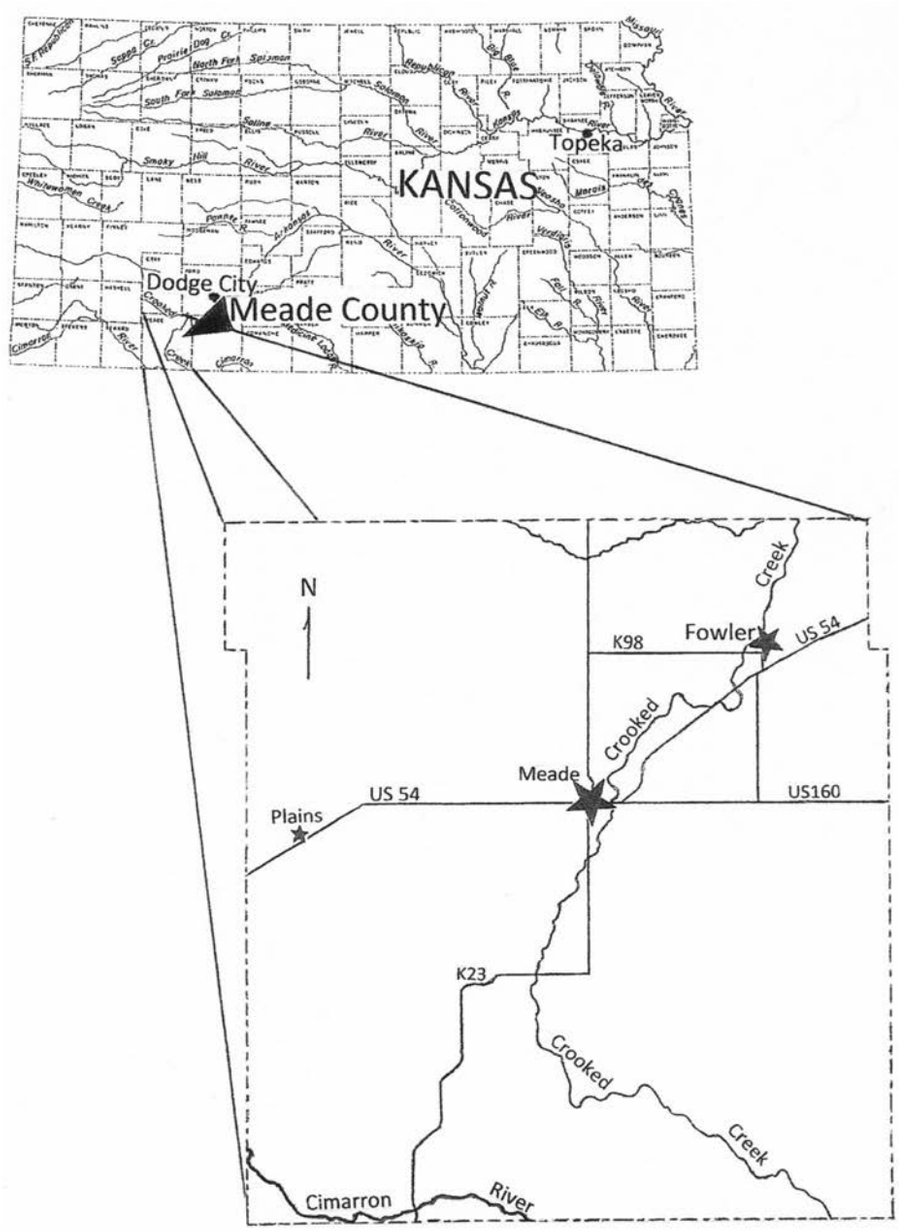

Figure 1. Map showing the location of Crooked Creek and the town of Fowler in Meade County. The Beeson site was near Fowler.

southwestern Kansas, approximately 43 km (26 miles) from the Kansas-Oklahoma border and 165 km (102 miles) from the Kansas-Colorado border.

Most of Meade County, including all of the Fowler vicinity, is drained by Crooked Creek (Figure 1) and is part of the High Plains (Buchanan 1984:8; Mandel 2006:11; Tomasu 1977:58–59). The region's climate is continental and, typical of the High Plains, has hot summers and cold winters. Irregular rainfall is low to moderate with an average yearly precipitation of 22.34 inches (Tomasu 1977:60). The soils typically formed under short grasses within Pleistocene and Holocene outwash sediments, loess and alluvial deposits, and sandy eolian (wind-moved) material (Tomasu 1977:56).

No information was recorded concerning the exact location of the burial; thus, a site number could not be assigned. For the purposes of this study, it will be referred to as the Beeson site. Based on other Native American burial locations, one might speculate that this interment overlooked or was near the Crooked Creek valley uplands in the northeast-

ern part of Meade County. Entering the county from the north-northwest, Crooked Creek flows a short distance west of Fowler (Figure 1) and continues southward before joining the Cimarron River just inside the Oklahoma boundary.

ARTIFACT DESCRIPTION

Although the burial collection consists of only a single object, the metal coil proved to be of interest, especially as it was said to have been on the arm of a child. A number of relevant questions can be asked but not answered. How, when, and where was the site discovered? Who found the site, and who excavated it? Were the child's skeletal remains left in place, as seems likely? Did additional burial goods accompany the child? What cultural materials might the site finders or excavators have overlooked, discarded, inadvertently destroyed, or disbursed?

The wire coil (Figures 2 and 3) appears to be made of heavy brass, which, while stiff, retains some ability to spring back to its original position when lightly squeezed. Brass is an alloy of copper and zinc. Frequently trace elements are present in the source materials and sometimes other elements are deliberately added to the mix. Engineering consultant Frank Rockett (1984a:257) described the manufacture of brass: ". . . lump zinc is added to molten copper, and the mixture is poured into either castings ready for use or into billets for further working by rolling, extruding, forging, or similar process. Brasses containing 75–85% copper are red-gold and malleable; those containing 60–70% are yellow and also malleable; and those containing 50% or less copper are white, brittle, and not malleable . . . Brass stains in moist air; however, the oxide so formed is sufficiently continuous and adherent to retard further oxidation." This oxidation is usually green or azure in color.

At the time of donation, Calabrese as the recorder, or perhaps Mrs. Beeson as the donor, thought that the artifact was made of bronze. Bronze is generally, but not always, an alloy of copper and tin, and variations are caused by added metals, such as lead, zinc, or silver. The properties of bronze depend on its varied composition and the manner in which it is worked (Rockett 1984b:265). This specimen has not undergone compositional analysis; however, it exhibits the characteristics of oxidized brass.

Some green corrosion from oxidation of copper in the brass is present on the surface of the 5.5-gauge (4.35-mm or 11/64-inch diameter) wire. No pseudomorphs were noted in the corrosion. The wire is uniform in diameter and shape, and it plainly was machine manufactured. When first extruded, it would have been a part of a much larger spool. The artifact incorporates 10 1/3 loops that range in exterior diameter from 45.8 to 52.9 mm and has a mass of 184.8 g (6.52 ounces). The maximum length of the coil (not the wire) is 56.3 mm. Both ends are rough and irregular, showing no evidence of having been cut or sawed. Rather, the wire appears to have been twisted back and forth repeatedly in order to cause it to break. Whatever the process, the ends were treated in the same manner. The smallest interior diameter of any loop is 37.2 mm. Note that two brass coils from the McKinney site burial (14SD301), as described by Feagins (herein), are considerably smaller than the Beeson site example.

DISCUSSION

The inside coil diameter is far too small for a human hand to fit through, except that of a young child. Lacking skeletal remains, no precise way of estimating the child's age is available. Genetic makeup, state of health, and nutritional deficiencies would affect the size and age of an individual who could wear the piece as a bracelet or armband. Slight flexibility would have allowed it to be more easily placed on the arm, even if it were a snug fit. It could have been placed on a newborn or even a stillborn baby as an expression of love and for accompaniment into the afterlife.

Native American uses for segments of brass or copper wire coils included finger rings, hair ornaments, tweezers (also called hair pullers, Indian razors, or multiple tweezers), ear decorations, necklaces, armbands, and bracelets (Bass et al. 1971:123; Birk and Johnson 1992:220, 222; Brain 1979:196; Karklins 1992:37–38, 52, 109, 134–135, 155; Mason 1986:131, 134; Nern and Cleland 1974:9; O'Shea and Ludwickson 1992:196, 308; Quimby 1966:155; Reynolds 1960:54; Smith 1972:73, 76; Wedel 1959:111, 127, 166, 205; West 1995:81; Wilford and Brink 1974:48). They were quite innovative in the ways that they used materials obtained from Euroamericans (Nassaney 2015:91, 105).

Figure 2. Vertical side view of brass wire coil.

Figure 3. Horizontal side view of brass wire coil.

Traders often stocked wire coils of various sizes, both heavy and more common lighter gauges. For example, in John Macdonell's journal entry for December 29, 1793, "4 Rings Collar Wire" and "10 Rings Ear Wire" were mentioned in his inventory for one of the North West Company posts (Wood 1984:93). Native American purchasers of collar wire probably did not intend to use it for collars. Short sections of wire could be cut from the coil and bent to form C-shaped bracelets, the coil could be retained together as an armband, or wire segments could be fashioned into other ornamentation. Had the Beeson site coil been recovered at a fort or trading post site, it might have been interpreted as trader's stock.

The Beeson site artifact was presumably of collar wire gauge and far too large to have been used as tweezers or a finger ring without hammering it thinner. It would have been quite heavy and unwieldy to attach in the hair or to the ear for adornment. For the same reasons, it was not likely connected to a necklace. Even though it would have been heavy on a child's arm, once accustomed to its presence, the child might not have paid it much attention except to occasionally admire its shape and bright color.

If one accepts the accuracy of the information recorded at the time of donation, i.e., that the coil accompanied a child's burial and had encircled an arm, what is the most probable scenario to account for the artifact's inclusion? Although pure speculation, it seems plausible that the coil was placed on the child's arm as an expediently furnished burial bracelet or armband. A textile or fur wrapping would have been expected to protect the deceased child at the time of interment; however, long-term preservation of such perishable materials is doubtful. Perhaps the parents, other family, or community members wanted an additional token for the afterlife journey, and, lacking anything else appropriate, the unmodified coil was offered for that purpose.

Because the only piece in the collection is made of a metal that was imported over many decades and distributed virtually all over North America as part of the fur and hide trade, it is difficult to ascertain tribal affiliation or to assign a narrow time frame for the burial. Determining tribal affiliation logically would focus on the tribes that commonly occupied or used that portion of the High Plains; the Comanche, Kiowa, Cheyenne, and Arapaho would be prime candidates. Until confined to reservations, these nomadic tribes were extremely mobile, using horses for transportation to follow the roving herds of bison. Adding to the complexity of the puzzle, many tribes with villages located farther east also roamed the plains on extended bison hunts. One cannot rule out a child's death and burial at the Beeson site during a bison hunt by the Osage or perhaps by the Pawnee, Kansa, or one of the groups immigrating from the East.

Generally, trade goods were available to any historic tribe that was willing to purchase them with furs and hides, other barter, or (later) annuity money. However, one could broadly surmise that the interment most likely occurred during the middle two-thirds of the nineteenth century. The object could have been collected as far back as Chalk Beeson's early years in the High Plains or obtained later by another member of the Beeson

family, dealing with folks from the Fowler area. This family was well known, and their museum would have generated conversations about archeological and historical finds. People might bring in items to show, seek opinions, or gift to the museum proprietors. The museum's heyday corresponded to an age of antiquarianism before archeology was a field of scientific inquiry. Concerning this time, Kwas (2020:29) succinctly stated, "The methods of archeology at the turn of the 20th century, which were driven by different expectations and research goals from today, were slow~~ing~~[ly] evolving into the science we know."

At the time she made the donation to the KSHS, Mrs. Beeson may not have known any details about the burial, e.g. precisely where, when, or by whom it was found, but was she asked? One prefers to believe that the Beesons obtained the ornament before or during the early part of the twentieth century.

The artifact has been described in detail; however, lack of information about many aspects of the burial has resulted in many questions and speculations but few answers. Obviously, it is most unfortunate that excavators did not keep records or, if they did, did not pass them along with the specimen—clearly unacceptable procedure by current standards. Although not for a lack of trying, more interpretations than explanations were gleaned from this study. However, the author concludes that a Native American child lived and died well over 140 years ago somewhere near what is now the town of Fowler. The brass coil bracelet or armband probably was an expression of love, and that is not such a bad legacy to leave after all.

ACKNOWLEDGMENTS

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REFERENCES CITED

Bass, William M., David R. Evans, and Richard L. Jantz
1971 *The Leavenworth Site Cemetery: Archaeology and Physical Anthropology*. Publications in Anthropology No. 2. University of Kansas, Lawrence.

Beeson, Richard
2011 Merritt L. Beeson. Find a Grave Memorial 65831487. Electronic document, https://www.findagrave.com/memorial/65831487/merritt-1-beeson, accessed November 18, 2020.

Bell, Kathie
2016 Beeson Museum. *Daily Globe*, 16 March. Dodge City, Kansas. Electronic document, https://www.dodgeglobe.com/article/20160329/NEWS/160329498, accessed November 18, 2020.

Birk, Douglas A., and Elden Johnson
1992 The Mdewakanton Dakota and Initial French Contact. In *Calumet Fleur-de-Lys: Archaeology of Indian and French Contact in the Midcontinent*, edited by John A. Walthall and Thomas E. Emerson, pp. 203–239. Smithsonian Institution Press, Washington, D.C.

Boot Hill Museum
2017a Chalkley Beeson, Dodge City's "Man of the Hour," Part 3, February 17, 2017. Electronic document, https://www.facebook.com/BootHillMuseum/posts/chalkley-beeson, accessed November 18, 2020.
2017b 2017 Kansas Cowboy Hall of Fame Inductees. Merritt & Elizabeth Beeson, 2017 Cowboy Historians. Boot Hill Museum, Dodge City, Kansas. Electronic document, https://www.boothill.org/2017-kchf, accessed November 18, 2020.

Brain, Jeffrey P.
1979 *Tunica Treasure*. Papers of the Peabody Museum of Archaeology and Ethnology No. 71. Harvard University, Cambridge, Massachusetts.

Buchanan, Rex
1984 Introduction. In *Kansas Geology: An Introduction to Landscapes, Rocks, Minerals, and Fossils*, edited by Rex Buchanan, pp. 1–8. University Press of Kansas, Lawrence.

Budda, Gail Harvey
1999 A Brief Biography of Chalkley Beeson. Electronic document, http://freepages.rootsweb.com/~beeson/genealogy/chalkley.html, accessed November 19, 2020.

Calabrese, Francis A.
1967 Note written on March 15, 1967, at the time of Beeson donation, KSHS accession number 67.16.20. Archeology Department, Kansas State Historical Society, Topeka, Kansas.

Feagins, Jim D.
2004 An Artifact from an Historic Native American Child's Burial in Mead County, Kansas: The Beeson Collection (UBS1991-89). Report on file, Archeology Office, Kansas Historical Society, Topeka.

Good, Diane L.
1983 Collection catalogue form for the Mrs. Merritt Beeson donation, dated June 22, 1983. Archeology Department, Kansas State Historical Society, Topeka.

Kansas State Historical Society
1961 General Index. *Kansas Historical Quarterly* 27(4). Kansas State Historical Society, Topeka.

Karklins, Karlis
1992 *Trade Ornament Usage Among the Native Peoples of Canada: A Source Book*. Studies in Archaeology, Architecture, and History. National Historic Sites, Parks Service, Environment Canada, Ottawa, Ontario.

Kwas, Mary L.
2020 A Practical Mound Explorer: C. W. Riggs and the Beginnings of Southeastern Archeology. *The Arkansas Archeologist* 58:1–41.

Mandel, Rolfe D.
2006 Late Quaternary and Modern Environments in Kansas. In *Kansas Archaeology*, edited by Robert J. Hoard and William E. Banks, pp. 10–27. University Press of Kansas, Lawrence.

Mason, Ronald J.
1986 Rock Island: Historical Indian Archaeology in the Northern Lake Michigan Basin. Special Paper No. 6. *Midcontinental Journal of Archaeology*. Kent State University Press, Kent, Ohio.

Nassaney, Michael S.
2015 *The Archaeology of the North American Fur Trade*. University Press of Florida, Gainesville.

Nern, Craig F., and Charles E. Cleland
1974 The Gros Cap Cemetery Site, St. Ignace, Michigan: A Reconsideration of the Greenlees Collection. *Michigan Archaeologist* 20(1):1–58.

O'Shea, John M., and John Ludwickson
1992 *Archaeology and Ethnohistory of the Omaha Indians: The Big Village Site*. University of Nebraska Press, Lincoln.

Quimby, George Irving
1966 *Indian Culture and European Trade Goods: The Archaeology of the Historic Period in the Western Great Lakes Region*. University of Wisconsin Press, Madison.

Reynolds, Sidney O.
1960 The Redskin Who Saved the White Man's Hide. *American Heritage* 11(2):50–55, 108–111.

Rockett, Frank H.
1984a Brass. In *McGraw-Hill Concise Encyclopedia of Science and Technology*, edited by Sybil P. Parker, p. 257. McGraw-Hill, New York, New York.
1984b Bronze. In *McGraw-Hill Concise Encyclopedia of Science and Technology*, edited by Sybil P. Parker, p. 265. McGraw-Hill, New York, New York.

Slagle, Rose
2003 *Ford County Marriage Records 1901–1903*. Electronic document, http://www.usgennet.org/usa/ks/county/ford/marriages/marriage19011903groom.htm, accessed November 12, 2020.

Smith, G. Hubert
1972 *Like-A-Fishhook Village and Fort Berthold Garrison Reservoir, North Dakota*. Anthropological Papers No. 2. National Park Service, U.S. Department of the Interior, Washington, D.C.

Tomasu, Bob L.
1977 *Soil Survey of Meade County, Kansas*. Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C.

Thies, Randall M.
1991 Case report for case number UBS1991-89, October

21, 1991. Unmarked Burial Sites Preservation Board. Archeology Office, Kansas State Historical Society, Topeka.

Wedel, Waldo R.
1959 *An Introduction to Kansas Archeology*. Bulletin No. 174. Bureau of American Ethnology, Smithsonian Institution, Washington D.C.

West, Ian
1995 *Portraits of Native Americans*. Smithmark, New York, New York.

Wikipedia
2017 Chalkley Beeson. Electronic document, https://en.wikipedia.org/wiki/Chalkley_Beeson, accessed November 18, 2020.

Wilford, Lloyd A., and John W. Brink
1974 Hogback: A Proto-Historic Oneota Burial Site. *Minnesota Archaeologist* 33(1–2):1–79.

Wood, W. Raymond
1984 Appendix: Journal of John Macdonell, 1793–1795 Assinibones-River Qu'Appelle. In *Fort Esperance in 1793–1795: A North West Company Provisioning Post*, by Daniel J. Provo, pp. 81–139. Reprints in Anthropology No. 28. J & L Reprint Company, Lincoln, Nebraska.

METAL HAIR PLATES FROM A NATIVE AMERICAN BURIAL IN SOUTHERN KANSAS:

THE BISSITT SITE (14KW310)

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During the last half of the nineteenth century, metal hair plates became quite popular among the Great Plains Indian tribes and to a lesser degree with tribes from the eastern United States and southern Canada. The popularity of metal hair plates spiked dramatically during the 1860s and 1870s after nickel/German silver became plentiful through the Plains fur/hide/annuity trade and thus was easily obtainable by Native Americans. The earliest hair plates from the 1830s were pounded thin from Spanish silver dollars acquired through Mexico. Copper and brass, cut and shaped from metal containers, also were used in their manufacture.

Hair plates are thin round metal discs, convex on the front and concave on the back, attached in various ways to a long strip of trade cloth or a leather strap, forming a trailer that in turn was connected to a braid at the back of the head. A set commonly comprised hair plates similar in size or graduated with the largest next to the scalp and the smallest at the bottom of the trailer. Trailers varied in length; some did not reach the waist, but many were much longer. Assuming only minor exaggeration, some Indigenous ledger artists illustrated mounted warriors wearing trailers that touched the ground.

Using hand tools, a number of Plains tribes became proficient metal workers. They usually fabricated hair plates from metal obtained from Euro-American traders. A few examples suggest that ready-to-wear sets occasionally were bartered. However, the 13 metal hair plates that are the focus of the current study clearly were made by Indigenous peoples. They, along with many other artifacts and limited skeletal remains, were discovered in 1940 by local Kiowa County residents. The Bissitt site (14KW310) was located in a wind-scoured blowout within a low sand hill near Greenwood, Kansas.

A general account of the burial site and its contents was published in 1992 by William B. Lees. This paper presents a more detailed description of a few artifacts, primarily focusing on the hair plates, and corrects a few minor errors in Lees' report. Also described are the metal buttons used to secure almost half of the hair plates. Of special interest are the incised decorations that Native Americans frequently engraved on these ornaments. Their metrics, attachment method, decoration or lack thereof, and use-wear suggest that this set probably was compiled from portions of other hair plate sets. Clearly these objects routinely were subjected to hard usage. The Bissitt hair plates serve as a case study and are compared briefly with hair plates from two other Central Plains sites that this author examined previously.

A preliminary scheme to classify metal hair plates, based on differences in the attachment openings, is proposed. Information from the Bissitt hair plates should enable more complete and easier comparisons with hair plates from other sites by researchers interested in fur/hide/annuity trade items and the changing styles of warrior ornamentation on the Great Plains and eastward during the 1800s.

The Kansas Anthropologist 42:43–64

NATIVE AMERICAN USE OF METAL HAIR PLATES

Metal hair plates use began during the first half of the nineteenth century. They were worn by warriors from many Plains tribes and from several eastern United States and southern Canada tribes (Feder 1962a:56–59; Hanson 1981:2). Early hair plates, usually made of silver, are rare in collections (Quimby 1966:94). Copper and brass also were used to manufacture them. As silver became increasingly more expensive, several white metals that looked very similar to silver were produced at much lower cost; in particular nickel/German silver dominated the trade. Hair plate popularity increased dramatically, especially on the Great Plains during the 1860s and 1870s, once the less expensive nickel/German silver became plentiful and, therefore, much more obtainable by Native Americans. Toward the end of the century, they gradually lost prestige because almost anyone could acquire them. Even during the heyday of hair plates, other types of hair ornaments, made by Native Americans or by Euro-American traders, were in vogue, and their popularity persists today, at least in the public eye. This includes the great feathered headdresses, commonly referred to as "war bonnets." Donning a headdress or other form of plumage on the head sometimes was subject to relatively elaborate cultural requirements, depending on the tribe and the time period involved. For example, counting coup was a way of earning warrior honors and status among many Plains tribes (Koch 1977:8–14; McGinnis 2011; Wikipedia 2021). The successful performance of such acts of bravery often were symbolized by certain feather arrangements or feather modifications attached to the scalp. While hair plates were decorative and proudly worn by warriors, they were not used to symbolize brave accomplishments.

The scarcity of metal hair plates during the first half of the nineteenth century is evident, as they were seldom depicted in the works of Euro-American artists who documented the Plains tribes, such as George Catlin, Karl Bodmer, and Charles Bird King. In 1832 Catlin painted Little Crow, a Crow Indian, wearing at least one and perhaps more hair plates. His 1834 portrait of *Teh-toot-sah* or Little Bluff, a Kiowa chief, displayed an excellent set of silver hair plates (Hassrick 1981:190, 200; PowWows.com 2020:1). Bodmer sketched two hair plates in a braid, suspended from the back of an unidentified Sioux man's head in 1834 (Feder 1962a:55; Moore 1997:226).

While these ornaments were in use for quite some time, representations of them were not produced by dominant society members as frequently as one might expect, even after hair plates became more plentiful. However, seemingly they were relatively abundant among the tribes gathered for the signing of the Medicine Lodge Treaty, which took place in southern Kansas in late 1867 (Contain et al. 1994:98–99). This treaty was negotiated among the U.S. government and several Central and Southern Plains tribes: Kiowa, Kiowa-Apache, Comanche, Cheyenne, and Arapaho (Nye 1968:109–110). An unnamed artist's sketch of the ceremony portrayed Native Americans in the foreground, detailing dress and the backs of their heads that featured metal hair plates. Notably, this event took place not far from the spot where 14KW310 eventually was discovered (Figure 1).

Hair plates often were drawn by Indigenous artists who lived before or shortly after the bison were exterminated and/or who later looked back upon that time. Generally their ledger art illustrated actual events involving real people, and they were well aware of what their friends and fellow warriors wore to battle, on raids, while hunting, or during social and religious occasions. Many hair plates were shown in their artwork, reproduced in numerous volumes (for instance, Afton 1977:25; Afton et al. 1997; Calloway 2012:cover, 167; Donnelley 2000; Foster and McCollough 2001:931; Greene 2001; Hoebel and Peterson 1964; Keyser 2000; McCoy 1987; Petersen 1968, 1971; Szabo 1994; Viola 1998; and Warner 1985).

Originally, individual hair plates were attached directly to a braid hanging down the wearer's back (Feder 1962a; Hanson 1981:1). Soon they began to be connected in sequence on a leather strap or a strip of trade cloth, used as a trailer suspended from the back of the head. Depending on which attachment method was used, at times they could be quickly fastened to or unfastened from the hair or scalp lock. Ordinarily the hair plates were graduated in size with larger ones at the top and smaller ones at the opposite end. Good examples of graduated sets can be seen or described in Feder (1962a:56, 60,

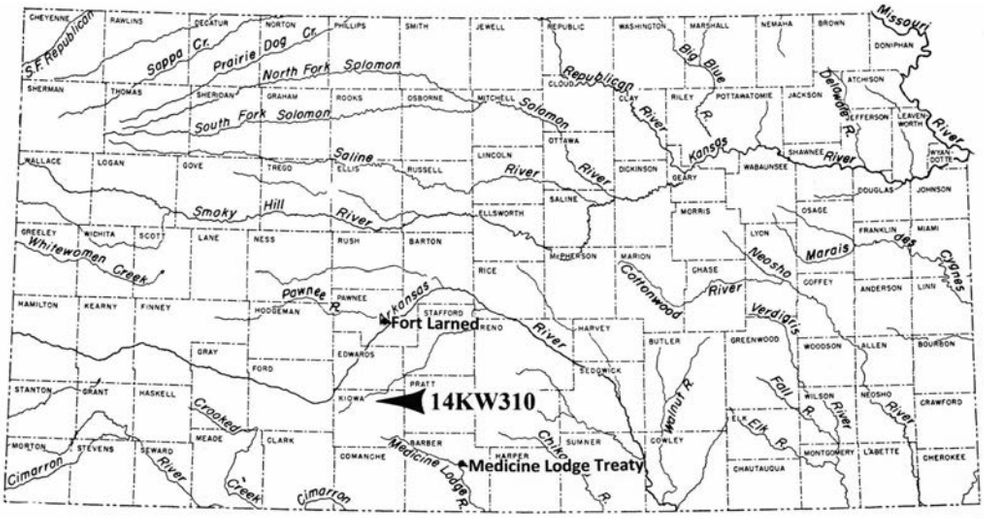

Figure 1. Location of the Bissitt site (14KW310). Map modified from the State Geological Survey of Kansas.

63), Hamilton (1995:94), C. Hanson (1981:3, 6), J. Hanson (1975:95), Hassrick (1981:200), and Koch (1977:76). Horse hair, colored ribbon, small pieces of beaded leather, or other innovative items frequently were tied at the distal end. Sometimes bison or cattle tails were appended to the trailer ends. Hair plate sets varied in length with some above the person's waist, but many were much longer. They might reach the heel of a standing warrior's moccasin. A photograph taken in 1891 by James Mooney depicted a mounted Kiowa Indian wearing a hair plate set on a trailer reaching to probably 20 cm from the ground (Feder 1962a:59). Unless gathered up, this trailer certainly would drag the ground when the warrior was on foot. Even allowing for a measure of artistic exaggeration, some ledger art portrayed mounted warriors wearing hair plate trailers that would easily have touched the ground when their horses were not in motion.

As hair plate metals were quite thin, warriors with long trailers had to be careful not to damage them, even by the simple act of sitting down. At such times they could place the trailer over their shoulders or across their laps, as demonstrated in a photograph of two Arapahos, thought to have been taken at Camp Supply in Indian Territory (Nye 1968:288–289). Despite some inconveniences and perhaps even hindrances, warriors clearly were proud of these showy ornaments, regularly wearing them into battle (Howard 1972:19).

Silver, copper, brass, and nickel/German silver were the metals most commonly used to manufacture hair plates. Most were made by Native Americans themselves from metal acquired through trade, and possibly a minority were shaped by Euro-Americans for barter. An example of the latter was obtained from 14NS320, a Ness County, Kansas, site where a single hair plate from a set of 29 was signed on the reverse side in English cursive by Fred Larson. This apparent American supplier moved to Sheboygan, Wisconsin, in 1850 and died in Sheboygan Falls in 1864 (Feagins 1999b:42; Letter and research notes from Janice Hildebrand, Sheboygan County Historical Research Center, to Jim D. Feagins, March 23, 1999). This hair plate could have been manufactured in Wisconsin or simply passed through Larson's hands.

Some of the earliest metal hair plates were cut and filed from copper containers (buckets, pots, and kettles) or hammered thin from Spanish silver dollars. These generally circular-to-oval artifacts are convex on the front (obverse) and concave on the back (reverse). They could be attached to hide or cloth backings in several different ways, depending on the plates' central openings.

Some authors, including Lees (1992), have referred to these hair plates as "conchas." Indeed, their overall shape does resemble circular shell objects, frequently made from conch shells, thus explaining the term's origin. That type of shell ornament, often called a "moon," was worn individually intertwined with the hair, suspended from the neck, or occasionally affixed to clothing. During much of the historic past and today, metal conchas routinely are found on horse tack, Native American waist belts, and other decorations (Hamilton et al.

1971:130; Koch 1977:77; Nye 1968:331, 343, 405). Many conchas used on belts and horse equipment are linked to leather straps with rectangular metal bands soldered on the back in a much different manner than the typical ways of connecting hair plates. However, slightly confusing the issue, single large disc-shaped metal slides are attached to neck scarfs. While fastened in a similar manner as some hair plates (Nye 1968:195, 239, 299; Reynolds 1960:51), their constituent metal, like that of belt and horse tack conchas, was usually thicker than hair plate metal. In addition, some larger metal brooches and ear wheels common in the fur trade erroneously have been referred to as conchas. The term "hair plates," as used by researchers such as Feder (1962a, 1962b) and Hanson (1981) among many others, is clearly a more descriptive and less ambiguous designation for the specimens examined here.

PREVIOUS STUDIES COMPARED TO BISSITT SITE HAIR PLATES

The Bissitt hair plate set is the subject of this article. After reading Lees' (1992) artifact descriptions, this writer wished to evaluate them firsthand to form a basis on which to compare another set of 27 silver hair plates from the Maranville site (14NS320), an unmarked burial site (case number UBS1989-18-H) being assessed as part of a Native American Grave Protection and Repatriation Act (NAGPRA) compliance and enhancement study, funded by the Kansas Legislature and administered by the Kansas Historical Society. This article is based on a report that was a component of the Kansas Unmarked Burial Sites Preservation Act (UBS law) compliance and enhancement study (Feagins 2004) and can be considered as a supplemental investigation, building on Lees' work.

To date this author has closely examined 56 hair plates, grouped in 3 sets. The Maranville and Bissitt sets were obtained by local residents from Indian burial sites in Kansas; the third set of 16 connected hair plates was from an ethnographic collection from Yuma County, Colorado. Notes, measurements, drawings, and photographs were recorded for all (Feagins 1999a, 1999b, 1999d), and the Maranville set was the topic of a paper presented at a regional archeological conference (Feagins 1999c). All three sets come from sites that date from the middle to slightly later portion of the nineteenth century. Significant differences exist among the sets, as well as interesting differences and similarities within each set. Nevertheless, the similarities outweigh the differences. Hair plates from archeological contexts seldom are described in the literature (Pearson 1978), and even then specifics usually are lacking.

A general description of the 13 hair plates and numerous other artifacts recovered from 14KW310 was published in a *Plains Anthropologist* article, "An Historic Burial from the Southern Plains of Kansas" (Lees 1992). Lees (1992:215) emphasized that he did not intend to do a descriptive analysis. The current work has undertaken to do so and thus enable more complete comparisons to be initiated with hair plates from other assemblages by those interested in items used in the fur/hide/annuity trade. Also of particular interest are the decorations incised on these hair plates by Native Americans themselves and the various methods of attachment.

BISSITT SITE SETTING AND COLLECTION SUMMARY

Site Location and Excavation

Site 14KW310 is located in north-central Kiowa County north of the city of Greensburg in southern Kansas (Figure 1). The northern third of the county is covered by sand hills, formed from old sand dunes, within the Great Bend Sand Plains (Hoffman et al. 1986:2). The site is situated between tributaries of Rattlesnake Creek, which comprises a small part of the upper Arkansas drainage basin. As a result of wind erosion, the artifacts and skeletal remains were uncovered in a blowout area within a low sand hill (Figure 2; Lees 1992:213). The Bissitt site was named after the landowner at the time of discovery.

Local residents Bernard Graff and Vollie Sturgeon excavated the site on July 4, 1940 (*Kiowa County Signal* 1940a). A rough piece of wood was found near the head of the grave. Because of the military items present, area residents speculated that the burial was that of an early U.S. Army officer or an army Indian scout (*KCS* 1940a). For many years the remains were displayed at a local drug store in Greensburg (Lees 1992:213–214). Subsequently, they were loaned for exhibit at the Kiowa County Courthouse (Letter from Charles A. Burkhardt

Figure 2. View to the southeast at close proximity to the burial locus on a low sand hill. Photograph (14KW310-1) courtesy of Kansas Historical Society.

to William B. Lees, Archeology Office, Kansas Historical Society, Topeka, March 1, 1989). In the mid- to late-1960s, the Bissitt family reclaimed the materials and put them in private storage until they donated them to the KSHS in 1987. The burial fell under the regulations of both the Kansas UBS Preservation Act of 1989 and federal NAGPRA of 1990.

Human Remains

Graff and Sturgeon collected four human bone fragments. Three came from the vicinity of the right shoulder: right proximal humerus, sternal two-thirds of the right clavicle, and the glenoid cavity of the right scapula. In addition, the excavators saved the distal end of a radius (Finnegan 1998) and "a small quantity of human hair" (Lees1992:213).

The skeletal remains indicated that the interment represented a single young adult of undetermined race, but four physical anthropologists who examined the bones did not agree on sexual determination (Finnegan 1998; Letter from J. Edgar Hoover to Claude Beckett, July 19, 1940; *KCS* 1940b; Lees 1992:228). Unfortunately, the few pieces recovered were not diagnostic in this regard. Kim Schneider postulated a 19- to 20-year-old male, while Peer Moore-Jansen judged a 19- to 23-year-old individual of indeterminate sex. Later Michael Finnegan (1998) of Forensic Anthropological Consultants analyzed the remains and concluded that the individual was a "late subadult or early adult," the race was osteologically indeterminate, and the sex was female. He also noted that all the bones had green stain from copper oxides.

Decades prior to examinations by Schneider, Moore-Jansen, and Finnegan, the skeletal remains and certain other grave items had been sent to the Federal Bureau of Investigation (FBI), which then forwarded them to the Division of Physical Anthropology at the Smithsonian Institution. A letter of July 19, 1940, from FBI Director J. Edgar Hoover to Kiowa County Sheriff Claude Beckett was published in the July 25, 1940, issue of the *Kiowa County Signal* (1940b). Speaking of the Smithsonian Institution, Hoover stated,

> They advised that the bones were definitely human bones and were most likely bones of a young adult Indian. They further advised that the bones appeared to be those of a young adult female inasmuch as they were very small bones and were part of a small and not very muscular body.

Thus, the four physical anthropologists generated a range of opinions concerning the individual's sex: female (2), male (1), and indeterminate (1). Considering the artifacts alone, this author is quite confident that they represent what one usually would expect to find associated with a male Native American interred during the 1860s or 1870s. Of course, grave goods alone do not prove gender. In fact, a possible archeological example from the Central Plains (Feagins 2014b) and several ethnohistorical examples involved Indigenous women warriors (Ewers 1965; Feagins 2014a).

Summary of Overall Artifact Collection

The UBS collection consists of a cow or bison horn segment with a wooden plug that is cord wrapped around the edge, believed to be from a powder horn; a straight, single-edged, fluted sword blade, thought by Lees (1992:215) to have been adapted for use as a lance point; a Kentucky rifle; 2 Model 1851 Colt Navy cap and ball revolvers within leather holsters (Feagins 2005); 3 lead bars from the St. Louis Shot Tower Company; 4 .55-caliber lead

balls; a handmade iron arrow point; portions of a small iron container; 7 U.S. General Service buttons; 2 "bullet" buttons, hooked to a brass chain; 18 necklace-sized (large) glass beads of 3 varieties; 12 shell hair pipes, probably part of a breast plate; 2 white metal finger rings; a lead alloy cross; 13 hair plates; feather, cordage, and textile fragments; a reddish yellow pigment; a mirror framed in red-painted wood, decorated with brass tacks; a brass or copper coil; wood and leather components of a Euro-American-made saddle; iron bridle bit pieces; a cinch buckle; a harness ring; a stirrup; a white metal headstall and parts of another; an iron ax; a hatchet; a knife with wooden side panel handle; an iron awl; 2 possible whetstones (Feagins 1999b; Lees 1992); some human hair; and 4 fragmented skeletal elements.

In addition to the materials listed above, another object was mentioned in the *Kiowa County Signal* (1940a): "a piece of hat cord and loop, which military officers wore around their hats." Regrettably, that artifact was not included in the collection donated to the KSHS. One cannot help but wonder where, when, and how many of the various items were obtained by the deceased or by friends and family to be placed with the interment. None of the things recovered would be unusual in a Native American male burial from this time period. Certainly, the sword/lance, the hair plates, the Kentucky rifle, a powder horn, the two revolvers, an iron arrowhead, halter/headstalls and other horse tack, and the lead balls would be much more likely to appear with an adult Native American male rather than with a female.

Additional Analysis of Artifact Collection

Eleven years after Lees' investigation was published, the rifle and two Model 1851 .36 Colt Navy revolvers were subjected to a CT (computed tomography) scan and standard X-ray technology (Feagins 2005). When found, both weapons were heavily rusted within their holsters. One of the two cap and ball revolvers was broken in a manner that suggests it had been damaged by accidental "cross-sparking" across the cylinder, as occasionally happened with old cap and ball weapons. When that occurred, two or even more balls were fired at the same time. The undamaged revolver was loaded with two rounds of ammunition. Unfortunately, the amount of metal and rust did not allow the CT scan to determine if any of the thin percussion caps still were attached to the nipples on any of the cylinder's chambers. The presence of used but unremoved percussion caps might indicate that the owner's death occurred while the revolvers were in use. Even with future research, this probably will continue to be conjecture.

CT scanning determined that the Kentucky rifle, a long rifle developed in southeastern Pennsylvania in the early 1700s, was not loaded. A brass front sight was noted on the barrel; however, no rear sight was observed. Further examination discovered pseudomorphs from the wooden fore grip. Also, eight very small white glass beads, Type IIa in the Kidd and Kidd (1970) classification system, and additional bead imprints were detected in four rows on the rusted lock plate. These small doughnut-shaped beads had an average diameter of 1.67 mm, which is seed bead size, and a length of 1.04 mm. The diameters of their holes could not be measured.

Extensive pseudomorphs from two different textiles also were recognized on the oxidized barrel (Feagins 2003; 2004:68–69). Using a binocular microscope, different weaves and thread counts were distinguished. In one area the rusted pseudomorphs clearly showed six layers of fabric. The bead pattern on the lock plate may or may not have been attached to the same cloth as that around the barrel. The textile next to the gun barrel had a twilling weave of over two, under one, over two, under one, etc. for the weft threads. These threads are S-twisted. The warp threads are two under, one over, etc., and the twist could not be determined due to rust. The warp thread count averages 22.23 threads/cm (56.22 threads/inch), and the weft thread count averages 18.52 threads/cm (47.04 threads/inch). The outer wrappings are a little harder to probe because of the rust. However, it is characterized by a simple weave of one over, one under, etc., and the average thread count is about the same for the warp and weft: 16.95 threads/cm (43.05 threads/inch).

Throughout most of the fur/hide/annuity trade era, textiles were by far the leading item of trade. Braund (1993:122; Levine 2020:52) declared "that the fur trade might be more accurately termed the cloth trade." Despite that little is known about the "fabric" of this trade (Levine 2020:51) because archeologically it is almost always missing or at

best poorly preserved. Even on the rare occasions when discovered in a historic Native American site, such as 14KW310, textiles generally have been described inadequately in the literature.

The beads found on the rusted lock plate are of a type meant to be sewn onto cloth or leather, as these obviously were. However, close by on the barrel were multiple layers of two different fabrics, rusted in place with no beads. Apparently some heavily beaded object, such as a bag or garment, was in direct contact with the lock plate and perhaps a portion of the stock. That article and the entire rifle must have been well wrapped in multiple layers of two kinds of cloth. As a side note, undoubtedly the untrained local excavators missed seeing hundreds, if not a few thousand, additional small glass beads in the burial soils.

This current study also documented various pseudomorphs on the steel sword blade/lance point. The grave contained no sheath for the single-edged blade. The blade alone is 67.1 cm (26.4 inches) long and, including the tang (not the original full length of the sword), is 73.9 cm (29.1 inches) long. A flute runs down the length of the sword except near the tang, where a few wood fiber imprints were noted. On one side of the blade, a few badly preserved feather and maybe plant pseudomorphs were present, as well as several areas of cloth pseudomorphs. The textile threads are S-twisted. Preservation is poor, and the fabric was heavily worn, so the thread count could not be calculated. This material appears to represent part of a coarse-textured, loosely woven fabric, perhaps from some sort of bag. The vast amount of rust on the opposite face of the blade incorporated many quartz grains, hindering other studies but confirming the sandy nature of the burial site soil.

One of two virtually identical conchas from a nickel/German silver-appearing halter/headstall (catalog number 1987.J.90) was examined. The halter/headstall pieces all had substantial amounts of green corrosion indicative of the high copper content of the metal. As customary for Native American halter/headstalls of this period, the conchas rested along the cheeks of a horse's head. Data was recorded only from the right concha. It is round with a convex-concave cross section and a diameter of 69.8 mm. The edge thickness, ranging from 1.11 to 1.25 mm, is two to four times thicker than the hair plates that are discussed later (Table 1). A metal band, bent at right angles, was soldered to the back of the concha, and through it a leather halter/bridle strap once had been inserted. A nicely preserved textile fragment is fused by the copper salts to the front of the concha, although it is mostly covered by some unidentified dark substance. Its relatively thick threads were woven in a simple one over, one under, etc. manner. The thread count averages 9.73 threads/cm (24.71 threads/inch). A tiny cloth segment on the back of the concha is in such poor condition that that not much could be gleaned from it except that it was not the same fabric as observed on the front side. Even this limited assessment has established that the grave contained a number of textile types.

The second concha was not scrutinized in any detail, but some bird feathers adhered to it. They were not downy feathers and probably not contour (body) feathers but had the appearance of flight (wing or tail) feathers from a medium to large bird.

Due to time constraints and the need to investigate previously unanalyzed cases, only those artifacts mentioned above plus the hair plates with their attachment buttons were reexamined in 1999. However, in 2003 time was taken to photograph the collection, including some with the use of a microscope. The 87 color slides are on file at the KSHS.

Lees (1992:215) stated, "The following discussion is meant to be interpretive rather than descriptive . . . ," thus explaining the lack of details concerning the 14KW310 specimens. Nonetheless, a more extensive future study likely would uncover many additional facts, especially concerning cloth and other perishables, thereby allowing formulation of new interpretations. Archeologists are well aware that there are oftentimes "complicated connections between burial assemblages and human behavior at varied scales" (MacIver 2020:816). Clearly, much more could be learned from this interment.

BISSITT SITE HAIR PLATES

Metal

The Bissitt site burial yielded 13 hair plates (Figure 3) that appear to be made of nickel/German silver. However, appearances can be deceiving. German silver is composed of copper, nickel, and usually zinc (Demeter 1980) and is commonly referred to

Table 1. Metal Hair Plates Arranged by Size.

Catalog number	Maximum diameter (mm)	Maximum thickness (mm)	Mass (g)	Type of opening	Button stain or imprint	Description of decoration	Damage or wear on edges
1987.J.60	89.80	.550	23.10	Circular quite damaged	Yes	Wide "V" on reverse (concave side)	Battered
1987.J.62	73.30	.300	11.00	Circular	Yes	Curved scallops near edge on obverse (convex side)	Very little damage or wear
1987.J.65	71.60	.400	11.10	Oval (slot) badly worn	Yes	None	Battered
1987.J.54	69.20	.500	11.10	Oval (slot)	Yes	None	Battered
1987.J.58	69.00	.300	10.50	Oval (slot)	Yes	None	Major battering with chipping
1987.J.66	68.80	.400	10.20	Oval (slot)	Yes	None	Major battering & slight bending
1987.J.57	68.50	.400	10.40	Oval (slot)	Yes	None	Extensive battering & major crack
1987.J.64	68.40	.400	9.60	Oval (slot)	Yes	None	Major battering & bent but straightened
1987.J.63	66.60	.500	10.40	Crossbar	No	Bird's foot (obverse)	Chipped & worn
1987.J.61	66.10	.400	11.20	Crossbar with slot	No	Bird's foot (obverse)	Battering
1987.J.59	66.00	.500	10.10	Crossbar	No	Bird's foot (obverse)	Battering
1987.J.55	65.10	.400	11.10	Crossbar with slot	No	Bird's foot (obverse)	Slight battering
1987.J.56	56.60	.500	10.70	Crossbar	No	58 edge marks from file (obverse)	Very little damage or wear
Range	56.60–89.80	.300–.550	9.60–23.10				
Median	73.20	.425	16.35				
Average	69.15	.427	11.58				

as nickel silver. Copper is always the main element. According to some sources, the process for making this alloy was developed, or at least first commercialized, in Germany during the early portion of the nineteenth century. Others assert that the Chinese were producing a "white copper" as early as the eighth century A.D. (Demeter 1980:109), although a question persists if China's white copper was nickel silver or an arsenide of nickel.

At least by the 1830s in Europe, nickel/German silver was used to manufacture many things, such as flatware, often replacing more expensive silver (Brown 1968:257; Demeter 1980; Leveridge 2002). Hanson (1981:4) claims that the alloy was produced in New York in the 1830s; nonetheless, it was not abundant on the Plains until the 1860s. "With cheap material available, the art of German silver working flourished among the Plains tribes and most of the hair plates in this period were probably Indian-made" (Hanson 1981:4; Pearson 1978:172). For

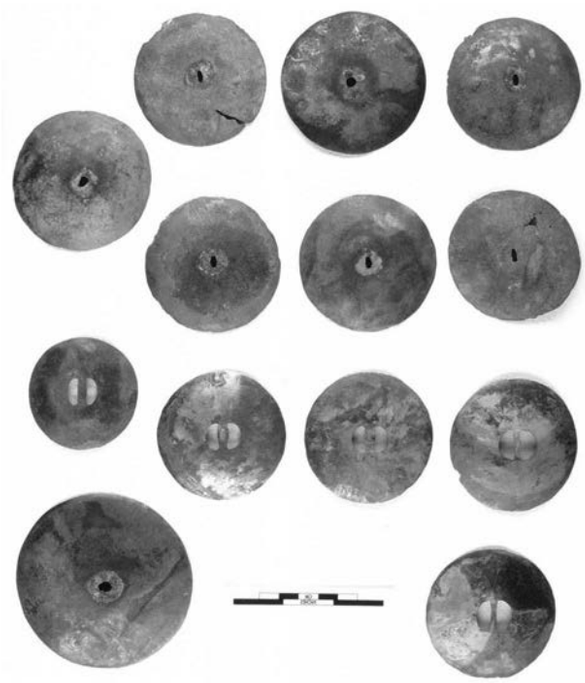

Figure 3. Bissitt site hair plates. Photograph courtesy of Kansas Historical Society.

instance, on April 12, 1867, Major General Winfield S. Hancock met with the Cheyenne camping near Fort Larned, Kansas. They "were decorated with large thin discs of German silver beaten from metal they had bought from Charles W. Whitacre, a trader known to them for a decade or more . . ." (Nye 1968:70). Apparently Whitacre sold the metal to them when he visited their summer camps the year before. Site 14KW310 is only about 54 km (33 miles) south of Fort Larned (Figure 1).

Over the years many manufacturers' trade names were applied to nickel/German silver (Liveridge 2002:2–4), and it was used in an array of household and decorative items. It is an extraordinary alloy, although today it largely has been superseded by other white metals. While having the outward appearance of silver, it was more affordable in trade and was eagerly obtained by Native Americans. The presence of nickel yields the silver color, even though the majority of the alloy is actually copper. When and if added, the primary importance of zinc was to lower the melting point. Often German silver incorporates lead and tin, but they are not necessary and are not part of the nickel silver definition. Exact composition varies considerably, depending on intended use (Demeter 1980:108). Also, other minor impurities are frequent constituents.

James N. Gundersen, geologist at Wichita State University, tested the Bissitt hair plate metals, and Lees (1992:222–223) shared his findings.

> The thirteen conchas [hair plates] in the collection are made of an alloy containing significant amounts of copper but also having important amounts of silver and other elements (including but not necessarily limited to arsenic, bromine, chlorine, gold, iron, krypton, lead, manganese, neodymium, titanium, and zinc). The number of elements and their relative importance varies between specimens, although copper and silver are consistently present and important. Although these artifacts would probably be classified as "German silver," the composition of these pieces does not mirror the classic definition of this metal as a copper, zinc, and nickel alloy in which silver is not present . . . .

While the hair plates have a superficial visual appearance of nickel/German silver, technically the metal from which they were fashioned should not be called German silver, as it does not contain any nickel. The composition places it outside of the family of nickel/German silver alloys (Demeter 1980; Leveridge 2002), and only in a loose generic sense could the term be applied to these ornaments. One cannot help but surmise that they were manufactured with the intention of producing a cheap variety of silver, as some silver is present, or potentially to imitate nickel/German silver, which served the same visual purpose. Unfortunately, Lees (1992) did not state Gundersen's method of assaying the hair plates or the percentages of silver or any other elements in them. It is uncertain if Gundersen (deceased in 2008) ever wrote a report of his analysis or if the information that Lees conveyed was from a verbal communication, such as a telephone call. As a written document has yet to be located, if one ever existed, it would be advantageous to run these assays again with more precision.

If the Bissitt hair plates are not nickel/German silver, then what should their metal be called? A number of metal alloys not in the nickel/German silver family have some visual similarities to that alloy (Leveridge 2002:5–6), but without knowing

the percentages of the elements in the 14KW310 specimens, it is difficult to draw comparisons. Schindelholz (2001:35) adopted a somewhat restrictive use of the term: "White metal, an alloy of tin, zinc, or lead, and is white in appearance." Perhaps it would be best to refer to the Bissitt hair plates as simply being manufactured from a white metal, labeling an expansive category of silver or white metal alloys. After all, the term "white metal" has long been used by historical archeologists and many others to classify a whole range of light-colored alloys with varying compositions and percentages of different metals.

This leads to a number of questions concerning the nature and sources of various trade goods fabricated to reduce silver content or made in imitation of silver. What were the ranges of different elements found in different nickel/German silver-like trade items? Can the manufacturing sources and time periods eventually be identified by assays of artifacts? At the time of the fur trade, were other unnamed alloys or similarly produced white metals made in an effort to imitate true silver? Were metallurgists, especially in a relatively new industrialized country such as the United States, experimenting with various combinations of metals to develop useful alloys or to imitate those already produced in Europe? Clearly, archeologists would like to know much more about the precise composition, origins, and manufacturing processes of various nickel/German silver-like or white metals appearing as trade goods through time. This field of investigation begs to be more vigorously pursued in the future by archeologists and metal experts.

Hair Plate Arrangement

In Table 1 the hair plates have been arranged by their maximum diameters from largest to smallest rather than in chronological order, based on catalog numbers, as employed in Lees' (1992:222) Table 2. This size graduation is presumed to be roughly the order in which they likely would have been fastened to their trailer. As it happens, this organizational scheme also grouped the artifacts according to the types of openings they have for attachment to their backing and to some degree according to the decoration present on or absent from the individual hair plates (Figure 4). This in turn supports some additional interpretations to be discussed later.

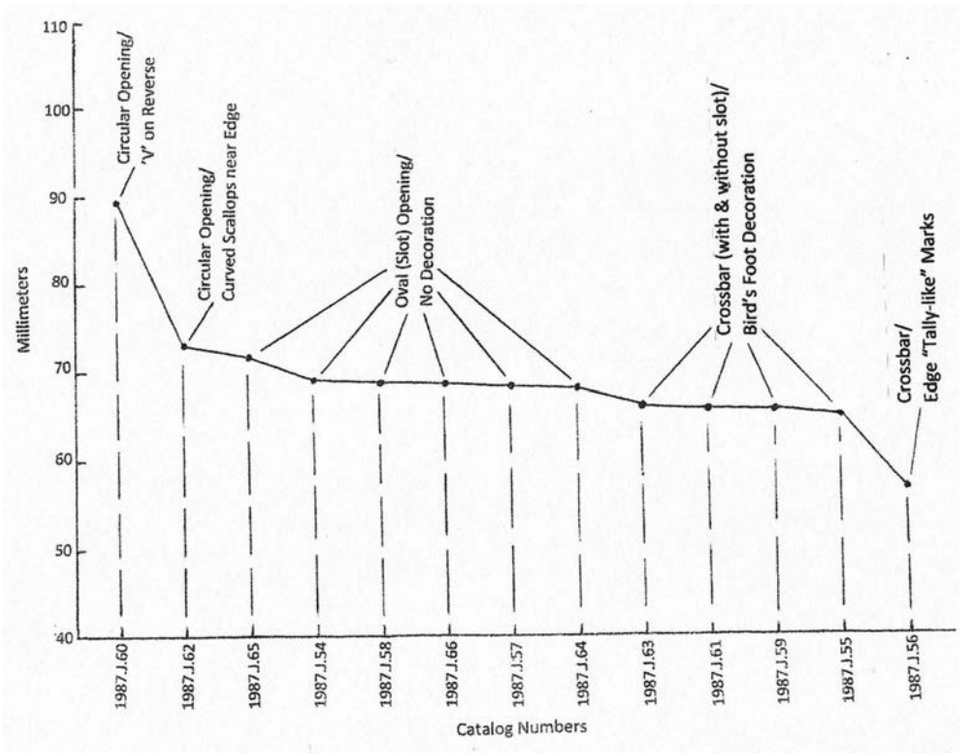

Figure 4. Hair plates arranged by maximum diameters, illustrating clusters of hair plate types and presence of decoration. Data suggests that portions of two sets of hair plates were combined along with a few odds and ends from others.

Hair Plate Classification

Classification of the Bissitt hair plates is based on their central openings. They are divided into four opening types: 1) single circular, 2) single oval (slotted), 3) crossbar, and 4) crossbar with slot. The first two categories, those with single circular and single oval openings (Figures 5–7), undoubtedly were attached with brass or copper buttons with shanks. The openings were small, just large enough to allow the button shank to pass through easily. Extensive use-wear from the shanks enlarged the holes. The buttons holding the hair plates in place were then sewn with cordage to the cloth or leather trailers. Alternatively, the buttons might be tied with heavy cordage to a long braided hairpiece that in turn was suspended from a scalp lock. Military buttons often were favored for this purpose, as is apparent with this collection, but at times certain civilian buttons were used.

The third variety, the crossbar, is identified by paired half-circle, half moon, D-shaped, or somewhat kidney-shaped openings, separated by a central strip of metal (Figures 3 and 8). The metal strip or crossbar allowed the hair plate to be held in place by a leather or fabric strap that passed through one D-shaped opening, over the bar, and down through the paired opening. The strap was then sewn in the spaces near the edges of each hair plate to a wider band that formed the trailer. A similar attachment method was to use a cord over each end of the crossbar to secure the hair plate to the trailer. This type of hair plate also could be braided directly into a hair extender or trailer. The openings on either side of the crossbar could be a broad array of shapes (Feder 1962b:107); however, the D-shaped ones without a slot in the crossbar are quite common, as evident with three Bissitt hair plates: 1987.J.56, 1987.J.59, and 1987.J.63.

The fourth style, the crossbar and slot (1987.J.55 and 1987.J.61), resembles the crossbar except that there is a narrow oval opening in the middle of the central bar (Figures 8–10). This could be adapted for any of the previously described modes of attachment: button shank through the slot or cordage, narrow strap, or hair braid interlaced over or around the crossbar. Hanson (1981:4) has illustrated some methods of hair plate attachment.

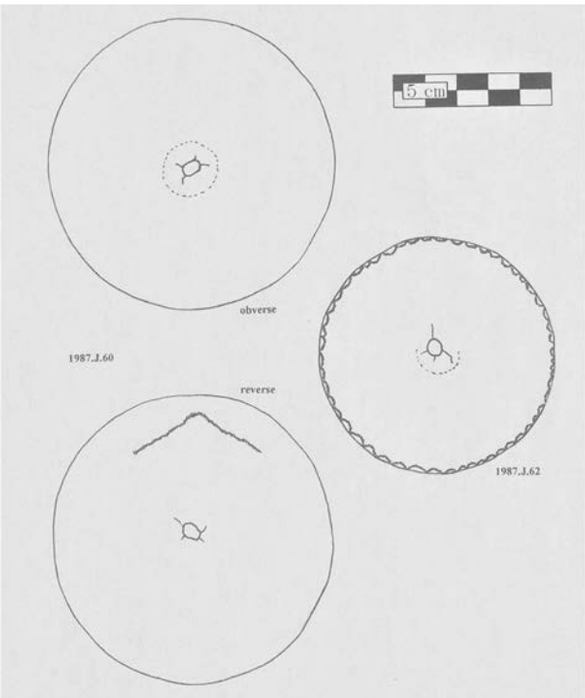

Figure 5. Two decorated single opening hair plates. Note damage and areas of button corrosion. Drawings by author.

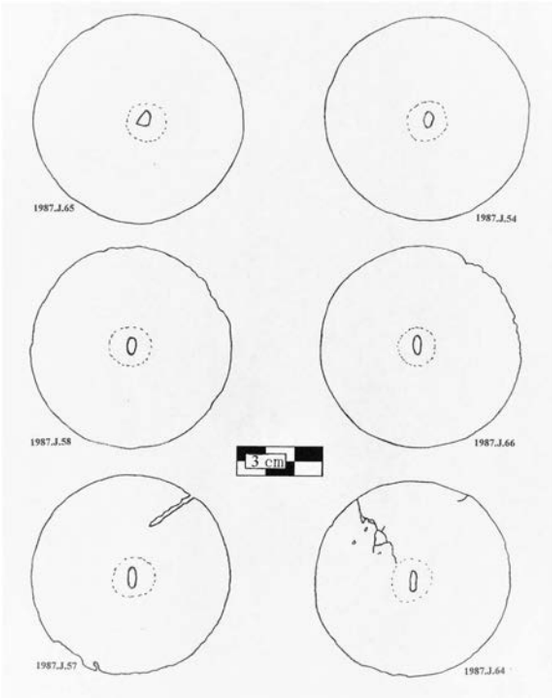

Figure 6. Six undecorated single opening hair plates. Note damage and areas of brass button corrosion. Drawings by author.

Figure 7. Examples of button corrosion and damage on two hair plates (left 1987.J.60; right 1987.J.57).

The metric and other attributes associated with the Bissitt hair plates are summarized in Tables 1–3. The eight largest specimens contain single openings, and most retain the circular copper corrosion from the brass buttons that held them in place (Figures 3 and 7). The five smaller hair plates, with perhaps one exception (1987.J.55), were connected with straps or more likely pairs of cords.

The narrowest crossbars or those weakened by slots were at greatest risk of being torn. Those hair plates attached with button shanks received considerable use-wear around the central openings from metal rubbing on metal, sometimes accompanied with small cracks induced by external forces.

Most of the hair plates exhibit appreciable use-wear and some damage, testifying that they were in use for quite some time and/or occasionally the crossbars or central openings were subjected to

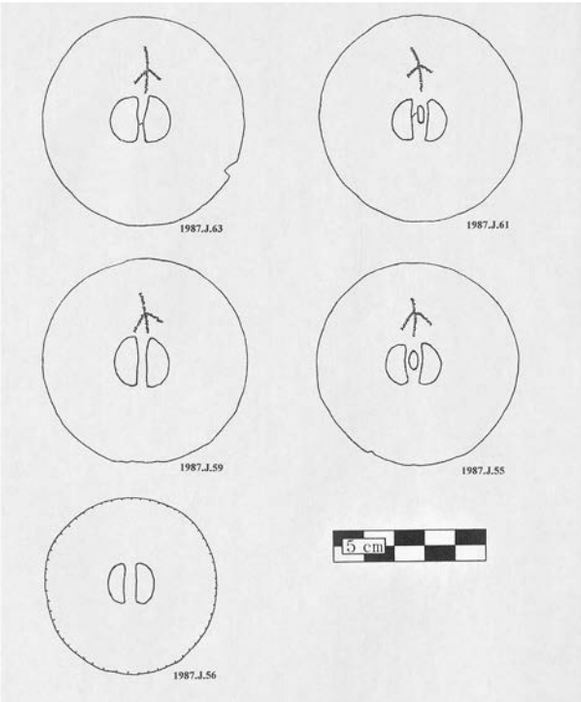

Figure 8. Decoration and damage on the crossbar type of hair plates. Note the bird track (aka "Crows Foot" or "Turkey Track") on the four upper hair plates and the fine edge incising on the lower hair plate. Drawings by author.

Figure 9. "Turkey track" rocker mark decoration on hair plate (1987.J.55). Maximum length of crossbar is 12.92 mm. Photograph courtesy of Kansas Historical Society.

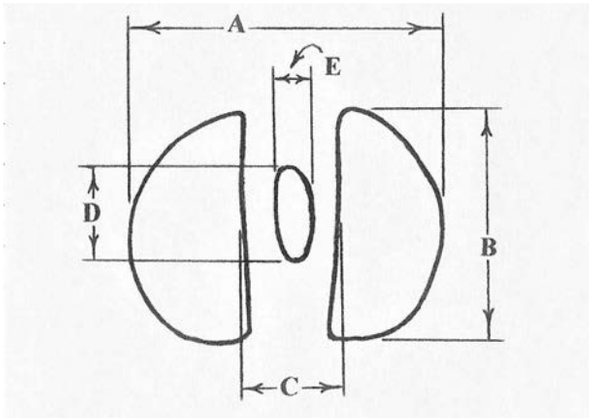

Figure 10. Locations of measurements for the centers of the hair plates as recorded in Table 3 for the crossbar type and the crossbar with slot type of attachments. A. Maximum collective width of openings, B. length of crossbar, C. width of crossbar, D. length of slot, and E. width of slot.

substantial stress. Several archeological examples from the Maranville site reveal attempts to repair crossbars, attesting that the hair plates were of value to their owner and worth the effort to extend their use-life.

The diverse types of openings and stages of use-wear and damage (Table 1) strongly suggest that some of the Bissitt hair plates were manufactured by different people at different times and had different degrees of usage. Also, variations in thickness and presence or absence of decorations imply different makers/owners during each hair plate's use-life. Most likely some were not always associated with each other or belonged to the same set, indicating reuse and rearrangement of certain hair plates (Figure 4). This issue will be addressed to a greater extent later.

Buttons Used for Hair Plate Attachment

All eight of the single-opening hair plates have green corrosion deposits where brass buttons attached them to a trailer (Figures 5–7; Table 2). Brass is a yellow metal alloy, formed when zinc is added to a much greater amount of copper (Rockett 1984; Schindelholz 2001:14). As it oxidizes, copper can cause a green to bluish-green corrosion, so the outlines of the buttons' resting spots can be observed around the centers of individual hair plates. None of the five hair plates with crossbars (with or without slots) showed any corrosion from brass buttons. However, use-wear on one of the crossbar slots (1989.J.55) suggests that during at least part of its use-life, it was fastened with a button rather than secured by cloth or cordage over the bar.

Table 2. Description of Attachment Holes for Single Opening Hair Plates.

Catalog number	Opening size of hair plate		Approximate diameter of button corrosion or wear pattern (imprint) on hair plate (mm)	Damage or wear to hair plate openings
	Length (mm)	Width (mm)		
1987.J.60	6.33	4.85	17.14	Much wear & four cracks radiating from opening
1987.J.62	5.12	4.62	14.85 (imprint; small area of corrosion)	Much wear & four cracks radiating from opening
1987.J.65	5.34	3.68	15.10	Quite worn from oval to triangular shape
1987.J.54	5.59	3.22	13.89	Wear & slight bend inward beside opening
1987.J.58	5.67	3.03	14.13	Wear & slight bend inward beside opening
1987.J.66	5.63	2.57	13.56	Some wear & bending inward beside opening
1987.J.57	6.29	2.22	15.09	Slight wear & bending inward beside opening
1987.J.64	6.49	2.24	11.29 (imprint only; no corrosion)	Slight wear & bending inward beside opening
Range	5.12–6.49	2.22–4.85	11.29–17.14	
Median	5.81	3.54	14.22	
Average	5.81	3.30	14.38	

Six brass buttons from 14KW310 almost certainly were employed in this manner. As eight and maybe nine hair plates clearly were affixed with buttons, at least two and perhaps three buttons are missing from the collection; they possibly were overlooked during the excavation. All the attachment buttons are the common two-piece-plus-shank buttons that fit within Sanders Type II, invented in about 1813 by Benjamin Sanders (Albert 1977:7; Johnson 1948:213); these frequently are called three-piece buttons (Lees 1992:217; Wyckoff 1984:xix). Seven buttons are a version of U.S. military General Service button that was issued after 1854 (Albert 1977:40; Johnson 1948:65; Tice 1997:140) and continued in use until 1880 (Wyckoff 1984:88). The front depicts an eagle with a lined shield on its breast; it holds arrows in its left talons and an olive branch in its right.

One of the seven General Service buttons is smaller than the rest: 15 mm (5/8 inch) in diameter. It is the only one of this style that likely was intended for use on a cuff, vest, or jacket. It was found with its shank inserted through a buttonhole in a textile fragment (Lees 1992:217) and would have been sewn to clothing and not part of a fabric hair plate trailer. It, along with the two "bullet" buttons, which were hooked to a brass chain, will not be considered further here.

The remaining six General Service buttons are approximately 19 mm (3/4 inch) in diameter. This size was used on the front of the standard uniform coat for U.S. infantry soldiers during the Civil War, as well as during the Indian Wars that dragged on for several decades afterward. Each coat was designed for nine buttons (McChristian 1995:9), so a single coat could furnish more than enough buttons to supply the needs for the single opening hair plates in this set. These six buttons probably were among those used to fasten eight of the hair plates. By and large they match the patch of the green corrosion around the single-opening attachment holes. Two of these buttons are stamped on the back: "EXTRA QUALITY" (Lees 1992:217). Such a quality mark has no bearing on the manufacturer or distributor of a button (McGuinn and Bazelon 1988:7).

The backs of the other four buttons of this size are stamped "HORSTMANN & ALLIEN N.Y." These buttons were distributed, but not manufactured, by the Horstmann and Allien Company, located in New York City. In 1850 brothers Sigmund H. Horstmann and William J. Horstmann joined in business with Henry V. Allien. The partnership was dissolved on December 31, 1876, when Allien took over (McGuinn and Bazelon 1988:56). The company sold an assortment of military accessories. Buttons with this particular backmark were distributed during the Civil War from 1860 to 1865 (McGuinn and Bazelon 1988:52). During this time period "the firm purchased large quantities of uniform buttons from Scovill" (McGuinn and Bazelon 1988:56). One cannot rule out the possibility that Horstmann and Allien also obtained buttons from other companies that were similarly backmarked, although it seems unlikely.

The Scovill Manufacturing Company, Waterbury, Connecticut, was the largest and best known of the American uniform button manufacturers (McGuinn and Bazelon 1988:89). The Scovill Brass Works, as the company is called today, was known by a number of corporate names over the years (Kearns 1997:2). The business first produced brass buttons in 1802 and stopped making uniform buttons in 1962 (McGuinn and Bazelon 1988:90–91). There is a good probability that at least a number of the buttons used to secure the Bissitt hair plates were manufactured by Scovill. In addition to the company's brass and other metal work, it started rolling out sheets of nickel/German silver in the 1850s (Kearns 1997:18). Some of these sheets potentially were sold by traders on the Great Plains. While it is not proven here, the business could have furnished not only the brass buttons, but also some of the metal stock used for fashioning hair plates by many Plains Indian tribes.

Hair Plate Edge Damage and Use-Wear

As is usually the case with hair plates, those from 14KW310 are quite thin (Table 1), ranging from .3 to .55 mm in thickness. The metal stock often was thin when purchased, and its thickness could be further reduced by the purchaser. Light-weight hair plates were advantageous as many could be attached to a single trailer and appended to a braid on the back of the head. Reducing weight suspended from the roots of braided hair for long periods would have been beneficial for hair plate wearers.

While thinness made the ornaments light in

weight, it also rendered them easy to damage. Their thin convex-concave cross section made them relatively fragile. For example, stress exerted at the apexes could induce cracking around the openings and chipping and splitting around the outer edges. In addition, the movement of the button attachments caused considerable use-wear, enlarging the openings through which the shanks passed. Some of these sorts of damage are present on practically all of the artifacts (Tables 1–3). Clearly most of the Bissitt hair plates had seen much service prior to their placement in the grave. Most likely the hair plate set with trailer actually belonged to the individual interred at 14KW310.

Single Openings

The measurements and descriptions of the single openings for the eight largest hair plates are given in Table 2. The openings vary from 5.12 to 6.49 mm in length and from 2.22 to 4.85 mm in width. The average opening length is 5.81 mm, and the average width is 3.3 mm. In some cases the use-wear from the button shanks had expanded the size of these openings and bent the edges slightly inward. Two specimens had stress cracks radiating from their openings (Figure 5).

Crossbar Openings

The damage and use-wear and the metric attributes for the five hair plates with crossbars (Figures 8 and 9) are summarized in Table 3. Figure10 is the key to the measurements listed in this table. The openings appear to have been made with a small chisel and a small file. In one example a few chisel marks are visible on the edge of a crossbar.

Slotted Crossbar Openings

Comparing hair plate sets from the Maranville site and ethnographic collection, the slotted crossbars tended to sustain greater damage than those without slots. Logically the slots rendered them less sturdy and thus more susceptible to injury.

On the other hand, crossbar damage was about the same on the four similar-sized, bird-track Bissitt hair plates: 1987.J.55, 1987.J.59, 1987.J.61, 1987.J.63 (see Figures 4 and 8; Table 3). It is assumed that these were crafted by the same individual and, therefore, received about the same amount of usage. Apparently the maker deliberately took steps to mitigate use-wear by making the slotted crossbars wider than the unslotted ones. The slotted average 5.74 mm wide, while the unslotted average 3.71 mm wide (Table 1) or 64.6 percent of

Table 3. Description of Attachment Holes for Crossbar Types of Hair Plates. See Figure 10 for key to letters.

Catalog number	Maximum collective width of openings "A" (mm)	Crossbar size		Slot size		Damage and wear to opening; comments
		Length "B" (mm)	Width "C" (mm)	Length "D" (mm)	Width "E" (mm)	
1987.J.63	18.76	14.81	3.50	n/a	n/a	Little to no wear; cracked crossbar; hair plate attached by crossbar
1987.J.59	17.63	15.52	3.05	n/a	n/a	Little to no wear; hair plate attached by crossbar
1987.J.56	15.19	13.19	4.58	n/a	n/a	Very little wear; hair plate attached by crossbar
1987.J.61	17.94	13.23	5.70	5.88	1.80	Very little wear; crossbar cracked by slot; hair plate attached by crossbar
1987.J.55	17.90	12.92	5.78	5.89	3.23	Very little wear; both sides of slot bent inward; crossbar cracked beside slot; hair plate held in place with insertion through slot; no button corrosion
Range	15.19–18.76	12.92–15.52	3.05–5.78	5.88–5.89	1.80–3.23	
Median	16.98	14.22	4.42	5.89	2.52	
Average	17.48	13.93	4.52	5.89	2.52	

the width of their slotted counterparts. Contrasting the masses of these same four artifacts, the two with slotted crossbars have an average mass of 11.15 g, while the two with unslotted crossbars have an average mass of 10.25 g (Table 3), the latter being 91.9 percent of the former, despite the fact that their maximum thicknesses, measured at the outside edges, were much less (Table 1). This seeming conundrum can be explained by the fact that the two with slotted crossbars are substantially thicker toward their centers than the two with unslotted crossbars. Evidently the individual who fashioned these hair plates compensated for the weaker slotted crossbars by making them not only significantly wider but also slightly thicker.

The bending and cracking on one of the specimens (1987.J.55) with a slotted crossbar suggest that it was held in place with a button shank. However, no corrosion from a brass button was present. Perhaps it had been reattached or fastened to a different trailer with cordage rather than with a button. The reuse of hair plates on different trailers will be discussed more fully later.

Hair Plate Decorations

The two largest and the five smallest Bissitt hair plates bear decorations produced by Native Americans. Designs occur on 53.8 percent of the objects, summarized in Table 1 and illustrated in Figures 5, 8, and 9. On six of the seven decorated artifacts, only one method is used: rocker marking (Feder1962b:107; Frank 1983:16). This metal engraving technique required a hard metal tool, but Native Americans were adapt at modifying a variety of simple implements for metal work (Bedinger 1973:22; Woodward 1970:60). They often used the corners of the narrow edge of either the tang end or the working end of a small file to press down very firmly and rock with a back and forth motion ("duck walk") to make shallow scratches. This author has experimented with the technique on modern nickel/German silver plate stock and found it quite easy to control.

The tang end of the tool probably was used on the Bissitt hair plates, as the individual rocker marks are quite small and lightly incised. Once attached to a trailer and worn, an onlooker would have to be relatively close to notice the engravings. Most of the decorations are on the more visible obverse convex surfaces; however, the largest hair plate (1987.J.60) had rocker marking only on the reverse concave side. The design resembled a broad shallow "V", forming an obtuse angle of 115 degrees (Figure 5), and measured approximately 46 mm in length.

The two other hair plate sets closely examined by this writer, the Maranville and ethnographic sets, have decorations on either or both the obverse and reverse sides of one or more hair plates. In at least some cases, the modifications are arguably much more than mere adornment for others to admire. The Maranville set is quite special, exhibiting extensive decorations on both sides of many hair plates. Furthermore, some of the other (non-hair plate) metal items in that collection appear to have sacred symbols inscribed on their backs (Feagins 1999a, 1999c).

The remaining six Bissitt hair plates display decoration only on their fronts. The second largest ornament (1987.J.62) has 55 shallowly incised loops along its outer edge (Figure 5). These reverse scallop-like loops are created by rocker marking. The other five hair plates are the smallest and the only ones with crossbars for attachment (Figure 8). The diminutive one (1987.J.56) has 58 fine notches around its edge. The tool used to produce these small narrow notches probably was a triangular file rather than a chisel, as a file removes the metal from a notch, while a chisel pushes metal to either side.

The last four hair plates (1987.J.55, 1987.J.59, 1987.J.61, and 1987.J.63) are decorated with a design that sometimes is called a "crow's foot" or "turkey track" (Figures 8 and 9) because it resembles a bird's foot or footprint. Lees (1992:222) incorrectly reported that five hair plates had this design, but actually only four do; 1987.J.54 does not have any decoration. These figures range in length from 13 to 15 mm and in width from 8 to 10 mm. Some of the lines curve slightly, and all are located adjacent to one end of the crossbar. In other words, each track faces toward the center of the hair plate. While the patterns were incised lightly by rocker marking and minor corrosion is present, they can be observed with the unaided eye. Magnification facilitated their perusal.

These patterns, visible only in close proximity, should not be viewed as mere decorations. Bird iconography is well known in North American rock art that dates back centuries. Even when solely con-

sidering petroglyph sites in the Central Plains, bird tracks and full bird outlines are plentiful (Buchanan et al. 2019:46, 50–53, 90–91, 164–165, 176–177; Loendorf 2008:64, 66, 104–105; O'Neill 1981:7–9). Could bird tracks on the Bissitt hair plates be mystical symbols to ensure success in hunting? Or could the track represent a spiritual helper, acquired during a vision quest? Such helpers could include many species of birds: swift raptors like eagles, hawks, or falcons; predators with night vision like owls; or birds that can spy on an enemy and warn of danger, such as crows, vultures, and magpies. A track of any of these fierce or cunning birds would be an appropriate sign of encouragement and assistance for hunting, scouting, or raiding expeditions.

Compiling Hair Plate Sets

Consistency of maximum diameter, diversity in attachment methods, presence or absence of decoration, and unequal use-wear and damage suggest that the Bissitt hair plates were originally made by several individuals at various times and probably were once part of different sets. Undoubtedly, some components of a set would deteriorate or be damaged beyond repair, and replacements would be needed.

The Bissitt hair plate set appears to be composed of portions of two slightly older sets with a few individual additions. While corroborated by the numbers and descriptions in Table 1, perhaps this concept is best illustrated by Figure 4. This diagram lists the hair plates from left to right in descending order of maximum diameter, graduated much as they might have been on the trailer at the time of burial.

Interestingly the graph, based on the simple ordering from largest to smallest maximum diameter, naturally groups six of the hair plates (1987.J.65, 1987.J.54, 1987.J.58, 1987.J.66, 1987.J.57, and 1987.J.64). Their sizes vary from 68.4 to 71.6 mm, a range of only 3.2 mm. Even more revealing, this aggregation happens to encompass only the artifacts with single openings for attachment and no decorations. Three attributes that correspond to the plates in the same size cluster seem a most unlikely happenstance, and especially as the coincidence was repeated with another grouping.

The second unit comprises four hair plates: 1987.J.63, 1987.J.61, 1987.J.59, and 1987.J.55 (Figure 4; Table 1). First, they are similar in size, ranging in maximum diameter from 65.1 to 66.6 mm, a difference of only 1.5 mm. Second, all have crossbars, although two contain additional slots. Third, each is decorated with a single bird track, placed in an identical position on the exterior (Figures 8 and 9).

Both groups exhibit use-wear (Figures 6 and 8; Table 2). An ideal course of study would test every Bissitt hair plate for trace element combinations to determine if they would support the divisions established by metric and visual means.

Each assemblage appears to have been derived from a distinct hair plate set with a narrow range of diameters. Combined, the 10 hair plates constitute 76.9 percent of the Bissitt set. The three remaining hair plates (1987.J.60, 1987.J.62, and 1987.J.56) have attributes that vary significantly from each other and from each of the defined clusters. This ostensible hodgepodge could have entered the set through individual trading, purchase from traders, gift giving, warfare, or raiding.

SUMMARY AND ADDITIONAL INTERPRETATIONS

The metal hair plates worn by Plains Indians and some of the eastern tribes need to be better documented. Not many are found in ethnographic collections today, and still fewer have been recovered in archeological contexts. Compared to other adornments, relatively few are illustrated by Euro-American artists or photographers. However, many examples of hair plates in use are depicted in ledger art produced by Indigenous people. Also of special interest is a small flat bangle made of white metal, possibly silver, from the Maranville site. One side contains a small incised anthropomorphic figure that is interpreted to be wearing a set of hair plates on a trailer (Feagins 1999a, 1999c).

This study of the 13 Bissitt hair plates attempts to provide additional detailed information on these artifacts and provides a way of categorizing them, based on their attachment openings. In addition, a few brief comparisons are made with two other sets of hair plates from the Plains. All these plates were thin and easily damaged by hard usage. Some types of attachment openings were especially subject to considerable use-wear, probably leading to discard.

Based on osteological examinations, four physical anthropologists did not reach a consensus on the race or sex of the young individual represented by the limited skeletal remains collected at 14KW310. However, the many weapons, the hair plates and other artifacts from the site are consistent with what one would expect to be interred with a Native American male during the early 1860s to 1880 period on the Great Plains. If allowed, the question of gender likely could be answered with a DNA test (Nikulina 2016) on the hair sample saved by the excavators.

As previously mentioned, three of the four recovered bone fragments come from the vicinity of the right shoulder. They all had green stains from being in contact with copper oxides, which could have resulted from the hair plates being draped over that shoulder in the grave. Other copper-rich objects could have caused the staining, but the burial position of the body cannot be reconstructed. The lack of this documentation reinforces the importance of careful excavation practices and detailed records. While speculations may be thought provoking and even hypothesis generating, they are not facts until proven.

Based on Gunderson's analysis, the Bissitt hair plates resemble but do not fit the definition of the nickel/German silver family of metal alloys, as no nickel was identified in the tested hair plate alloys. Furthermore, the assay indicated a substantial amount of actual silver, which would seem to defeat the purpose for substituting nickel/German silver for the more expensive silver. The information that Lees (1992:222–223) conveyed from Gunderson's analysis raises as many questions as it answers. Moreover, in the broader scope of research, additional data concerning the chemical makeup of silver-substitute alloys needs to be obtained from many other nineteenth-century fur/hide/annuity trade-related archeological sites in order to understand this aspect of the enterprise.

The Bissitt hair plates were classified according to their central openings. All of the single opening specimens were fastened by buttons with shanks, apparently accounting for some of the U.S. General Service buttons found in the grave. With one exception the hair plates with crossbars were attached with cloth or leather strips, woven through the two central openings or tied with cordage over the central bar. The two hair plates with central slotted crossbars (1987.J.55 and 1987.J.61) were more versatile; they easily could be secured by more than one method.

The extensive use-wear on most of the hair plates argues that they were made at various times well before the burial took place. However, evidence suggests that the deceased was the current owner of this eclectic assortment of hair plates at the time of interment. They were meant to accompany the warrior into the afterlife.

More than half (7) of the 13 hair plates display decoration, all but one by the rocker marking technique. The smallest hair plate had 58 short incised notches around its outer edge; four bear "bird foot" designs; one incorporates curved (reverse) scallops near its edge; and the largest contains a broad V-shaped figure on the concave side.

Indigenous people had fashioned various metals for centuries, but their skills were greatly expanded with the introduction of abundant European metals (Ehrhardt 2005) and certain metal-working tools. Tribes from the Plains and other regions acquired the necessary materials, knowledge, and skill to manufacture hair plates and many other metal objects (Feder 1962b). The Bissitt hair plates appear to have been produced by Native Americans from metals procured from traders. They thinned the metal by hammering, then smoothed, cut, filed into final shape, polished, and decorated it. Incising probably was accomplished with the metal tang end of a small file.

The Bissitt hair plates do not substantiate that every hair plate in the trade was shaped by Indigenous craftsmen; there are exceptions (Dubin 2003:91; Feagins 1999a:42; Letter and research notes from Janice Hildebrand, Sheboygan County Historical Research Center, to Jim D. Feagins, March 23, 1999). Nevertheless, these ornaments represent an interesting history of selective individual acculturation, usually made or modified by Native Americans for their own purposes from Euro-American-supplied materials. More comparative studies of these artifacts are needed.

AN INDIVIDUAL'S ARCHEOLOGICAL EPITAPH

The individual interred at 14KW310 more than 140 years ago must have been very proud of these hair

plates, as well as the other decorative and practical items signifying status as a human being and a warrior. Even at a young age, he must have generated respect of tribal members, friends, and loved ones, who gathered the burial offerings for accompaniment into the afterlife.

It is with sincere respect for that life and lifeway that a portion of these artifacts are described in some degree of detail here. However, the burial materials—both from what was recovered and what undoubtedly was overlooked, including many unrecognized soil clues, by the untrained excavators—was the only "obituary" that was rendered in 1940. Fortunately, all was not lost. Even though his way of life and all who once knew him are long gone, archeology has provided the story that enables a small part of his personal and to some degree his tribal/cultural legacy to be appreciated.

ACKNOWLEDGMENTS

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REFERENCES CITED

Afton, Jean
1977 Techniques for Determining Dates Derived from a Cheyenne Indian Sketchbook. *Southwestern Lore* 43(2):11–32.

Afton, Jean, David Fridtjof Halaas, and Andrew E. Masich
1997 *Cheyenne Dog Soldiers: A Ledgerbook History of Coups and Combat*. Colorado Historical Society and University Press of Colorado, Boulder.

Albert, Alphaeus H.
1977 *Record of American Uniform and Historical Buttons: Bicentennial Edition.* Boyertown Publishing Company, Boyertown, Pennsylvania.

Bedinger, Margery
1973 *Indian Silver, Navajo and Pueblo Jewelers*. University of New Mexico Press, Albuquerque.

Braund, Kathryn E. Holland
1993 *Deerskins and Duffels: The Creek Indian Trade with Anglo-America, 1685–1815*. University of Nebraska Press, Lincoln.

Brown, Dorothy Foster
1968 *Button Parade*. Mid-America Book Company, Leon, Iowa.

Buchanan, Rex C., Burke W. Griggs, and Joshua L. Svaty
2019 *Petroglyphs of the Kansas Smoky Hills*. University Press of Kansas, Lawrence.

Calloway, Colin G.
2012 *Ledger Narratives: The Plains Indian Drawings of the Lansburgh Collection at Dartmouth College*. University of Oklahoma Press, Norman.

Contain, Roberta, Russell B. Adams, Jr., Dale M. Brown, Janet Cave, Lee Hassig, Jim Hicks, Robert Somerville, and Henry Woodhead (editors)
1994 *War for the Plains*. Time-Life Books, Richmond, Virginia.

Demeter, C. Stephan
1980 Nickel Silver: An Aspect of Material Culture Change in the Upper Great Lakes Indian Trade. *Historical Archaeology* 14:109–119.

Donnelley, Robert G.
2000 *Transforming Images: The Art of Silver Horn and His Successors*. David and Alfred Smart Museum of Art, University of Chicago, Chicago, Illinois.

Dubin, Lois Sherr
2003 *North American Indian Jewelry and Adornment: From Prehistory to the Present*. Concise ed. Harry N. Abrams, Inc., New York, New York.

Ehrhardt, Kathleen L.
2005 *European Metals in Native Hands: Rethinking Tech-*

nological Change 1640–1683. University of Alabama Press, Tuscaloosa.

Ewers, John C.
1965 Deadlier than the Male. *American Heritage* 16(4):10–13.

Feagins, Jim D.
1999a Analysis Notes on Artifacts from a Native American Burial Site, 14NS320: The Maranville Collection (UBS1989-18-H). Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
1999b Notes on Selected Artifacts from a Native American Burial Site, 14KW310, Case UBS1991-7, pp. 1–6. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
1999c The "Silver" Artifact from the Maranville Seated Burial Site, 14NS320, Ness County, Kansas. Paper presented at the 21st Flint Hills Archaeological Conference, Lawrence, Kansas.
1999d Notes on hair plates from an ethnographic collection obtained from a site in Yuma County, Colorado. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
2003 Notes on Selected Artifacts from a Native American Burial Site, 14KW310, Case UBS1991-7, pp. 7–12. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
2004 Examination of Hair Plates from the Bissitt Site, 14KW310: A Native American Burial in Southern Kansas—(UBS1991-7). Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.
2005 Radiological Examination of a Rifle and a Pair of Revolvers from a Native American Burial Site, 14KW310, in Southern Kansas. *Current Archaeology in Kansas* 5:67–77.
2014a Warrior Women on the Great Plains: Ethnohistoric Examples and Material Culture Expectations. Paper presented at 36th Flint Hills Archaeological Conference, Fort Osage National Historic Site, Sibley, Missouri.
2014b The Case for a Female Warrior: Archaeological Analysis of a Native American Burial from the North American Plains. Paper presented at 36th Flint Hills Archaeological Conference, Fort Osage National Historic Site, Sibley, Missouri.

Feder, Norman
1962a Plains Indian Metal-Working with Emphasis on Hair Plates. *American Indian Tradition* 8(2):55–76.
1962b Plains Indian Metalworking, Part Two. *American Indian Tradition* 8(3):93–108.

Finnegan, Michael
1998 Results of Osteological Analysis—UBS1991-07. Manuscript on file, Archeology Office, Kansas Historical Society, Topeka.

Foster, Morris W., and Martha McCollough
2001 Plains Apache. In *Plains*, edited by Raymond J. DeMallie, pp. 926–940. Handbook of North American Indians, Vol. 13(2), William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Frank, Larry
1983 *Indian Silver Jewelry of the Southwest, 1868–1930*. Schiffer Publishing, Ltd., Atglen, Pennsylvania.

Greene, Candace S.
2001 *Silver Horn, Master Illustrator of the Kiowas*. University of Oklahoma Press, Norman.

Hamilton, Henry W., Jean Tyree Hamilton, and John A. Anderson
1971 *The Sioux of the Rosebud: A History in Pictures*. University of Oklahoma Press, Norman.

Hamilton, Martha Wilson
1995 *Silver in the Fur Trade, 1680–1820*. Martha Hamilton Publishing, Clemsford, Massachusetts.

Hanson, Jr., Charles
1981 Plains Indian Hair Plates. *Museum of the Fur Trade Quarterly* 17(2):1–8.

Hanson, James Austin
1975 *Metal Weapons, Tools, and Ornaments of the Teton Dakota Indians*. University of Nebraska Press, Lincoln.

Hassrick, Royal B.
1981 *The George Catlin Book of American Indians*. Promontory Press, New York, New York.

Hoebel, E. Adamson, and Karen Daniels Peterson
1964 *A Cheyenne Sketchbook by Cohoe*. University of Oklahoma Press, Norman.

Hoffman, Bruce R., Robert K. Glover, and William E. Roth
1986 *Soil Survey of Kiowa County, Kansas*. Soil Conservation Service, U.S. Department of Agriculture in cooperation with Kansas Agricultural Experiment Station, Washington, D.C.

Howard, Oliver O.
1972 *My Life and Experiences Among Our Hostile Indians*. DaCapo Press, New York, New York. Originally pub-

lished 1907, A. T. Worthington and Company, Hartford, Connecticut.

Johnson, David F.
1948 *Uniform Buttons: American Armed Forces 1784–1948,* Vol. I, Descriptions and Values. Century House, Watkins Glen, New York.

Kearns, Betsy
1997 *Scovill Brass: Buttons, Cameras, and Cartridge Cases*. Historical Perspectives, Westport, Connecticut.

Keyser, James D.
2000 *The Five Crows Ledger: Biographic Warrior Art of the Flathead Indians.* University of Utah Press, Salt Lake City.

Kidd, Kenneth E., and Martha A. Kidd
1970 A Classification System for Glass Beads for the Use of Field Archaeologists. *Canadian Historic Sites: Occasional Papers in Archaeology and History* 1:45–89. National Historic Sites Service, National and Historic Parks Branch, Department of Indian Affairs and Northern Development, Ottawa, Canada,

Kiowa County Signal (KCS) [Pratt, Kansas]
1940a Grave of Early Day Army Officer Believed Found. *Kiowa County Signal* 11 July:1. Pratt, Kansas.
1940b Letter of July 19, 1940 from FBI Director J. Edgar Hoover to Kiowa County Sheriff Claude Becket. *Kiowa County Signal* 25 July:1. Pratt, Kansas.

Koch, Ronald P.
1977 *Dress Clothing of the Plains Indians*. University of Oklahoma Press, Norman.

Lees, William B.
1992 An Historic Burial from the Southern Plains of Kansas. *Plains Anthropologist* 37(140):213–231.

Levine, Mary Ann
2020 The Fabric of Empire in a Native World: An Analysis of Trade Cloth Recovered from Eighteenth-Century Otstonwakin. *American Antiquity* 85(1):51–71.

Leveridge, Richard Mervyn
2002 Nickel Silver, German Silver and Related Alloys. Electronic document, http://pages.zoom.co.uk/leveridge/nickel1.html, accessed August 31, 2020.

Loendorf, Lawrence L.
2008 *Thunder and Herds: Rock Art of the High Plains*. Left Coast Press, Inc., Walnut Creek, California.

McChristian, Douglas C.
1995 *The U.S. Army in the West, 1870–1880: Uniforms, Weapons, and Equipment*. University of Oklahoma Press, Norman.

McCoy, Ronald
1987 *Kiowa Memories: Images from Indian Territory, 1880*. Morning Star Gallery, Santa Fe, New Mexico.

McGinnis, Anthony R.
2011 Counting Coup. *Encyclopedia of the Great Plains*. University of Nebraska, Lincoln. Electronic document, http://plainshumanities.unl.edu/encyclopedia/doc/egp.war.013, accessed April 24, 2021.

McGuinn, William F., and Bruce S. Bazelon
1988 *American Military Button Makers and Dealers: Their Backmarks and Dates.* Expanded ed. Book Crafters, Inc., Chelsea, Michigan.

MacIver, Andrew
2020 Review of *The Burial Record of Prehistoric Liangshan in Southwest China: Graves as Composite Objects* by Anke Hein. *American Antiquity* 85(4):815–816.

Moore, Robert J.
1997 *Native Americans: A Portrait: The Art and Travels of Charles Bird King, George Catlin, and Karl Bodmer*. Stewart, Tabori and Chang, New York, New York.

Nikulina, Elena A.
2016 Hair, Bone Plates and Coprolites: Ancient DNA Research on Rare Archaeological Materials. *Archaeologica Baltica* 23:38–43.

Nye, Wilbur Sturtevant
1968 *Plains Indian Raiders: The Final Phases of Warfare from the Arkansas to the Red River*. University of Oklahoma Press, Norman.

O'Neill, Brian
1981 *Kansas Rock Art*. Historic Preservation Department, Kansas State Historical Society, Topeka.

Pearson, Charles E.
1978 The Rabbit Hill Site: A Late Nineteenth Century Southern Plains Indian Burial at Fort Sill, Oklahoma. *Bulletin of the Oklahoma Anthropological Society* 27:171–177.

Petersen, Karen Daniels
1968 *Howling Wolf: A Cheyenne Warrior's Graphic Interpretation of His People*. American West Publishing Company, Palo Alto, California.

1971 *Plains Indian Art from Fort Marion*. University of Oklahoma Press, Norman.

PowWows.com
2020 Hair Plates. Electronic document https://forums.powwows.com/f13/hair-plates-50519/, accessed August 31, 2020.

Quimby, George Irving
1966 *Indian Culture and European Trade Goods: The Archaeology of the Historic Period in the Western Great Lakes Region*. University of Wisconsin Press, Madison.

Reynolds, Sidney O.
1960 The Redskin Who Saved the White Man's Hide. *American Heritage* 11(2):50–55, 108–111.

Rockett, Frank H.
1984 Brass. In *McGraw-Hill Concise Encyclopedia of Science & Technology*, edited by Sybil P. Parker, p. 257. McGraw-Hill Book Company, New York, New York.

Schindelholz, Eric
2001 A Simple Guide for Archaeological Materials Characterization. Senior Research Paper, Anthro-3028, Department of Anthropology, University of Minnesota, Minneapolis-St. Paul.

Szabo, Joyce M.
1994 *Howling Wolf and the History of Ledger Art*. University of New Mexico Press, Albuquerque.

Tice, Warren K.
1997 *Uniform Buttons of the United States*. Thomas Publications, Gettysburg, Pennsylvania.

Viola, Herman J.
1998 *Warrior Artists: Historic Cheyenne and Kiowa Indian Ledger Art Drawn by Making Medicine and Zotom*. National Geographic Society, Washington, D.C.

Warner, Christopher (editor)
1985 *Ledger Art of the Crow and Gros Ventre Indians: 1879–1897*. Yellowstone Art Center, Billings, Montana.

Wikipedia
2021 Counting Coup. Electronic document, http://en.wikipedia.org/wiki/Counting_coup, accessed April 19, 2021.

Woodward, Arthur
1970 *The Denominators of the Fur Trade: An Anthology of Writings on the Material Culture of the Fur Trade*. Westernlore Press, Pasadena, California.

Wyckoff, Martin A.
1984 *United States Military Buttons of the Land Services 1787–1902*. McLean County Historical Society, Bloomington, Illinois.

INVESTIGATIONS AT THE KAW MISSION IN COUNCIL GROVE

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with a contribution by
John R. Bozell
History Nebraska

Kaw Mission was established for the Kanza (also known as the Kansa or Kaw) in 1850 north of their new reservation near present-day Council Grove. The structure was built of native limestone and designed to accommodate 50 students. A smoke house, a workshop, and a well also were constructed. The school opened in May 1851 under the direction of Thomas Huffaker. The property was run by the Methodist Episcopal Church South until 1854 when the government closed it due to excessive cost. During its three years of operation, the school reportedly averaged about 30 students—all boys, who were orphans or dependents of the tribe. The building has served several functions: mission, schoolhouse for area white children, council house, courthouse, meeting house, informal hotel, private residence, and museum. In 1971 it was listed on the National Register of Historic Places. Archeological investigations began in 2016, with more intensive excavations taking place in 2018. All investigations were part of the Kansas Archeology Training Program. The work recovered artifacts and features from the mission period, including a blacksmith shop; from the Civil War era, when it was a private residence; and from its time as a museum.

The focus of the 2018 Kansas Archeology Training Program field school (KATP) was the Kaw Mission State Historic Site (SHS). This project was a partnership between the Kansas Historical Society (KSHS) and the Kansas Anthropological Association (KAA). The field school ran from June 2 through 17 and had excavations daily (Waggoner 2020:1).

Kaw, Kansa, and Kanza are terms that pertain to the same people (Figure 1). Throughout this report, when dealing with standing buildings, structures, or places, the most commonplace name associated with that location is applied. Kanza is used when referring to the people, past and present. When denoting the modern tribal nation, Kaw Nation is employed. Other spellings may appear in direct quotations.

HISTORICAL BACKGROUND

1846 Treaty

In January 1846 the Kanza relinquished rights to its 2,000,000-acre reservation along the Kansas River in exchange for a new reservation (Figure 2) and $202,200, plus 5 percent interest, to be paid in annuities over the course of 30 years (Barry 1972:569–570; Kappler 1904; Parks 2014:14; Unrau 1971:164; Waggoner 2016:118, 2018:15–16). Reservation life had become dire, and destruction of the traditional Kanza lifeway resulted in malnutrition, starvation, and rampant disease (Herring 1990:27; Parks 2014:14; Thornton 1987:127; Waggoner 2016:118, 2018:15–16). Many treaties, like this one between the United States and tribal leaders, were negotiated while numerous tribes were under tremendous pressure. Government agents used bribery, deception, and threats, or exploited fault lines within the tribes to ensure that treaties were signed (Herring 1990:22; Miner 2002:34). Swayed by its promise of goods and food, the Kanza signed the treaty in January; in February they arrived at Fort Leavenworth in a state of starvation. Indian agent Richard Cummins noted that he was not able to give them enough to do them any good, and the Sac and Fox, newly arrived in Kansas, gave food and clothing to the desperate people (Barry 1972:571).

The new reservation was to be near the Solomon River, taken from the western portion of the land ceded (Parks 2014:11, 13). The intent was to

Figure 1. Studio portrait from around 1870 of Kanza Indians who lived on the reservation south of Council Grove, Kansas. Courtesy of the Kansas Historical Society.

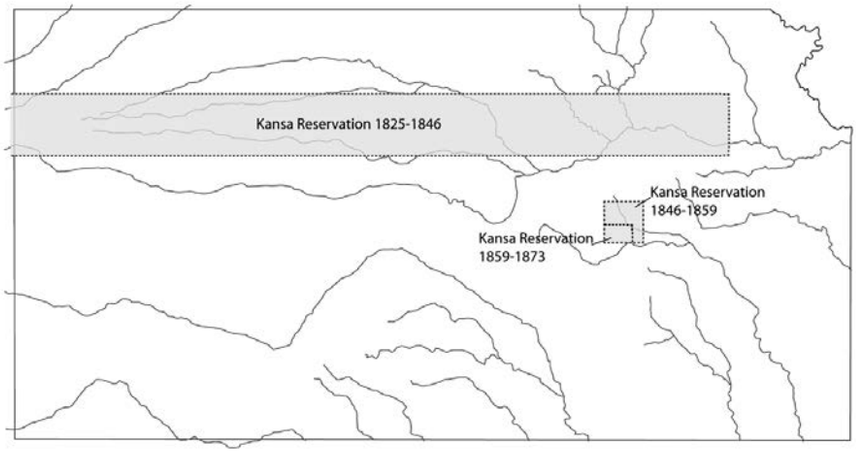


Figure 2. Kansas map, showing the three Kanza reservations within the state and years of occupation.

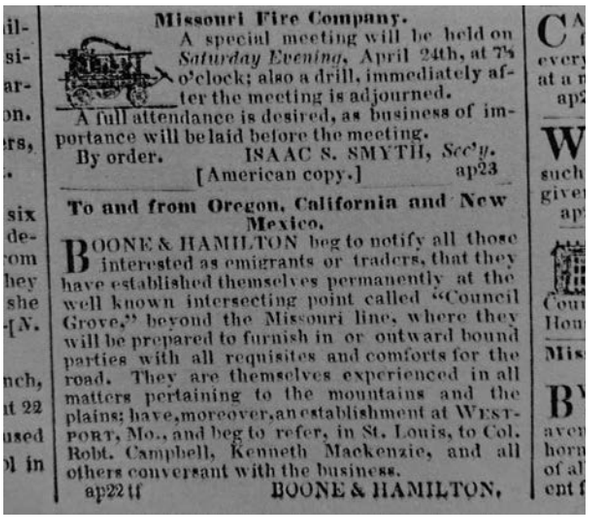
make room for emigrant tribes being relocated from the east and to place the Kanza a "great distance . . . removed from the white settlements" (Kappler 1904; Wedel 1946:15). This removal from white population centers was important to the Indian policy of the day. Isaac McCoy, a Baptist missionary who worked with multiple tribes in the early 1800s, had advocated for an American Indian haven for some time. He believed in removing American Indians from the influence of white settlers in order for them to receive a European-style education and learn to farm before they were overrun with white settlers and their business interests (Miner 2002:33–34; Sheehan 1974:262, 270; Waggoner 2016:117, 2018:13–14). Any possible success of this strategy depended on the availability of land not wanted by white settlers (Miner 2002:34; Washburn 1988:662). However, due to a provision in the treaty that allowed the reservation to be placed elsewhere due to doubts of the "sufficiency of timber" in the proposed reservation, the new reservation instead was located on the international highway of the day,

the Santa Fe Trail (Kappler 1904; Parks 2014:15; Waggoner 2016:115, 2018:11; Washburn 1988:49; Wedel 1946:15).

Council Grove and the New Reservation

In July 1846 the assistant quartermaster at Fort Leavenworth sent two blacksmiths to set up a shop in the Council Grove vicinity to help with wagon repairs and other needs for travelers along the Santa Fe Trail (Barry 1972:672; Parks 2014:22; Unrau 1971:165). The location was already a common rendezvous point for trail travelers (Parks 2014:21). At this time only government employees, licensed traders, and missionaries were allowed to live and work in Indian Territory, which then included Kansas. Albert G. Boone and James G. Hamilton received a license to trade with the Kanza early in 1847. Boone then hired his second cousin, Seth M. Hays, to run the business. In April 1847 Hays traveled to Council Grove to set up a trading post for Boone and Hamilton. He had been working at Frederick Chouteau's trading house outside of present-day Topeka for a couple of years and, as a witness, signed the 1846 treaty between the United States and the Kanza (Barry 1972:537, 671; Kappler 1904; Parks 2014:14). When Hays set up the trading post, the Kanza reservation at Council Grove had not yet been established, but Boone and Hamilton wasted no time in advertising to westward-bound travelers (Figure 3). Trail traffic might have been the true purpose of the trading post or, having been involved in the 1846 treaty, Hays might have had inside knowledge of the eventual reservation location.

In June 1847 Indian Agent Richard W. Cummins set out to select the location for the new Kanza reservation. This was after May 1847, the date when the tribe was to have vacated the old reservation, as stipulated in the recently signed treaty (Kapper 1904; Waggoner 2016:118). Cummins decided that sufficient timber was not available on lands either west or east of the previous reservation and instead selected Council Grove. In his report of July 17, 1847, he measured the reservation boundaries using the Boone and Hamilton Trading Post as a marker: "To commence at a point ten miles due north of the trading house of Boon & Hammilton [sic] . . ." (Barry 1972:689). In November President



Missouri Fire Company.

A special meeting will be held on *Saturday Evening*, April 24th, at 7½ o'clock; also a drill, immediately after the meeting is adjourned.

A full attendance is desired, as business of importance will be laid before the meeting.

By order. ISAAC S. SMYTH, *Sec'y*.

[American copy.] ap23

To and from Oregon, California and New Mexico.

BOONE & HAMILTON beg to notify all those interested as emigrants or traders, that they have established themselves permanently at the well known intersecting point called "Council Grove," beyond the Missouri line, where they will be prepared to furnish in or outward bound parties with all requisites and comforts for the road. They are themselves experienced in all matters pertaining to the mountains and the plains; have, moreover, an establishment at WESTPORT, Mo., and beg to refer, in St. Louis, to Col. Robt. Campbell, Kenneth Mackenzie, and all others conversant with the business.

ap22 tf BOONE & HAMILTON.

Figure 3. Advertisement for Boone and Hamilton (Barry 1972:812).

James Polk accepted the proposed location (Parks 2014:21).

In fall 1847 or spring 1848, the Kanza relocated to the new 256,000-acre reservation along the Neosho River (Figure 2). The area encompassed the future town of Council Grove, which in 1847 consisted of the Boone and Hamilton store and the Fort Leavenworth-run blacksmith shop. The Kanza established three villages: Hard Chief's Village, Fool Chief's Village, and Big John's Village (Unrau 1971:166–167; Waggoner 2016:118, 2018:15–16; Wedel 1946:15). They built bark lodges and continued to go on seasonal bison hunts (Waggoner 2016:118, 2018:15–16). Almost immediately Euroamerican settlers and displaced members of other Indian tribes started settling on the reservation (Wedel 1959:53). By 1849 a few shops and at least six houses were erected by non-Kanza settlers on Kanza-owned land (Unrau 1971:165).

The Mission and Missionaries

Many missionary societies believed that Christianity was essential to civic life and the underpinnings of modern civilization (Bowden 1981:164–165). The American Missionary Movement started early in European colonization, but the missionaries' power within the United States stemmed from two acts of Congress designed to teach agriculture. One, passed in 1793, authorized the provision of domestic ani-

mals, farm tools, and teachers to tribes; the other, passed in 1819, provided a "civilization fund" of $10,000 annually to be used for agricultural instruction. The government had no system for distributing these resources, so churches were relied upon (Bowden 1981:165–167; Sheehan 1974:7). The churches expended these funds, and later treaty money, to establish mission schools throughout the United States. These institutions forced American Indian children to cut their hair, wear European clothing, speak English, and change their names. The schools redefined traditional gender roles and concepts of time and ownership (Bowden 1981:169). Student were expected to emerge as copies of young white scholars, thus eliminating the next generation's connections to traditional culture (Herring 1990:3; Sheehan 1974:131).

The Methodist Episcopal Church (MEC) had worked with the Kanza since 1830, when the MEC Missouri Conference was formed. Thomas Johnson was appointed to minister to the Shawnee, and his brother, William Johnson, was assigned to the Kanza (Lutz 1906:160–161). The Methodists followed the model set forth by Cyrus Kingsbury in 1816, which placed schools near American Indian population centers but separated the students from their tribes (Sheehan 1974:133). In 1832 the Kansas missions were placed in a new district, and Thomas Johnson was appointed superintendent (Lutz 1906:165; Parks 2014:43). His work among the Shawnee progressed, but when William Johnson died of pneumonia in 1842, he believed that his seven years among the Kanza had accomplished little (Lutz 1906:199–202).

In fall 1850 the MEC South sent Allen T. Ward to Council Grove to begin construction of a mission to serve the Kanza (Unrau 1971:165). The resulting two-story, eight-room building was made of local limestone and measured 35 by 50 feet. Hallways separated the rooms on each story. In addition, two log structures were erected: an 18 by 20-foot workshop and a 15 by 15-foot smokehouse. Also a well was dug (Barry 1972:962; Johnson 1851; Morehouse 1908:356; Unrau 1971:165–166). The exact locations of the workshop and smokehouse have not been determined. According to Barry (1972:962), the total cost for the school, workshop, smokehouse, and well was $3,102, with the lion's share of the cost—$3,000—going to the stone schoolhouse. Parks (2014:37–38) put the cost at $4,325.05, but he included the plowing and fencing of the farmland east of the Neosho River.

Kaw Mission in Council Grove was operated by the MEC South, which was a branch that split from the Methodist Church in 1844–1845 over the issue of slavery (Gurrentz 2020; Faith Project, Inc. 2003; Lutz 1906:179; University of Richmond 2015). Methodist Church founder, John Wesley, was adamantly opposed to slavery, but southern congregations within the denomination pushed for allowing slave holding (Gurrentz 2020; University of Richmond 2015). When Bishop James O. Andrew was defrocked for owning slaves, the southern church seceded from the main body in a split that foreshadowed the division of the United States 16 years later. The Kansas Methodist missions, organized in Missouri, sided with southern churches (Barry 1972:538; Lutz 1906:179), and their stand on slavery was reflected in the attitudes of their teachers: both Thomas Johnson and Thomas Sears Huffaker, who ran the Kaw Mission, owned slaves and ran for pro-slavery positions in Kansas Territory (Kansas Historical Society 2014; Parks 2014:43).

Kaw Mission, at the time referred to as the Manual Labor School, was completed in 1851 with funds set aside for education in the 1846 treaty between the Kanza Nation and the United States (Kappler 1904; Unrau 1971:165–166). These educational funds were to total $1,000 annually for 30 years and were part of the payment for the 2,000,000 acres sold to the United States government.

Huffaker was sent to head the school and arrived in April 1851. He had been teaching for about two years at Shawnee Mission in present-day Johnson County, Kansas (Parks 2014:41). The church also hired Henry W. Webster as an agriculturalist (Lutz 1906:201; Morehouse 1908:335; Unrau 1971:166). Kaw Mission was in operation for merely three years. The Kanza refused to allow girls to attend and sent only a few boys, mostly orphans, who received irregular instruction in reading and writing (Morehouse 1906:233; Unrau 1971:168). While the amount of education that students received is unclear, it is apparent that the youths were used to cultivate the agricultural lands adjacent to the mission. Huffaker then sold the crops to white settlers and the tribe for profit. This exploitation continued

even after the mission officially closed. In 1857 a delegation of Kanza chiefs, Hard Hart, White Hair, and The Wolf, complained to the federal government in Washington that Huffaker was a bad missionary, did not teach anything, and forced 50 young Kanza boys to labor in fields "the size of Washington" to raise corn and other crops to sell to white settlers (Unrau 1971:170, 1975:56).

The number of students in residence at the mission is not definite. In her personal journal Harriet Bidwell Shaw described her overnight stay on September 28, 1851: "Mr. Webster [the agriculturalist] allows no Indians to stay after dark and they all left at that time—he has a large dog which he turns out at night . . . ." Shaw (1851) said nothing of the Kanza boys who were supposed to be living at the mission, yet her disdain for American Indians was evident throughout her journal. The phrase "an average of 30 children" appeared repeatedly in multiple sources, but this author believes that they all stem from a single letter, written by Huffaker in 1905 (Lutz 1906:203). An 1852 letter from Thomas Johnson reported 15 students, all removed from school when the tribe went hunting (Parks 2014:43). Brigham (1921:108) wrote that few Kanza children attended the school and "for this reason Mr. Huffaker's time was not fully occupied . . . ." At some point in 1854, Huffaker requested additional funds for the school, declaring that $50 per student was insufficient (*Topeka State Journal*, 11 July 1910:8). In October 1854 he informed the Indian agent that the school would be discontinued (Parks 2014:52). Sources differ on whether the government or the church made the decision to close the mission.

Huffaker and the Bakers

Eliza Ann Baker moved to Council Grove with her family in 1849 (*Council Grove Republican* [*CGR*], 29 September 1950:3). She moved there because her brother, Morris Baker, and brother-in-law, Emanuel Mosier, were assistant blacksmiths for the Kanza (Barry 1972:896, 977; Maloy 1886:8). An earlier blacksmith, William H. Mitchell, had worked for the tribe since 1844 (Barry 1972:533). He constructed a shop, house, and corral, and started farming in Council Grove in spring 1847. Baker and Mosier bought the buildings and land from Mitchell and began smithing for the Kanza in 1849. Eliza and her mother, Agnes Miller Baker, were hired by the MEC South as mission housekeepers in that same year, when Eliza was about 13. Much of the extended Baker family worked directly or indirectly for the Kanza. An exception was her brother, Arthur Ingraham Baker, who was a blacksmith (1843–1849) and trader (1849–1853) for the Missouri Sac and Fox, until he moved to Council Grove in 1853 or 1854 (Barry 1972; Shimeall 2012:61–62). In fact, most early Council Grove settlers earned at least some of their money from the tribe, either by government appointments, contracts, or annual annuity payments (Unrau 1968:272). On May 6, 1852, Eliza Baker married Thomas Huffaker in the mission (Barry 1972:1088).

Eliza helped Thomas run a school for white children at the mission. About 15 white students were instructed separately from the Indian youth. The white school, which opened in May 1851 and continued for four or five years, is considered the first white school in Kansas. Even though it was held in the mission, which was built with money owed to the Kanza, and was funded with the yearly annuity funds belonging to the Kanza, instruction was free for white students, whose parents lived on lands owned by the Kanza (Morehouse 1906:233; Parks 2014:45; Unrau 1971:168).

For several years after the mission closed, John Montgomery, assigned as Indian agent in 1855, complained in his reports that there was no functioning school for the Kanza. This was the case even though $1,000 a year was supposed to be spent on tribal education. He also wrote that the Kanza boys, who had attended the mission school, had learned very little (Barry 1972:962; Parks 2014:68; U.S. Department of the Interior, Bureau of Indian Affairs 1857, 1858).

Huffaker and the Kanza

Huffaker was fluent in several American Indian languages, including Kanza (Huffaker 1906; Morehouse 1906:233). With this skill he was able to be involved in the enrollment of annuities, to act as an interpreter for the tribe in its dealings with the government, and to negotiate treaties (Huffaker 1906; Unrau 1971:169, 179, 185–186, 1975:55–56). The mission was a frequent stop for Indian agents, government officials connected to Indian affairs,

and missionaries (*CGR*, 29 September 1950:3). Huffaker's influence went completely unchecked until Indian Agent Montgomery's appointment (Unrau 1971:167). By 1857 Montgomery revoked Huffaker's trading license and called for a full investigation of Huffaker's relationship with the tribe (Unrau 1971:180).

Increasing White Settlement and Conflicts with the Kanza

After Kansas became a territory in 1854, Huffaker and his brother-in-law, Arthur Baker, began encouraging settlement in and around Council Grove, despite Kanza ownership of the land (Parks 2014:66). In February 1859 Huffaker, Seth Hays, Christopher Columbia (another licensed trader with the Kanza), and others formed the Council Grove Town Company in anticipation of being able to sell lots for a profit once the tribe ceded the land of Council Grove (Unrau 1971:185–186).

The Kanza continued to struggle in the meantime. In treaties with the United States, they were promised the necessities of life in exchange for land cessions, but they did not receive what was due to them, and their population continued to decline (Thornton 1987:127). In 1855 a devastating smallpox epidemic killed more than 400 people (Wedel 1946:16). High infant and maternal mortality rates were noted, and pneumonia, tuberculosis, and other "fevers" were also problems. Indian Agent Hiram Farnsworth, appointed in 1861, often paid for medical care out of his own pocket in hopes of easing suffering within the tribe (Parks 2014:159–161).

The increasing white population and trail traffic around Council Grove contributed to conflicts. In spring 1858 Territorial Governor James Denver warned that in their frustration the Kanza were likely to commit violence against whites encroaching on their reservation. The Kanza were repeatedly accused of theft of household items, food, and alcohol. Some squatters' homes and farms were raided and burned (Parks 2014:103–105).

A common problem was horse theft. White settlers, traders, travelers, and other American Indian tribes in the region stole horses from the Kanza, who in turn stole horses from all these groups. One such incident triggered the violence of June 17, 1859. On June 15 the Kanza stole two horses from a Mexican trader traveling along the trail. Council Grove leaders demanded that the horses be returned. Some Kanza rode into town, stopping in front of the Hays store. Hays went outside and fired two shots above the heads of the mounted men. They returned fire, injuring two bystanders, Charles Gilkey and William Park, who both eventually recovered. The Kanza then left town (Cutler 1883; Parks 2014:107–108; Unrau 1971:183). The town folk assembled a council to decide what to do, and H. J. Epsey was put in charge. The previous August Epsey had told the Kanza that, if they ever injured a white man again, "the white people would exterminate their tribe." Four men, including Huffaker, were sent to the reservation to negotiate. The Kanza agreed to turn over two men, one of them the son of a chief. The prisoners were brought back to Council Grove, and both were hanged. The bodies were left hanging until the next day (Cutler 1883; Parks 2014:109–110; Unrau 1971:183–184). This is just one example of the tit-for-tat violence that plagued relationships between the Kanza and squatters on their land.

A New Treaty

On October 5, 1859, a new treaty was signed (Kapper 1904). The Kanza relinquished 160,000 acres of their land, encompassing all of Council Grove, and moved to a smaller reservation southeast of town (Figure 2; Waggoner 2016:118; 2018:16). Article two of that treaty gave Huffaker the mission building, where he and his family had been living since the mission closed, and 320 acres of surrounding land (Parks 2014:132). The treaty specified that the land be paid for and that outsiders also could bid on land already settled. In hopes of getting a treaty that better favored the squatters, Huffaker joined a committee that petitioned the United States government: "Whereas, The late Treaty made by Commissioner Greenwood with the Kansas Indians is grossly unjust to the whites" (*Herald of Freedom*, 19 November 1859:1).

Huffaker ultimately paid nothing for the building and grounds because he claimed that the Kanza owed him $1,425. This was for food grown at the mission farm from 1851 to 1854 and sold to the tribe. At the time the Kanza children were his students and main work force (Parks 2014:132). Commissioner

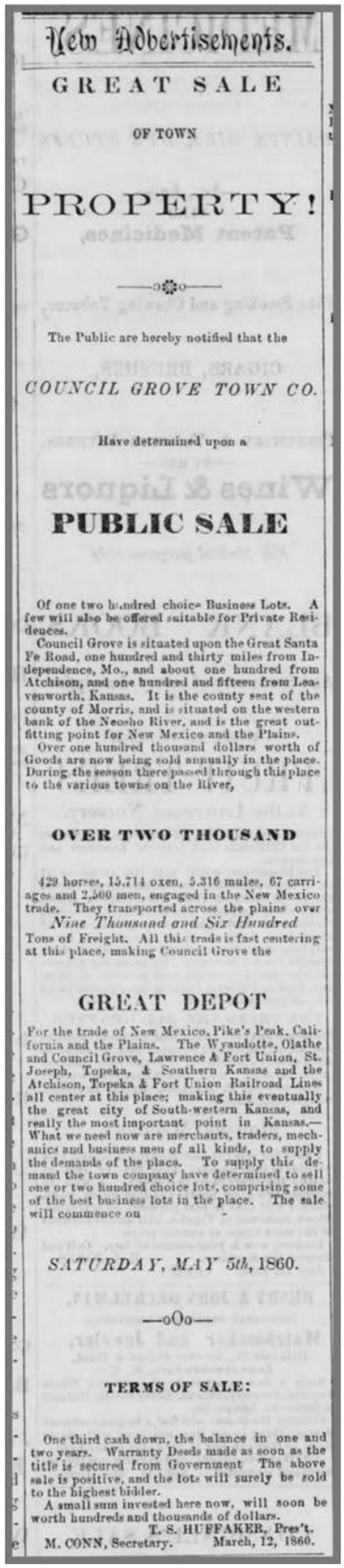
Edward Wolcott complained that the deal was a swindle and that the land was worth at least $20 an acre (Parks 2014:132; Unrau 1971:192), far more than the $1.75 per-acre charge that Huffaker circumvented. Town lots were sold the next year for $100 apiece (Parks 2014:132; Unrau 1968:273, 1971:187). Huffaker was president of the town company (Figure 4; *Topeka Tribune*, 31 March 1860:3; *Weekly News Democrat*, 31 March 1860:4). He acted as interpreter for the Kanza in negotiations of the treaty that ceded the land (Unrau 1975:56). After the signing of the 1859 treaty, Huffaker was appointed agriculturalist for the tribe and held that position for four years (Cutler 1883).

Civil War

In the lead up to the Civil War, Huffaker identified with the Democrats and pro-slavery faction, as did many Council Grove citizens. In 1855 he was named chairman of the first county commission, created by the "Bogus Legislature" (*CGR*, 14 July 1910:1). He also was appointed probate judge (Cutler 1883). However, when war broke out, he sided with the Union, possibly due to influence of his bother-in-law, Arthur Baker, who published a number of pro-Union editorials in his newspaper, though his loyalty to the Union was complicated (Shimeall 2012:63–65).

Council Grove's position on the Santa Fe Trail made it a strategic location during the Civil War. Captain Rowell, commanding a Company of the Second Colorado Regiment, was stationed near town to protect the trail and the mail that ran along it (Cutler 1883). Council Grove was a stopping point for troop movements from Fort Riley to Fort Scott and from Fort Leavenworth to New Mexico Territory (Bird 2004:57; Greene 1916). Lawlessness reached new heights during the border violence in Kansas. William Anderson, known as Bloody Bill, killed Arthur Baker and burned his store and home on July 3, 1862, an incident in an ongoing feud between the two families (Howell 1955; Shimeall 2012:63–65). Anderson also was involved in the killing of Augustus Howell at Diamond Springs west of Council Grove on May 4, 1863 (Schiesser 2017).

In spite of the complicated relationship between the tribe and the United States government, numerous Kanza men served in the Union Army. Eighty-



New Advertisements.

GREAT SALE

OF TOWN

PROPERTY!

The Public are hereby notified that the

COUNCIL GROVE TOWN CO.

Have determined upon a

PUBLIC SALE

Of one two hundred choice Business Lots. A few will also be offered suitable for Private Residences.

Council Grove is situated upon the Great Santa Fe Road, one hundred and thirty miles from Independence, Mo., and about one hundred from Atchison, and one hundred and fifteen from Leavenworth, Kansas. It is the county seat of the county of Morris, and is situated on the western bank of the Neosho River, and is the great outfitting point for New Mexico and the Plains.

Over one hundred thousand dollars worth of Goods are now being sold annually in the place. During the season there passed through this place to the various towns on the River,

OVER TWO THOUSAND

429 horses, 15,714 oxen, 5,316 mules, 67 carriages and 2,500 men, engaged in the New Mexico trade. They transported across the plains over *Nine Thousand and Six Hundred* Tons of Freight. All this trade is fast centering at this place, making Council Grove the

GREAT DEPOT

For the trade of New Mexico, Pike's Peak, California and the Plains. The Wyandotte, Olathe and Council Grove, Lawrence & Fort Union, St. Joseph, Topeka, & Southern Kansas and the Atchison, Topeka & Fort Union Railroad Lines all center at this place; making this eventually the great city of South-western Kansas, and really the most important point in Kansas.—What we need now are merchants, traders, mechanics and business men of all kinds, to supply the demands of the place. To supply this demand the town company have determined to sell one or two hundred choice lots, comprising some of the best business lots in the place. The sale will commence on

SATURDAY, MAY 5th, 1860.

TERMS OF SALE:

One third cash down, the balance in one and two years. Warranty Deeds made as soon as the title is secured from Government The above sale is positive, and the lots will surely be sold to the highest bidder.

A small sum invested here now, will soon be worth hundreds and thousands of dollars.

T. S. HUFFAKER, Pres't.

M. CONN, Secretary. March, 12, 1860.

Figure 4. Advertisement for lots in Council Grove in the *Topeka Tribune* of March 31, 1860.

seven fought in Company L of the Ninth Kansas Cavalry (Kaw Nation 2020). Colonel John Richie's Second Indian Regiment also included members of the Kanza tribe (Bird 2004:61). In 1863 Huffaker (Lutz 1906:203) wrote to the Kansas Indian Agency, "Many families have been unable to cultivate their farms as they should, owing to the fact that many of their able-bodied men have gone into the army . . . ."

Removal to Indian Territory

After years of hardship and disease, the Kanza were relocated to Indian Territory (present-day Oklahoma) in 1873. An act of Congress on May 8, 1872, provided for the sale of all remaining land owned by the Kanza and for a place on a reservation shared with the Osage (U.S. Department of the Interior, Bureau of Indian Affairs 1872:32). When the Kanza arrived at their reservation on the Neosho River in 1847, they numbered 1,600. By the time they left, Unrau (1998:86) estimated their numbers at 700, while the U.S. Department of the Interior, Bureau of Indian Affairs (1872:32) counted 593 (Parks 2014:7; Waggoner 2016:118; 2018:16). According to Unrau (1998:85), "Not one Kansa male was over fifty-five years old."

The Huffakers and the Mission

After the war Huffaker became more active in state politics and the Republican Party, serving in the Kansas House for two terms: 1874 and 1879 (Connelley 1918; Kansas State Library 2020). He, his wife Eliza, and their children continued to live in the mission building until they moved to a new house in 1862. Subsequently the edifice served many purposes: schoolhouse, council house, courthouse, meeting house, and a place of refuge during raids on Council Grove by the Kanza and other tribes (Brigham 1921:108; Morehouse 1908:356). The property passed through several hands until it was purchased by Homer Carpenter and Anna Huffaker Carpenter (daughter of Thomas and Eliza) around 1907. In 1926 Carl Huffaker, the tenth son of Thomas and Eliza, bought the tract and remodeled the structure, giving it its current appearance. The carriage house, which is now the education center, was built in 1936.

In 1951 the Kansas Legislature approved the purchase of the building and grounds from Carl Huffaker, who was paid in November of that year (Miller 1952). The KSHS took possession of the site in July 1951, installing Elwood M. Jones as caretaker. Immediately after the KSHS took over, the Neosho River flooded (Figure 5). Money was set aside for flood damage in March 1952, and, once repairs were made, the mission opened as a museum (Jones 1952; Miller 1952). The initial plan was to restore its 1851 appearance, but that idea was abandoned due to cost (Miller 1952). In 1954 the Council Grove Rotary Club moved an 1862 Kaw cabin to the grounds. Kaw Mission was listed on the National Register of Historic Places in 1971.

PRELIMINARY ARCHEOLOGICAL INVESTIGATIONS

Research into the Kaw Mission uncovered no record of prior archeological investigations at the site (Pankratz 1970). Trinomial 14MO368 was assigned by KSHS Public Archeologist Virginia Wulfkuhle during preparations for the 2016 investigations (Waggoner 2020:11).

Metal Detection in June 2016

Archeological investigations at Kaw Mission started in June 2016 as part of the KATP field school. The northern portion of the site was surveyed using metal detectors. A grid of 5 by 30-m transects was set up on magnetic north (Figures 6 and 7). The entire area within each transect was surveyed, and every metal detection hit was flagged. Once that task was completed, every third hit was excavated to sample the artifacts present. Each volunteer pulled two flags then excavated one to get a somewhat even distribution of material. As a specimen was recovered, its location was recorded with a GPS (Global Positioning System) device. The locations were mapped to look for artifact concentrations by distribution and type.

The metal detection survey of the northwestern part of the property exposed an aggregation of clinkers with a strong enough magnetic signature to set off the detectors. To investigate further a series of probes were placed across the concentration in cardinal directions. These probes revealed a lens of

Figure 5. Photograph of 1951 flood waters at Kaw Mission. Courtesy of the Kansas Historical Society.

Figure 6. Metal detection survey in progress. Volunteers excavate previously flagged metal detection hits. Yellow ropes were used to lay out transect lines.

dark soil, containing charcoal, coke, clinkers, and coal, which was designated Feature 614, hereinafter referred to as F614 (Figure 8).

F612 also was found during the survey (Figures 9 and 10). Multiple artifacts were recovered from a single flagged metal detection hit. The majority were late nineteenth- and early twentieth-century domestic items. Once recognized as much more than a single piece or small cluster, the area was

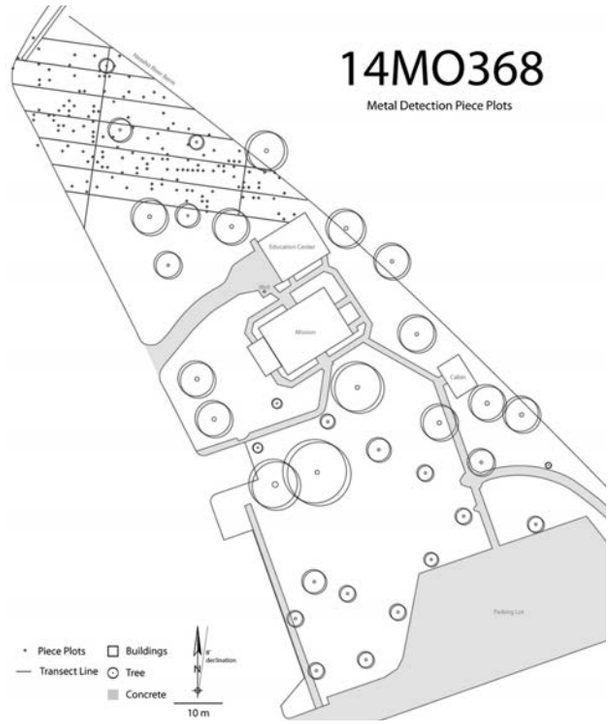


Figure 7. Metal detection piece plots from summer 2016.

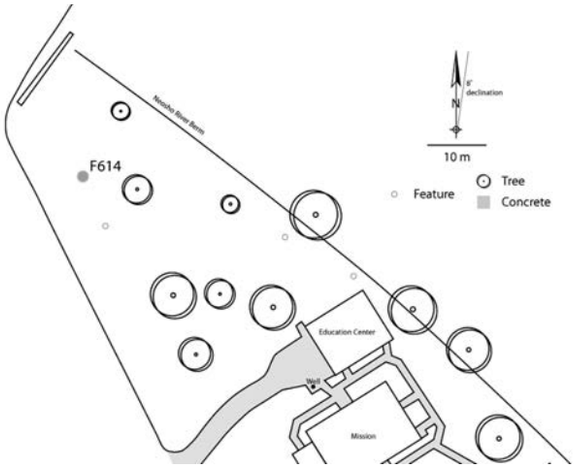


Figure 8. Location of Feature 614.

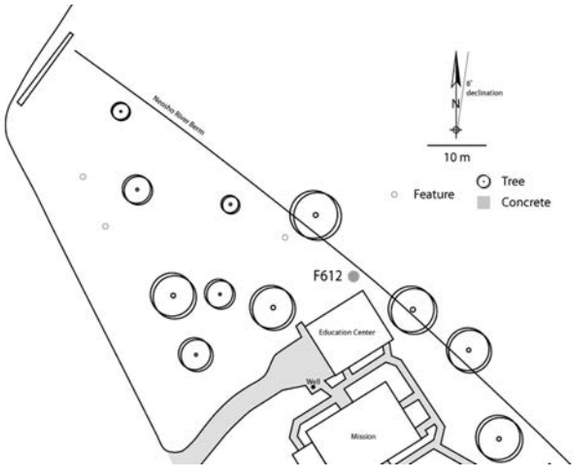


Figure 9. Location of Feature 612.

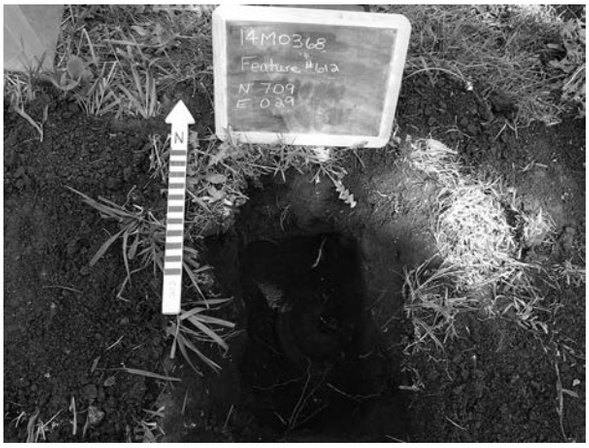


Figure 10. Feature 612 at initial discovery.

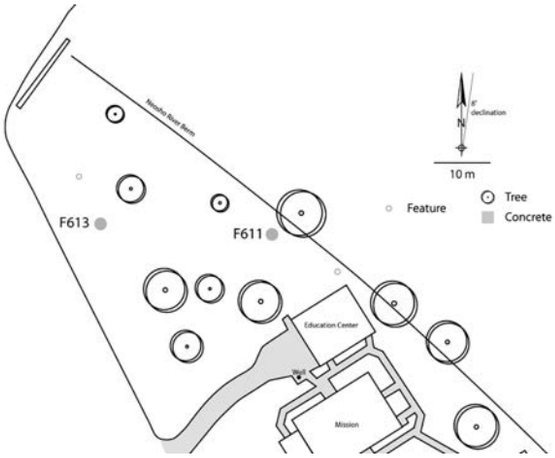


Figure 11. Locations of Features 611 and 613.

designated a feature and reburied for future investigation.

Two other features were identified during this procedure (Figure 11). F611, a possible hearth, was investigated only during the metal detection survey. F613 consisted of a scatter of artifacts that appear to date from the mid-1800s.

Investigations in Fall 2016

Based on the results of the June 2016 metal detection survey, test excavations were conducted in October 2016 (Figure 12). Test units were 2 by 2-m squares that were excavated in 10-cm levels and the fill dry screened. F612, F613, and F614 were selected for excavation. Single units were placed over F612 and F613. Three units were laid out at F614.

The metal detection survey, using the same protocol as described above, was continued. This procedure yielded the first indications of military activity in the southern portion of the property.

Figure 12. Locations of piece plots from the metal detection surveys in June and October 2016 and of five test units excavated in October 2016.

Geophysical Survey

In April 2017 Archaeo-Physics, LLC conducted a geophysical survey at 14MO368, using three techniques: electrical resistance, magnetic field gradient, and magnetic susceptibility (Figure 13). In addition, analysis of LiDAR imagery was incorporated in the report (Maki 2017).

Electrical resistance records differences in the electrical resistivity of subsurface materials that can result from deviations in grain size, organic

Figure 13. Areas subjected to geophysical survey.

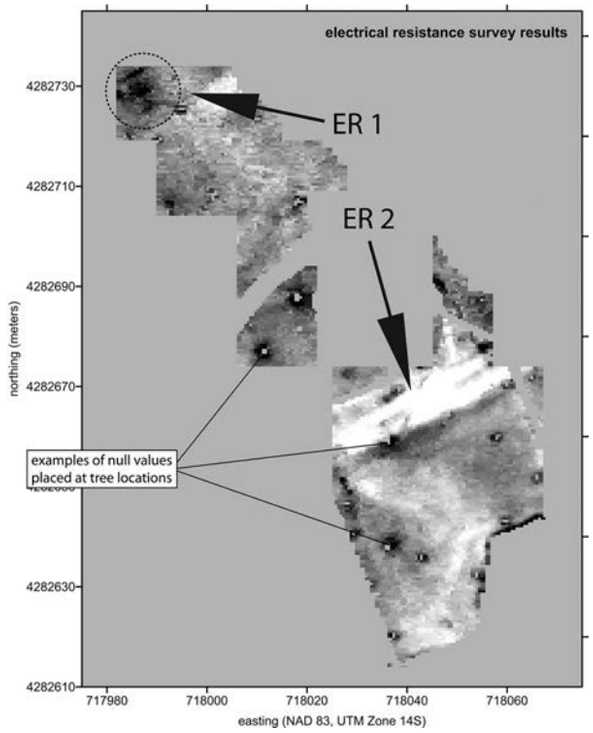


Figure 14. Electrical resistance data showing ER1 and ER2 (Maki 2017). Because data could not be collected from tree locations, these spaces are shown as null values.

Figure 15. Kaw Mission in 1890, looking northwest. Huffaker Road is visible in the foreground. Courtesy of the Kansas Historical Society.

content, moisture, air voids, and chemistry of the soil. Two significant electrical resistance anomalies were identified: ER1 and ER2. ER1 is a rectilinear pattern in the northern part of the site that corresponds well with ER1/F614, discovered during the June metal detection survey and tested during the October investigation (Figure 14). ER2 represents a buried road that formerly passed south of the mission, known as Huffaker Road (Figures 14 and 15; Maki 2017).

Magnetic field gradient responds to local variation in the earth's magnetic field, created by subsurface materials, such as ferrous metal, brick, or soils that have been burned, organically enriched, disturbed, or compacted. Three anomalies were noted in the magnetic field gradient survey: MFG1, MFG2, and MFG3. MFG1 is a rectilinear pattern just north of ER1/F614, MFG2 is likely a utility pipe, and MFG3 is a pattern around the building that may be pins from landscape sod (Figure 16; Maki 2017).

Magnetic susceptibility survey measures the concentration of magnetic minerals in subsurface soils. These minerals can be concentrated due to burning, midden deposits, or mass displacement of soils. Two anomalies were identified during the survey: MS1 and MS2. MS1 corresponds very well to ER1/F614. MS2 is near a utility trench (Figure 17; Maki 2017).

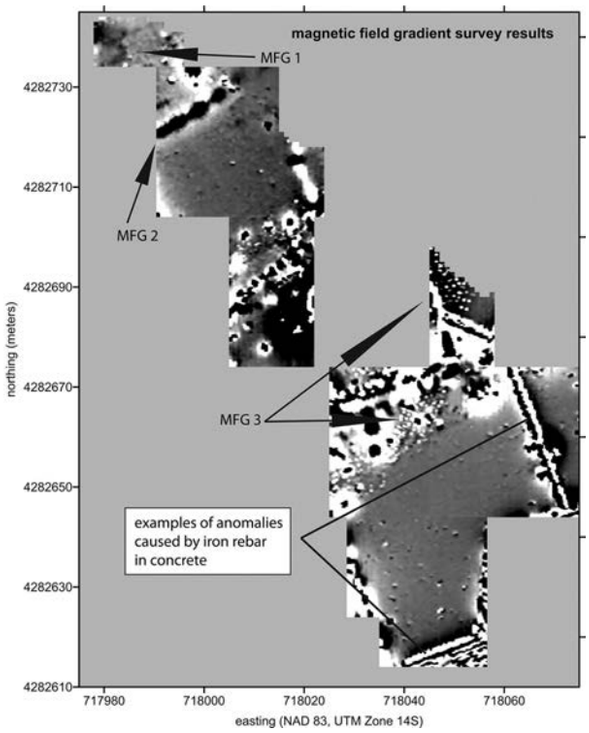


Figure 16. Magnetic field gradient data, showing MFG1, 2, and 3 (Maki 2017).

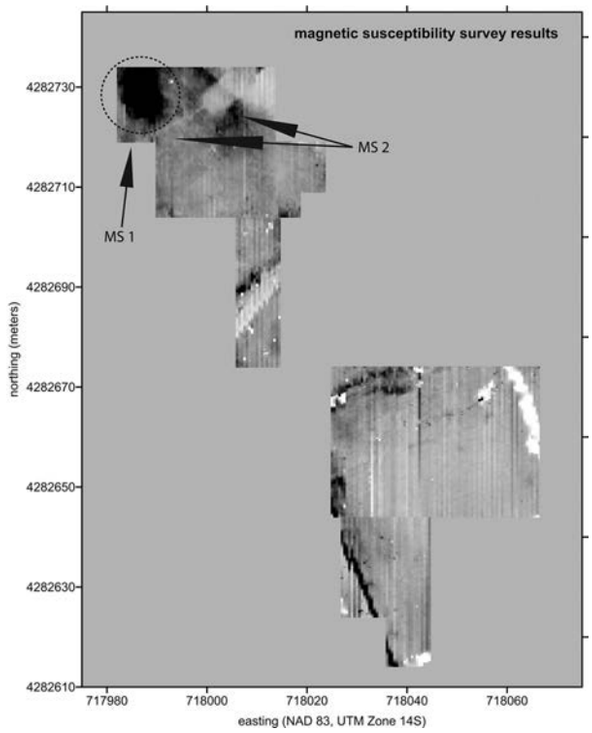


Figure 17. Magnetic susceptibility data, showing MS1 and MS2 (Maki 2017).

The two rectilinear anomalies, ER1/F614 and MFG1, are very close together but represent two different subsoil anomalies. MFG1 is north and west of ER1/F614 and is a smaller anomaly (Figure 18; Maki 2017).

LiDAR imagery analysis involved shaded relief, using multiple light azimuths and local relief modeling. No significant topographic features were distinguished in the LiDAR data (Maki 2017).

PRIMARY INVESTIGATION RESEARCH METHODS

The primary investigation of the Kaw Mission SHS took place during the 2018 KATP field school, June 2–17, 2018. The major focus was excavation of features previously discovered through metal detection survey, geophysical survey, and test excavations, but additional metal detection survey and test excavations were conducted.

After the field school was complete, additional excavations were needed. Those happened on

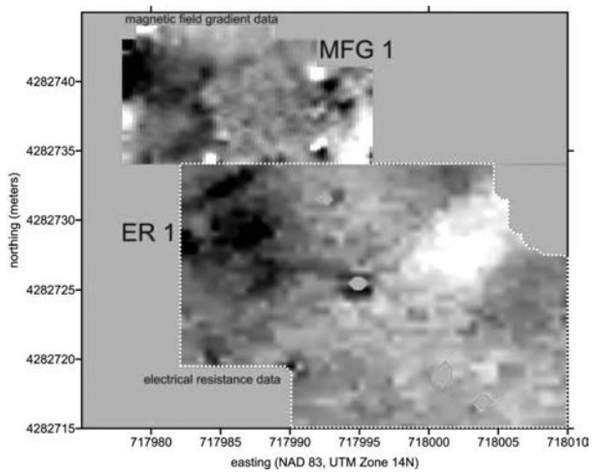


Figure 18. Combined electrical resistance and magnetic field gradient, showing ER1 and MFG1 (Maki 2017).

Figure 19. Metal detection survey during 2018 KATP field school.

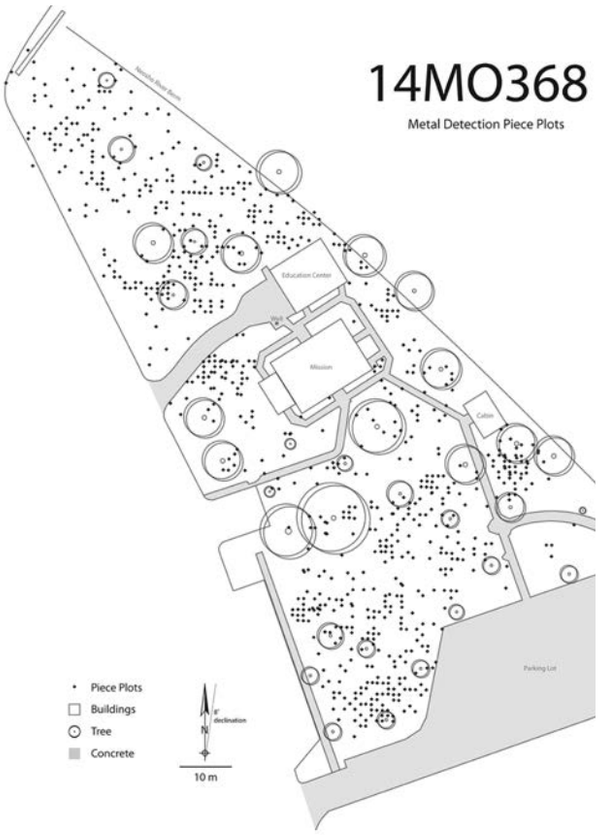


Figure 20. Locations of all artifacts recovered from metal detection surveys of June 2016, October 2016, and June 2018.

September 28–30 during the 2018 KATP fall field event and centered on the main excavation block in the northwestern portion of the site.

Metal Detection Survey

A systematic metal detection survey covered the entire grounds outside of excavation areas and recovered 100 percent of the hits (Figures 19 and 20). This work included new tracts as well as those previously surveyed in 2016. Thorough metal detection was not done near the excavation blocks due to interference from the unit metal spikes and the difficulty of working around the large number of participants.

The metal detection survey consisted of 5 by 30-m transects. Ropes were laid out as guides for the metal detector operators prior to survey, and each detectorist was responsible for covering the whole expanse inside his/her transect. If something was recognized as modern trash (e.g., soda cans and modern coins), it was removed and discarded. The locations of all other artifacts were recorded with a total station.

Excavation

Excavations focused on anomalies ER1/F614 (MS1) and MFG1 (Figures 14 and 17), defined during the geophysical survey by Archaeo-Physics, LLC and on features found by metal detection survey and test excavations in 2016 by the KSHS and KAA. Sod was removed prior to excavation (Figure 21). Units were laid out on UTM (Universal Transverse Mercator) coordinates, based on geodetic datum NAD (North American Datum) 83. The final three digits of the northings and eastings of the southwest corner of each excavation unit served as the unit designation. For example, a southwest corner with the coordinates N4358487 E285781 was unit N487

Figure 21. Sod removal from main excavation block prior to excavation.

E781. The elevation information for 14MO368 was assigned arbitrarily, with the elevation of Datum 1 being specified as 100 m.

Level Excavation and Artifact Collection

Twenty 2 by 2-m units and five 1 by 1-m units were excavated during the June 2018 project. In addition, one of the 2 by 2-m units opened during the October 2016 testing was reopened. In September 2018 seven more 2 by 2-m units were excavated. In total from June 2016 through September 2018, 32 2 by 2-m units and 5 1 by 1-m units were excavated (Figure 22).

Units were excavated in 10-cm levels until culturally sterile soil was encountered throughout an excavation level. Once sterile soil was reached, a soil sample was taken in the middle and the four corners of each unit, using a soil core probe to check for deeper cultural deposits. When building foundation walls were encountered, they were left in place whenever possible. Significant in-situ diagnostic artifacts (e.g., buttons and bottle bases with maker's marks) were piece plotted with a total station, which recorded their UTM coordinates and elevations in relation to Datum 1. All other cultural material from each level was collected in a level bag, using the northing, easting, and elevation information for the unit's southwest corner as provenience. Feature locations were recorded with a total station, which noted their UTM coordinates and elevations in relation to Datum 1.

Two small exploratory trenches, designated TX1 and TX2, were excavated at the southeastern edge of the education center (Figure 23) to locate any remnants of the carriage house foundation. The current education center replaced the carriage house, which is visible in some photographs (Figure 24). Each trench was 20 cm wide by 210 cm long and 25 cm deep. Construction debris and artifacts were present in both trenches, but no conclusive evidence of a foundation was uncovered.

Screening

Ten 10-liter soil flotation samples were taken from selected features at the discretion of the principal investigator. All other excavated sediments were dry screened through ¼-inch mesh.

Due to the high volume of coal, coke, clinkers, and slag in F614 (ER1/F614/MS1), a stacked screen arrangement was used at that excavation block. Sediments were screened first through a top screen with ½-inch mesh, artifacts were collected from that screen, and the cinders, coke, coal, and

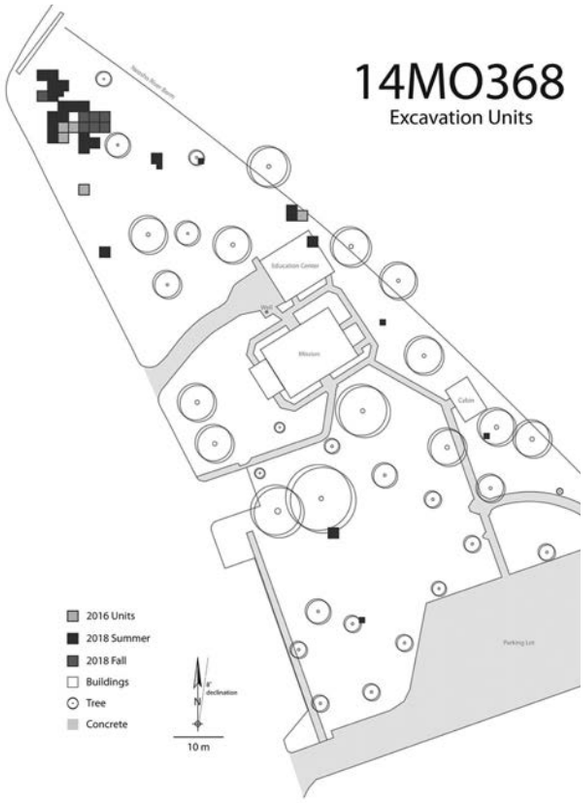


Figure 22. Excavation units from June 2016 through September 2018.

Figure 23. Exploratory trenches TX1 and TX2.

slag were discarded. Volunteers then screened the remaining sediments through a bottom screen with ¼-inch mesh, again collecting artifacts and discarding cinders, coke, coal, and clinkers.

FEATURE DESCRIPTIONS

Geophysical surveys, metal detection surveys, and excavations revealed 65 features, representing a significant amount of activity at the site. The features reflect the uses of the property as a mission, center of government activity, private residence, farm, and museum.

Feature 611

This feature was discovered during the metal detection survey because two large brass tent or tarpaulin grommets were there. F611 contained a mix of charcoal, burned earth, and ash, and was likely a hearth. No date could be determined; the hearth might be connected to the military activity in the southern part of the property or to a campout at the mission by later visitors. It was not investigated further (Figure 25).

Feature 612

Located adjacent to the northeast corner of the education center, this feature was a trash dump with domestic artifacts (Figure 25). The cultural materials, which date largely from the late nineteenth and early twentieth centuries, are a mix of buttons, glass, safety pins, and nails, as well as bits of limestone and coal. The matrix surrounding the artifacts was darker than the soil outside of the feature, forming a 25-cm-thick band that was more than 2.5 by 2 m in diameter (Figure 26). In 1978 the area behind the education center was used to store debris, some of which may be linked to this feature (Figure 27).

Sub-feature 705

This feature was a limestone, ash, and mortar concentration within F612. Its purpose is unknown, but it might be related to a building episode at 14MO368. One possibility is that excess construction debris

Figure 24. Photograph from 1925 with carriage house visible in background. Courtesy of the Kansas Historical Society.

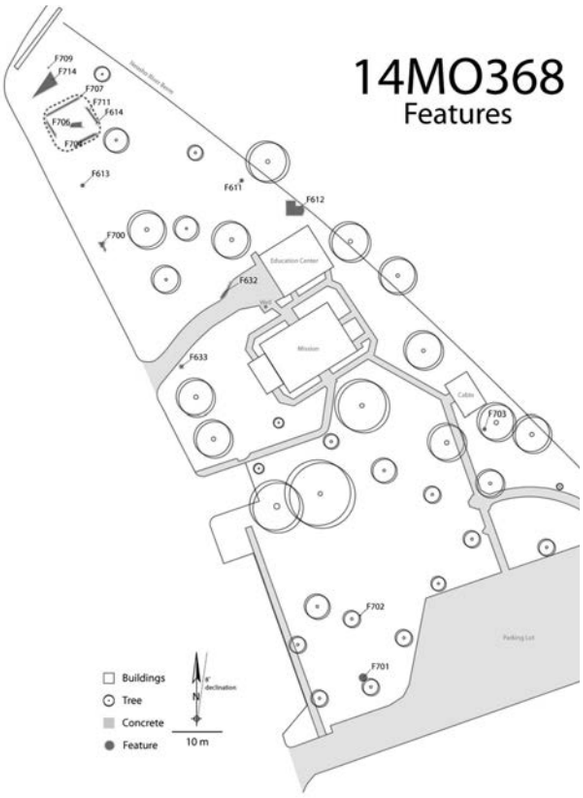


Figure 25. Features discovered during investigations.

was deposited in the previously established trash dump (F612). An alternative is a mortar or plaster mixing pit, called a slaking pit, that was dug into the existing dump and later filled with trash. Associated artifacts include bone, glass, ceramics, nails, and a garter hook.

Feature 613

This artifact concentration, discovered during the metal detection survey, was an activity area of unknown use. A single 2 by 2-m test unit was excavated at the location in fall 2016. Associated objects are bottle glass, milk glass, whiteware, and nails.

Figure 27. Photo from 1978, showing debris being stored behind education center.

Feature 614

This feature was a blacksmith shop (Figures 25 and 28), represented by a foundation wall on the west side (Figure 29), two builder's trenches on the north (F707) and south (F704), and a faint drip line (F711) on the east, facing the river. Inside the shop was a thick layer of coal, coke, clinkers, and slag, which are fuel and waste materials connected to smithing. While coal is common in historic sites, coke is not because it is a specialized fuel source, made by heating coal in a low- to no-air environment. The result is a fuel that is porous, high in carbon, and burns very hot. Coke is used mainly for iron ore smelting and not for heating (United States Energy Information Administration 2020). Its presence in high volume is strong evidence that this feature was

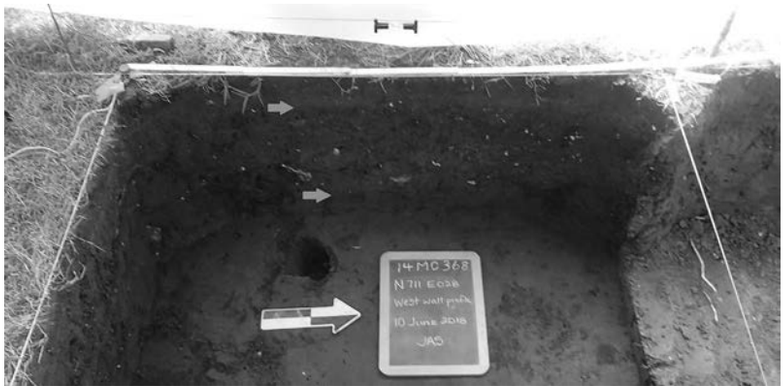


Figure 26. Feature 612 in profile, showing top and bottom of band of cultural debris.

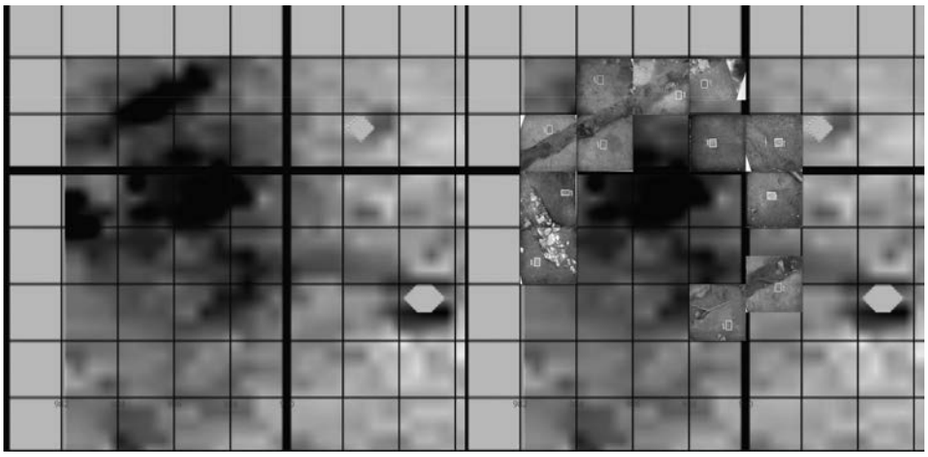


Figure 28. Results of electrical resistance survey in blacksmith shop area (left) and excavation units georeferenced over electrical resistance results (right).

Figure 29. Remains of limestone foundation wall of blacksmith shop.

a blacksmith shop. Slag also is linked to smithing, being a waste material separated from metals during the smelting process (Pearsall and Trumble 2002).

The size of F614 was 8.75 by 8.20 m (28.71 by 26.90 feet), which does not match either of the outbuildings described in Thomas Johnson's (1851) letter as a workshop of 18 by 20 feet and smokehouse of 15 by 15 feet. This might be the government shop, erected by Fort Leavenworth, or the one built by William Mitchell for his blacksmith work for the Kanza. It also could have been constructed after 1851. In any case it cannot be attributed to the MEC South. Most of the foundation stones were removed, leaving behind two builder's trenches. One side lacked a foundation wall and might have been open or had large doors. A possible photograph of the blacksmith shop was taken in 1898 from the hill overlooking the intersection of Huffaker and Belfry Streets with the mission just off frame to the right (Figures 30 and 31).

Sub-feature 704

This sub-feature was the southern builder's trench of the blacksmith shop (Figures 25 and 28). It was full of artifacts, including glass, ceramics, nails, glass bottles, and pieces of metal. From the upper surface, where it was recognized, to the base of the trench was about 20 cm. It was not fully excavated but stretched through three excavated units (Figure 28).

Figure 30. Photograph from 1898, showing outbuilding that may be blacksmith shop. Belfry and Huffaker Streets are marked.

Sub-feature 706

Located inside the blacksmith shop, this sub-feature might represent the area of high heat generated by a forge. The dark red to rust-colored soil (Figure 32) lay almost in the center of F614 and was only partially excavated (Figure 25).

Sub-feature 707

This sub-feature was the northern builder's trench for the blacksmith shop (Figures 25 and 28). It ran parallel to F704 and perpendicular to the intact limestone foundation wall (Figure 29). From the top, where the feature was recognized, to the base of the trench was about 24 cm (Figure 33). It was full of artifacts.

Sub-feature 711

This sub-feature was faint evidence of the eastern wall of the blacksmith shop (Figures 25 and 28). It was unlike the builder's trenches for the north and south walls and was instead very shallow—about 8 cm deep. It might constitute a drip line from the roof or the place where a threshold once was.

Feature 632

This feature is a segment of pavement, a mix of plain brick and bricks stamped "Coffeyville." Immediately north of the existing driveway, it likely was laid to extend the driveway (Figures 25 and 34). No artifacts were associated.

Feature 633

This lamppost base and concrete pad were discovered during the metal detection survey. The pad

Figure 31. Google Earth image, shown at slight angle, with locations of blacksmith shop, Belfry Street, and Huffaker Street marked for comparison to Figure 30.

Figure 32. Feature 706 showing dark reddish soil.

measured 35 by 40 cm. The octagonal iron lamppost was cut off at ground level and then buried with electrical wires still inside (Figure 35). Pieces of an incandescent light bulb (Specimens 411-4 through 411–10) were found in association. The feature was not excavated and is located west of the mission building and just south of the driveway (Figure 25).

Feature 700

This feature was visible in the electrical resistance survey data at N705 E993 (Figures 14 and 25). A single 2 by 2-m unit was excavated to investigate what proved to be a gravel concentration (Figure 36). Rock might have been dumped in this location to fill a low spot or to stage landscaping material for use on the mission grounds. This feature contained some glass, whiteware, scrap metal, and coal, but artifact density was low.

Feature 701

While conducting the metal detection survey in June 2018, building materials were found in sev-

Figure 33. Trench going into excavation unit wall. Artifacts are visible in profile wall.

Figure 34. Feature 632.

Figure 35. Feature 633, a lamppost base and associated light bulb fragments.

eral places where artifacts were being recovered. These might relate to houses that once stood across Huffaker Street from the mission. This area was platted by the town company, and residential lots were indicated on the Morris County plat maps, produced by Geo. A. Ogle & Co. in 1901 and 1923, but it is unclear if houses were ever erected on these lots (Figure 37). By the time this photograph was taken, sometime in the early 1920s, any structures that might have existed had been removed (Figure 38).

Feature 702

This hearth (Figures 25 and 39) was discovered in the southern part of the property during the metal detection survey. F702 measured about 30 cm in diameter. It might be associated with military artifacts and further evidence of the military camp discussed below. It also may date to recent reenactor events that took place at the site. The locations of reenactor campfires were not recorded.

Figure 36. Planview of Feature 700.

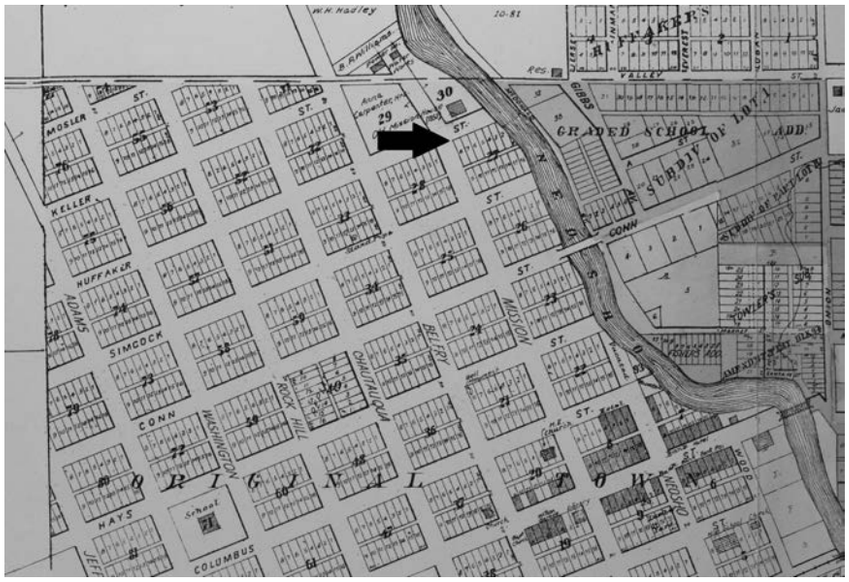


Figure 37. Plat map from Geo. A. Ogle & Co. 1923, showing residential lots across Huffaker Street from Kaw Mission. Courtesy of the Kansas Historical Society.

Figure 38. Photograph from early 1920s with arrow pointing to Kaw Mission. No houses exist across Huffaker Street from the Mission.

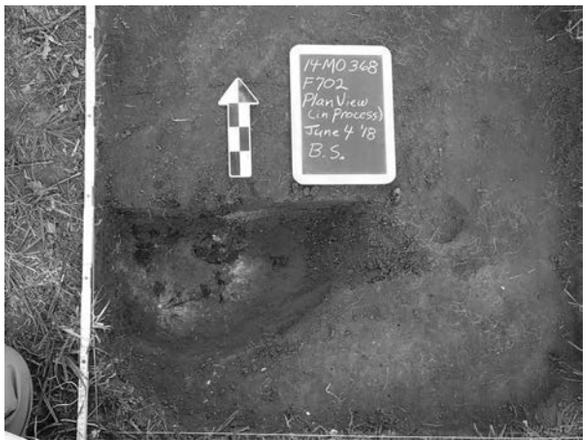


Figure 39. Feature 702 during excavation.

Figure 40. Feature 709, showing feature's loose soil.

Feature 703

This feature was created when the Kaw cabin was relocated to the Kaw Mission grounds in 1954. Clusters of limestone and mortar likely represented spills from the mixing of mortar and scraps from trimming stones during reconstruction. The concentrations were very shallow and confined to the area directly south of the cabin (Figure 25).

Feature 709

This pit likely was located within the boundaries of F714. F709 was roughly 30 cm in diameter and 75 cm deep. Sediments within the pit were looser than the surrounding soil (Figures 40–42). It contained milk bottles and tubing that might be components

Figure 41. Feature 709 during excavation. One milk bottles is visible.

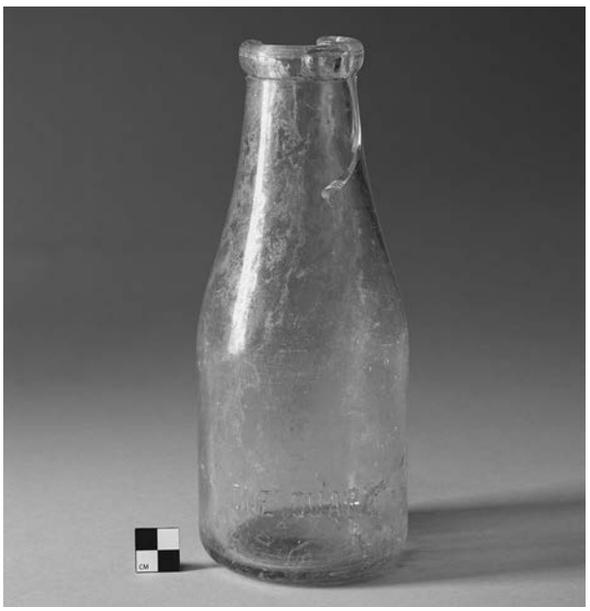


Figure 42. One of the milk bottles from Feature 709. Courtesy of the Kansas Historical Society.

of a milking machine (Figure 43). Maker's marks on the milk bottles indicate that they date from the 1910s to 1920s. The purpose of the feature is unknown.

Feature 714

This feature was a building of some kind that was visible in the magnetic field gradient data as MFG1 (Figures 16, 18, and 44). Excavations revealed a

Figure 43. Man with a milking machine from the early 1900s. Courtesy of the Kansas Historical Society.

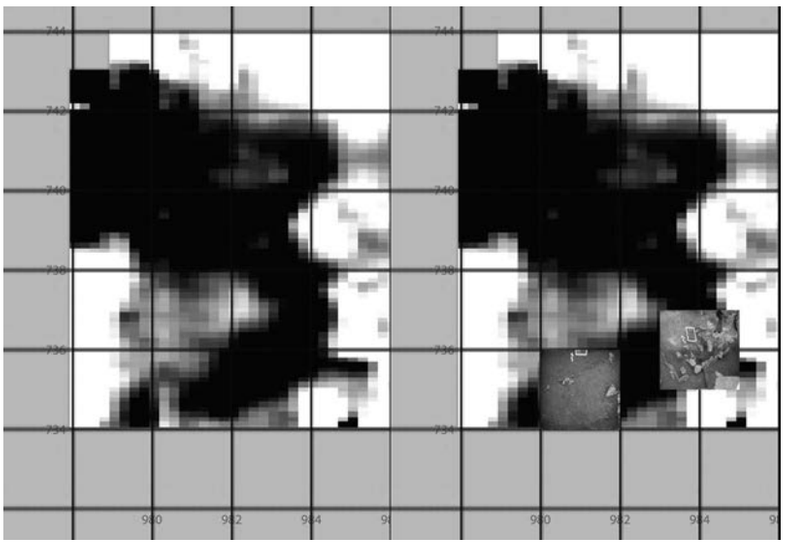


Figure 44. Feature 714, building visible in magnetic field gradient data as MFG1 (left). Two excavation units are georeferenced onto magnetic field gradient data (right).

builder's trench with scattered limestone rubble throughout. The trench turned at a 90-degree angle in unit N735 E983. The overall dimensions of the structure are unknown, as is its function.

Sub-feature 712

This sub-feature was the builder's trench for F714 (Figures 25 and 44). It was not fully excavated, so its depth is not known. The trench contained limestone foundation rubble and various artifacts, including glass bottles, a saw blade, and a drainpipe.

CIVIL WAR-ERA ACTIVITY AREA

The metal detection survey discovered several Civil War-era artifacts in the southern yard of the mission (Figure 45). These items include a 3-pound solid shot, two Minié balls, two rifle sights, two military buttons, and part of a brass spur. While these are the most direct ties to the Civil War, several other objects also might be connected to a Civil War activity area: round ammunition balls, an oil lamp burner, and a hard rubber button.

Council Grove's location on the Santa Fe Trail

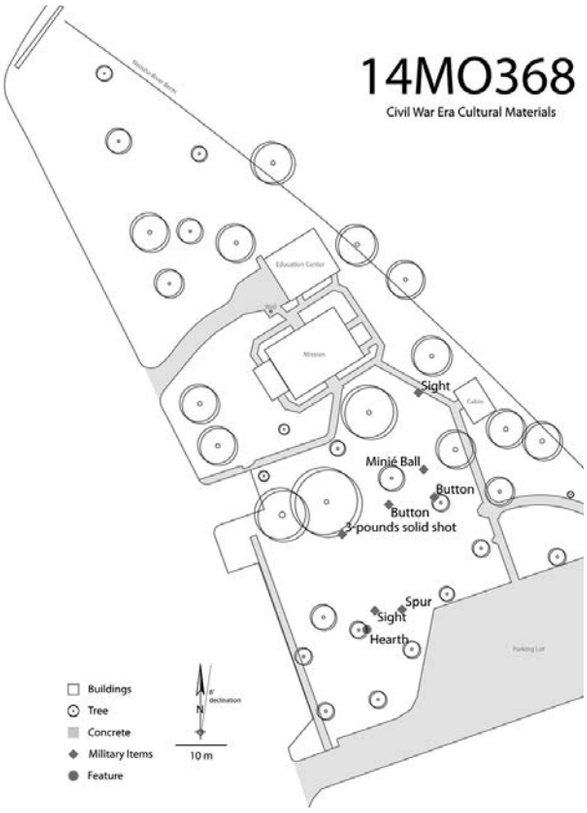


Figure 45. Hearth and military-related artifacts associated with Civil War-era camp.

made it strategically important during the war. Only one reference to a company of the Second Colorado Regiment being stationed near town has been found (Cutler 1883); however, other sources refer to Council Grove as a stopping point for troop movements (Bird 2004:57; Greene 1916). Greene (1916) wrote of his time at Council Grove during the war.

> At Council Grove we camped near a lot of Kaw Indians and had a world of fun setting up hard tacks for them to win by shooting them with their bows and arrows. The target was set twenty paces away and they rarely missed the mark.

The solid shot, Specimen 491-1 (Figures 45 and 46), was likely for a 3-pounder smoothbore gun (Melton 2019). There were several 3-pounder smoothbore-style guns. One, called the Grasshopper, was common from the Revolutionary War through the War of 1812 (Brabenec 2011). Another, the

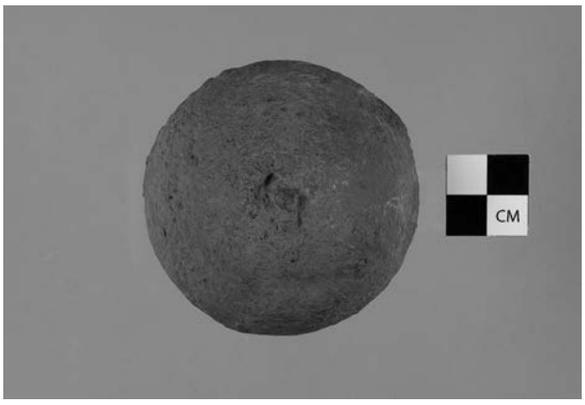


Figure 46. Three-pound solid shot found during metal detection survey. Courtesy of the Kansas Historical Society.

Ames Mountain Howitzer Smoothbore from the Ames Manufacturing Company of Massachusetts, was made during and after the Civil War (Horse Soldier 2020; Katcher 2001:36–37). A third, the Woodruff Gun, was manufactured by the Greenleaf Foundry in Illinois and used by the Iowa Cavalry. Only 30 to 40 of these were produced (Lovett 2020). Another possibility is that this artifact was a piece of grapeshot for a 24-pounder cannon (Melton 2019), although the presence of heavy artillery at Council Grove is highly unlikely. Additionally, by the time of the Civil War, grapeshot was largely confined to naval artillery (Coggins 1990:144).

Two Minié balls (Specimens 579-1 and 1163-1) were found (Figures 45 and 47). The Minié ball was invented by French Army officer Claude-Etienne Minié in 1846 and was adopted by the United States military in 1852 (Coggins 1990:27–33). Rifling the barrel of a firearm had long been employed to increase accuracy, as the spiraled grooves in the barrel impart a consistent spin to the bullet. However, the need for the bullet to fit snugly in the barrel rendered reloading very slow. The hollow base of the Minié ball caused it to expand when fired, forcing the sides of the bullet snug against the rifling grooves but still allowing it to be loaded as quickly and easily as a loose-fitting bullet in a smoothbore musket (Coggins 1990:27–33).

Older style round ball ammunition was also present (Table 1, Figure 47). Though round balls were an older technology, they were used throughout the Civil War. Cartridges could contain a single ball, multiple buckshot, or a combination of one

Table 1. Round ball ammunition.

Specimen number	Weight in grams	Diameter in inches
185-2	5.4	.38
564-1	11.0	.50
872-1	5.3	.39
1130-1	5.2	.44
1162-1	12.1	.50
1163-1	21.1	.60
1215-1	13.4	.50
1812-1	8.2	.44

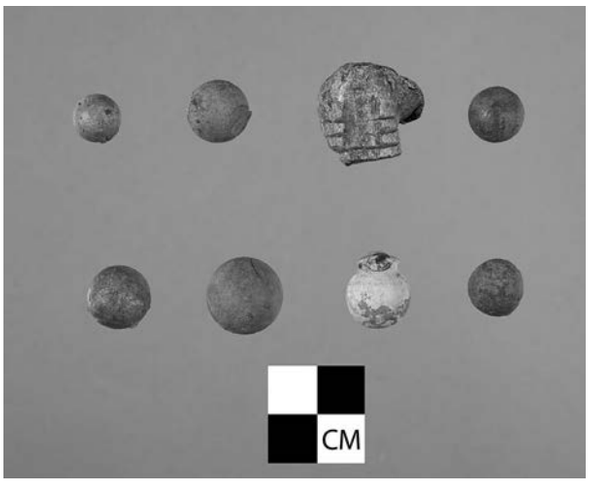


Figure 47. Ammunition. Courtesy of the Kansas Historical Society.

ball and three buckshot called "buck and ball." A single percussion cap was recovered. These served for ignition of muzzle-loading firearms and were introduced in the United States in 1841 (Coggins 1990:31).

Three other firearm components were acquired (Table 2) by the metal detection survey. A gunflint (Figure 48) was unearthed while excavating a hit on the east side of the building. It is a complete French flint and is sized for a standard rifle. Flintlock rifles would have been very outdated weapons by the Civil War, but evidence attests that they still were used. At the Mine Creek Battlefield (14LN337) a flintlock mechanism was collected (KSHS 2020). Flintlocks, such as the Springfield Model 1795 and the Harper's Ferry Model 1803, frequently were converted to use percussion caps (American Battlefield Trust 2020). Two rifle sights were found

Table 2. Firearm parts.

Specimen number	Weight in grams	Material	Type	Portion
400-1	4.7	French flint	Rifle	Gunflint
1125-1	23.3	ferrous	Rifle	Rear sight
1165-1	3.7	cuprous	Rifle	Rear sight

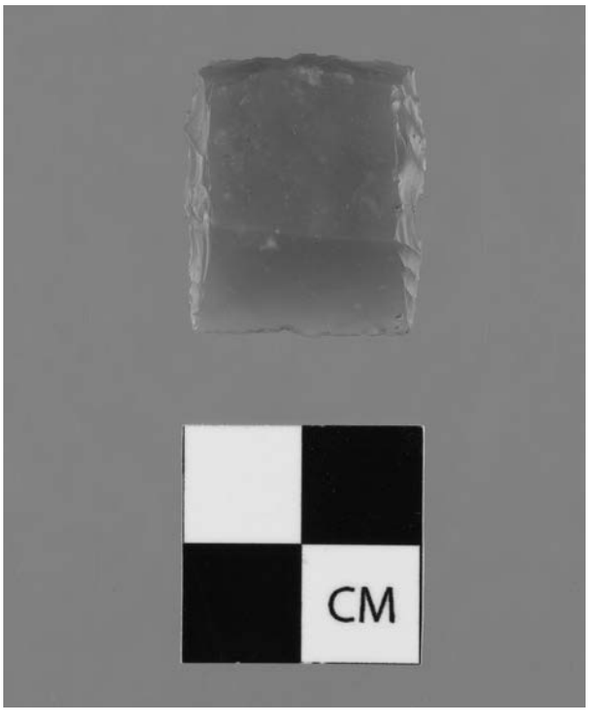


Figure 48. Standard rifle gunflint, made of French flint (Specimen 400-1). Courtesy of the Kansas Historical Society.

(Figure 45): one iron (Specimen 1125-1, Figure 49) and one brass (Specimen 1165-1, Figure 50).

The military buttons are Union Army infantry coat buttons (Figures 51 and 52). Both are two-piece, stamped, pressed brass buttons with Sanders-style metal loop shanks. This style of two-piece button was manufactured starting in 1830 (Marcel 1994; Olsen 1963:552–554) and was popular with the military because the stamped face could indicate the branch of service and rank of a uniform's owner (Olsen 1963:552–554). One of the buttons is an officer's button (Specimen 503-1), and the other is an enlisted man's (or general service) button (Specimen 1235-1; Albert 1976:38–41). The officer's button style, adopted in 1851 (Albert

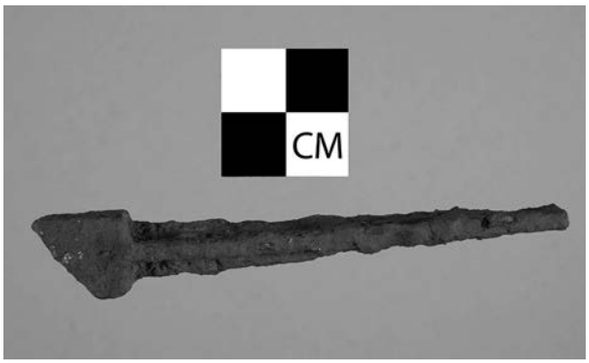


Figure 49. Rifle rear sight (Specimen 1125-1). Courtesy of the Kansas Historical Society.

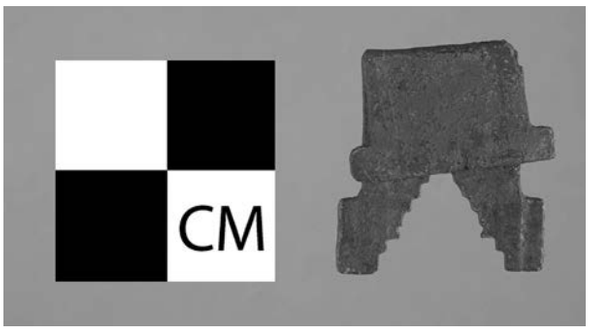


Figure 50. Rifle sight (Specimen 1165-1). Courtesy of the Kansas Historical Society.

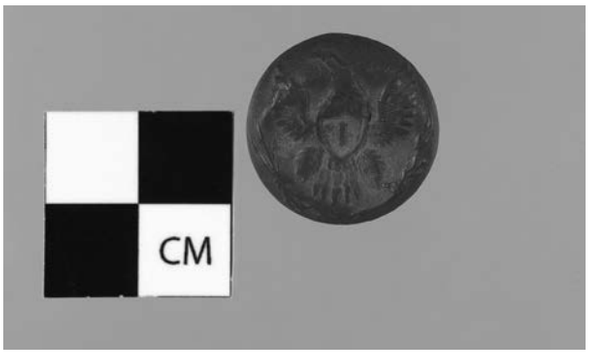


Figure 51. Officer's coat button (Specimen 503-1). Courtesy of the Kansas Historical Society.

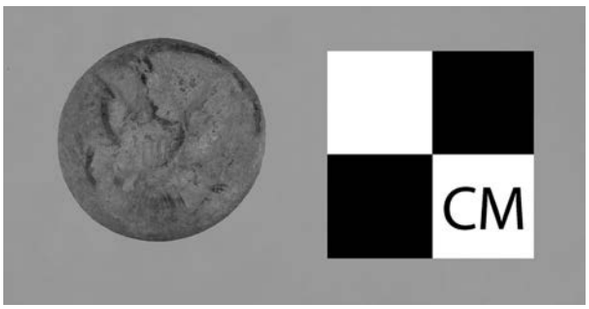


Figure 52. Enlisted man's coat button (Specimen 1235-1). Courtesy of the Kansas Historical Society.

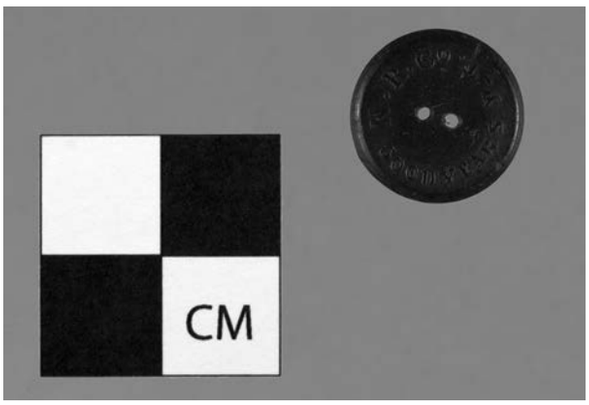


Figure 53. Hard rubber button (Specimen 839-27). Courtesy of the Kansas Historical Society.

1976:38–39), has an eagle with three arrows in the right talon and an olive branch in the left. A shield in the center of the eagle's breast has an "I" in its center for "Infantry;" the back is blank (Figures 45 and 51). The button would have been gilded, but that has been lost with age. The enlisted man's button style was adopted in 1854 (Albert 1976:40–41). Though harder to discern, this button also has an eagle on it, likely with three arrows in the left talon and an olive branch in the right (Figures 45 and 52). In the center of the eagle is a shield with raised lines, and the back is marked "Waterbury Button Co." The Waterbury Button Company is based in Connecticut and has made buttons for the United States military since 1812 (Waterbury Button 2020). Both the officer's and enlisted man's styles were used throughout the Civil War.

Another button that dates to the Civil War era is Specimen 839-27 (Figure 53), which was retrieved from a 1 by 1-m unit east of the mission building (Figure 22). This hard rubber, two-hole, sew-through button, manufactured by the Novelty Rubber Company, dates from 1855 to 1870 (Luscomb 2006; Marcel 1994). It is marked "N. R. Co. Goodyear's P=T" on the reverse. Rubber buttons were patented in 1851 by Nelson Goodyear

and often have "Goodyear" on the back (Marcel 1994).

The partial spur is a brass spur side branch with a sliding attachment (Figures 45 and 54). It is consistent with Civil War-era military spurs (American Civil War Museum 2020), which were issued to cavalry and horse artillery in both armies.

Two oil lamp burners were found in the southern part of 14MO368, one west of the parking lot and the other near the infantry buttons (Figures 22 and 55). These lamps might be related to Civil War activity or with later occupations.

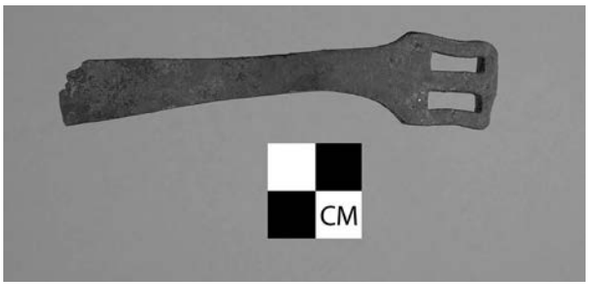


Figure 54. Brass spur (Specimen 1101-1). Courtesy of the Kansas Historical Society.

ARTIFACT SUMMARY

In addition to specimens linked to the Civil War era, many artifacts were recovered, such as buttons, toys, office supplies, and tools. They tell a story of a site that has been a school, private home, farm, and museum. There are items that belonged to men, women, and children. There are objects that were manufactured before the mission was built and ones that are relatively recent. All hold a piece of the site's past and a portion of the narrative of the people who lived, learned, worked, and visited over the years.

Personal Items

Personal items include buttons, beads, buckles, jewelry and adornments, safety pins and straight pins, coins, and a smoking pipe. Many were unearthed from the trash dump (F612), located on the northeast corner of the education center.

The 43 partial and complete buttons are presented in Table 3. Nineteen are brass, 13 are glass, 3 are iron, 3 are shell, 2 are brass and iron, 1 is rubber, and 2 are unknown material (one may be jet and one may be lead). Three were discussed in the previous section (Figures 51–53), and the rest are described below.

Of the brass buttons 17 are partial or complete two-piece with stamped domes over flat backs with loop shanks (Figure 56). This style was produced starting in 1830 (Marcel 1994; Olsen 1963). Ten are the same design (Specimens 1143-1 and 1143-2) in which the brass top is stamped with Asian motifs of bamboo, dragonflies, and houses. Of the glass buttons three are four-hole, sew-through, men's dress buttons of milk glass. These were common from 1840 to 1940 (Marcel 1994). The rest are women's dress or sew-through buttons. Four are black glass (Figure 57), and one may be jet (Specimen 24-73), a gemstone that is fossilized decomposed wood. Black glass/jet buttons were popularized in 1861 when Queen Victoria wore jet buttons and jewelry in mourning for her late husband, Prince Albert. They remained popular until 1920 when they fell out of fashion (Electric Literature 2017; What the Victorians Threw Away 2020). The two brass-clad-over-iron buttons are two-piece, four-hole, and sew-through.

Several fragments of denture plates, both upper and lower (Figure 58), were associated with F614 (Figure 25). These plates are made of vulcanite, a stabilized rubber developed by Charles Goodyear, and likely date between 1855 and 1930. The first rubber dentures were produced in the 1850s under Goodyear's 1851 patent. By the 1930s dentists were experimenting with other base materials, and vulcanite was replaced by the acrylic resins still used today (Prioli 1991).

The site yielded 23 pins, 14 of which are safety pins (Figure 59) and 9 are straight pins. Thirteen of the pins were retrieved from F612 trash dump (Figure 25), including all but one of the straight pins, which was recovered during the metal detection survey. Safety pins also were found in the metal detection survey, as well as in F614, F700, and F703 (Figure 25). Fifteen of the pins (eight straight and seven safety) are brass, eight (one straight and seven safety) are iron or steel. Straight pins have been used for thousands of years but were mass produced starting in 1835. The safety pin was invented in 1849 by Walter Hunt (Patrick and Thompson 2008:179–180).

Table 3. Buttons.

Specimen number	Feature number	Weight (g)	Diameter/ dimensions (mm)	Material	Shank	Description	Date range	Work cited
24-73	612	1.5	11.21	Jet?	Self 2-way thread groove	Black faceted		
24-74	612	1.0	12.96	Iron	Pin shank	2-piece	1800–1870	Marcel 1994
24-75	612	.8	10.49	Brass	Iron loop missing	2-piece, stamped	1830–present	Marcel 1994; Olsen 1968
25-38	612	1.6		Brass	Too damaged to tell			
25-39	612			Glass	Missing	Small fragment	1825–present	Marcel 1994
25-69	612	1.1	17.39	Brass/iron	4-hole sew through	2-piece, brass over iron	1830–present	Marcel 1994
280-1		1.4	14.04	Iron	Loop	Back of 2-piece	1800–1870	Marcel 1994
503-1		2.4		Brass	Loop	2-piece, stamped, infantry eagle (Figure 51)	1851–1870	Albert 1976
596-1		1.6	19.15	Brass/iron	4-hole sew through	2-piece, brass over iron	1830–present	Marcel 1994
704-37	614	.3	9.70	Glass	Missing	White	1840–1940s	Marcel 1994
705-39		.1	6.85	Glass	3-hole sew through	Black	Unknown	
705-40		1.3	15.21 x 13.24	Glass	Whistle sew through	Molded, black, 6 sided	1825–present	Marcel 1994
707-35	614	1.6	22.27	Glass	Metal 4-way thread groove	Molded flower, gold paint	1883–present	Marcel 1994
707.005-1	614	.9	15.11	Shell	4-hole sew through	White	Unknown	
825-21	612	1.0		Brass	Missing	Back of 2-piece	1830–present	Marcel 1994
831-28	612	2.2	16.40	Brass	Staff	2-piece, etched Asian theme (Figure 56)	1830–present	Marcel 1994
835-22	612	3.3	19.86	Glass	Whistle sew through	Black, faceted rim	1825–present	Durell 2015; Marcel 1994
837-103	612	.5	12.41	Brass	4-hole sew through	B & Burnham	1823–1848	Marcel 1994
837-104	612	.5	11.23	Glass	4-hole sew through	Brown	Unknown	
839-27		.5		Rubber	2-hole sew through	Hard rubber (Figure 53)	1855–1870	Luscomb 2006; Marcel 1994
848-50	612	1.6	13.20 x 18.23	Glass	Self 2-way thread groove	Amber, molded, painted back	Unknown	
848-51	612	.4	12.08	Brass	Missing	Front of 2-piece	1830–present	Olsen 1968
848-53	612	.3	9.65	Shell	4-hole sew through	White	Unknown	
855-31	612	.7	14.00	Lead?	4-hole sew through	White metal	1800–1860	Marcel 1994
855-32	612	1.4	15.75	Glass	Loop	Molded, black, likely Czech (Figure 57)	1883	Luscomb 2006; Marcel 1994
858-12	714	.3	10.78	Glass	4-hole sew through	White	1840–1940s	Marcel 1994
887-21	714	.3	10.84	Glass	4-hole sew through	White	1840–1940s	Marcel 1994
903-2	614		fragment	Shell	2-hole sew through	White	Unknown	
908-26	614	1.1		Brass		2-piece	1830–present	Marcel 1994
908-27	614	1.7		Iron	Shank			
916-12	614	.3	10.28	Glass	4-hole sew through	White	1840–1940s	Marcel 1994
925-24	614	.9	10.37	Glass	Loop	Molded design, black	1883–present	Marcel 1994
1143-1 (9 buttons)		11.0	~11.80	Brass	Iron loop	Domed 2-piece, Asian theme	1830–present	Marcel 1994
1143-2		1.1	11.51	Brass	Iron sanders loop	Domed 2-piece button	1830–present	Marcel 1994
1235-1		2.9		Brass	Loop	2-piece stamped, infantry eagle (Figure 52)	1854–1870	Albert 1976

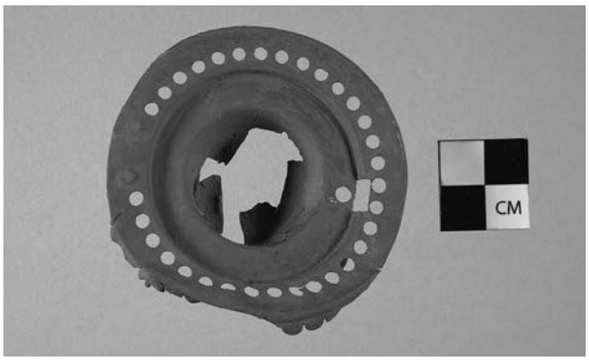


Figure 55. Brass oil lamp burner (Specimen 1803-1). Courtesy of the Kansas Historical Society.

Figure 56a & b. Front and back of two-piece brass button with metal loop shank (Specimen 831-28). Courtesy of the Kansas Historical Society.

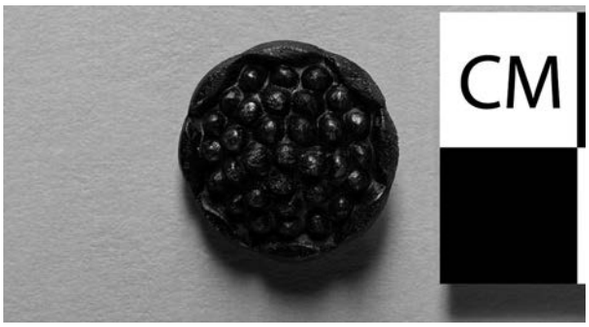


Figure 57. Black glass button (Specimen 855-32). Courtesy of the Kansas Historical Society.

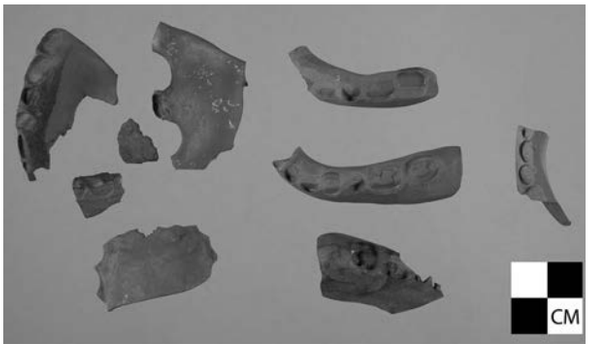


Figure 58. Examples of denture plate fragments from Feature 614. Courtesy of the Kansas Historical Society.

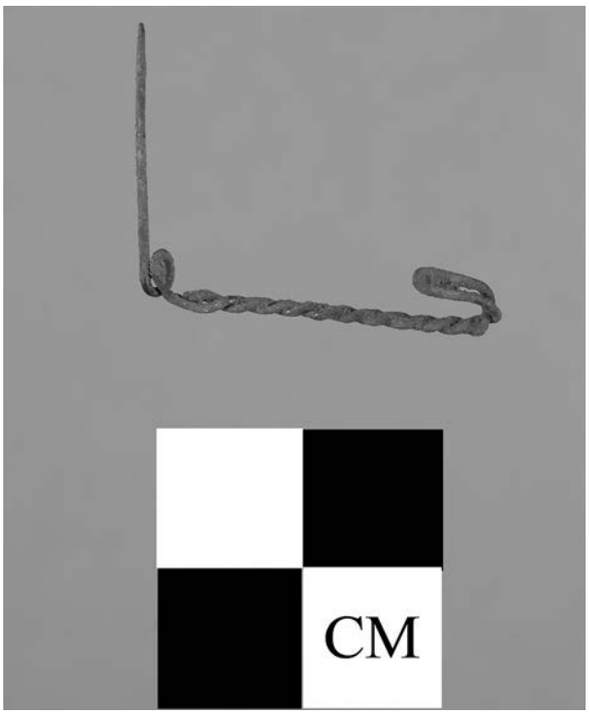


Figure 59. Brass safety pin from Feature 612. Courtesy of the Kansas Historical Society.

Table 4. Coins predating 1960.

Specimen number	Feature number	Date	Denomination	Comments
203-1		1898	Nickel	
388-1		1933	Penny	
819-8	714	1952	Penny	
825-20	612	1876	Penny	Figure 60
829-3	714	1917	Dime	
914-24	614	1868	Penny	
1170-1		1946	Penny	
1182-1		1909–1958	Penny	Date illegible
1186-1		1874	Penny	
1221-1		1936	Dime	
1290-1		1946	Penny	

As a result of extensive metal detection survey, many coins were observed, but only the 11 coins that predate 1960 were retained for the collection (Table 4). Coins newer than 1960 probably were dropped by visitors and caretakers after the property became a museum. Four coins (Specimens 819-8, 825-20 [Figure 60], 829-3, and 914-24) were associated with features, but Specimen 819-8 was found in the top 10 cm of excavation and likely postdates F714. The other coins recovered from features are consistent with the estimated ages of those features. An 1868 penny (Specimen 914-24) is the oldest coin and was associated with F614.

During the metal detection survey, a cosmetic compact case was found near F611 (Figure 25). The brass compact was sold by Avon and bears the logo adopted by the company in 1936 and used for 10 years (Figures 61 and 62). The compact presumably contained blush, and it may still, but it could not be opened.

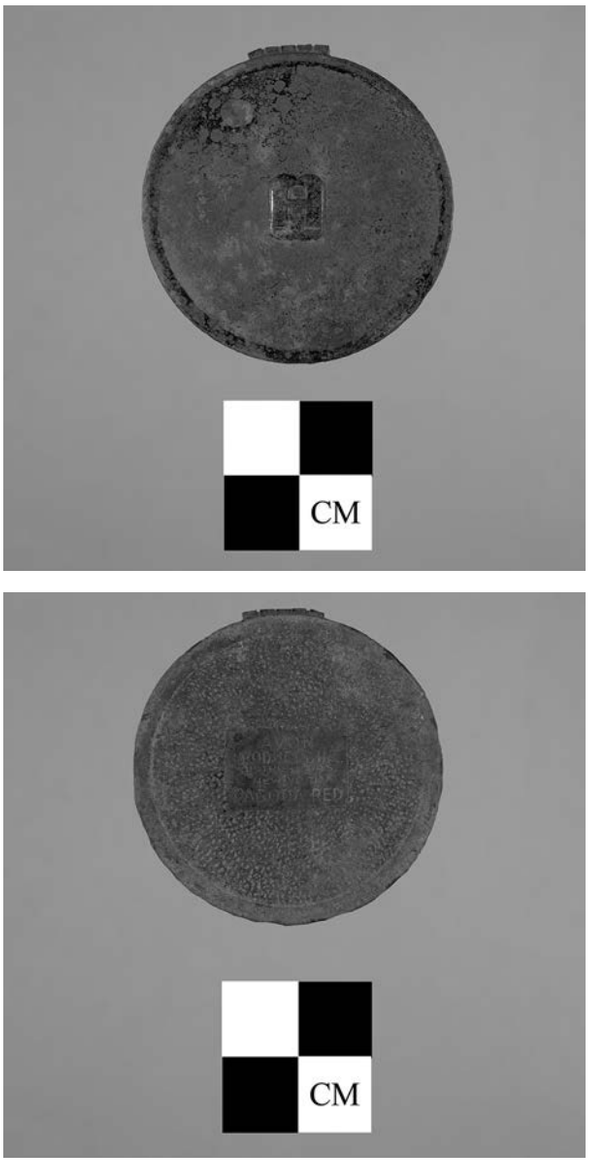


Figure 61a & b. Front and back of blush compact case from Avon (Specimen 183-1). Courtesy of the Kansas Historical Society.

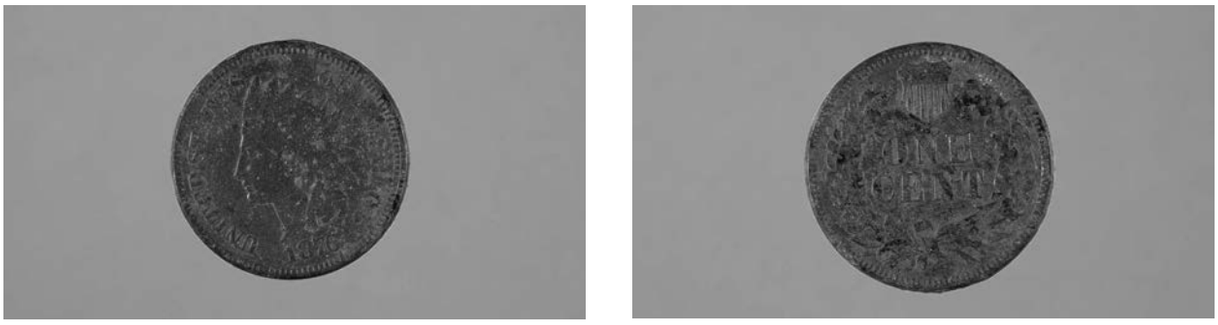


Figure 60a & b. Front and back of penny from Feature 612 (Specimen 825-20). Courtesy of the Kansas Historical Society.

Figure 62. Avon logos from 1886 to present (https://turbologo.com/articles/avon-logo/).

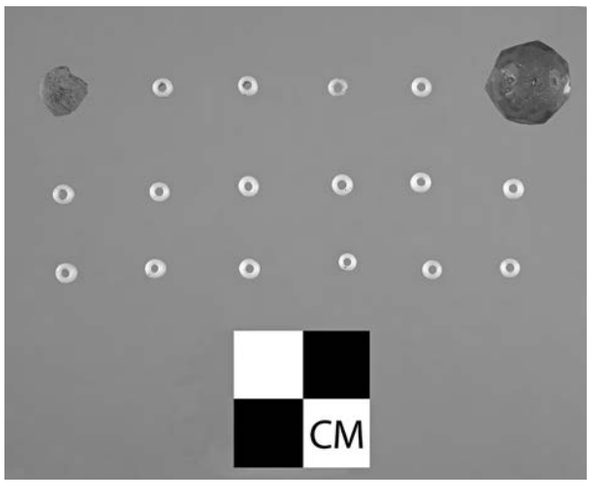


Figure 63. Examples of beads. Courtesy of the Kansas Historical Society.

Thirty-two glass beads were recovered. Seventy-five percent (n = 24) are white round beads, commonly called seed beads (Figure 63). They represent a recent deposit, perhaps 1983 or later. Most were in the first level above F714 (Figure 25) before the feature was encountered. Six black glass beads were collected from F612 (Figure 25) and probably date from around 1900.

A piece of modern regalia was discovered just west of the parking lot during the metal detection survey (Figure 64). This dance regalia has a large brass concho, two leather fringes, two tinkler cones, and several styles of beads. The beads are a mix of bone and colored glass, including black, two shades

Figure 64. Dance regalia (Specimen 1152-1). Courtesy of the Kansas Historical Society.

of opaque orange, and translucent orange. Regalia is often worn in pow wow dancing, and pow wows have been an activity of the annual Washunga Days in Council Grove since 1983. Many dances have been held by the Kaw Nation on the Kaw Mission grounds. The white seed beads mentioned previously also may be connected to these festivals.

Tableware, Cutlery, and Other Food-Related Items

Many items for cooking and eating were recovered. They include fine porcelain and common earthenware, a silver spoon and an iron fork, etched glassware, and an aluminum shot glass. This variety reflects the diverse uses of the property in the last 170 years. The artifacts date from 1850 to the present.

More than 1,500 pieces of tableware weighed in excess of 5 kg. Most of the tableware is refined

earthenware with white paste and glaze on both sides, commonly called whiteware. The sherds are decorated in a variety of patterns, including hand painting, transfer printing, and flow blue transfer printing, which was deliberately blurred (Figure 65). Some of the pottery has maker's marks that indicate origins of England, Holland, and the United States and dates from 1850 to around 1900 (Gibson 2011; Kowalsky and Kowalsky 1999; Figure 66). Tableware was associated with F612, F613, F614, F700, F703, and F714 (Figure 25).

A three-pronged fork fragment was found near F613 during the metal detection survey (Figures 25 and 67). The wood or bone handle is missing, but the tines and remnant of the tang survive. This simple iron fork would not have been used for fine dining. It is similar to Civil War-era forks in museum collections and might have been part of a soldier's mess kit (Maine Historical Society 2020; National Public Radio 2010; Townshend Historical Society 2020).

A silver souvenir spoon from Helena, Montana, was discovered in the northern yard during the metal detection survey (Figure 68). The spoon has

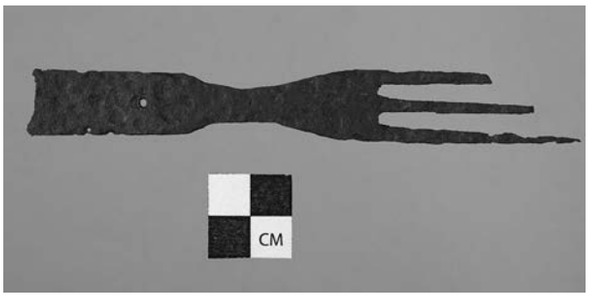


Figure 67. Three-pronged fork (Specimen 178-1). Courtesy of the Kansas Historical Society.

Figure 68. Silver souvenir spoon (Specimen 1324-1). Courtesy of the Kansas Historical Society.

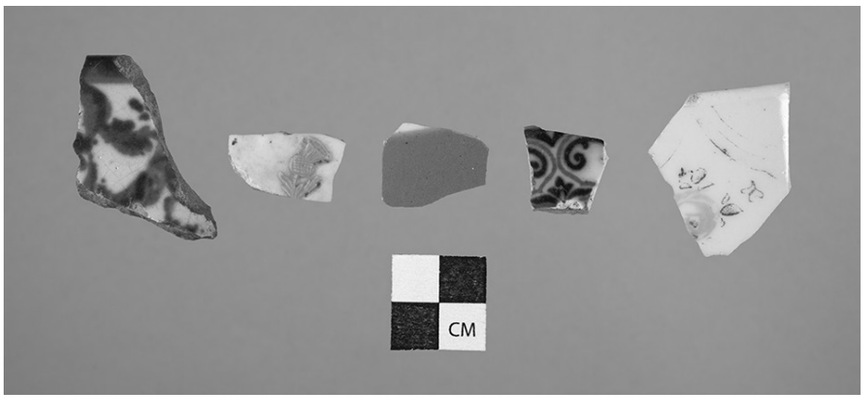


Figure 65. Examples of pottery patterns. Courtesy of the Kansas Historical Society.

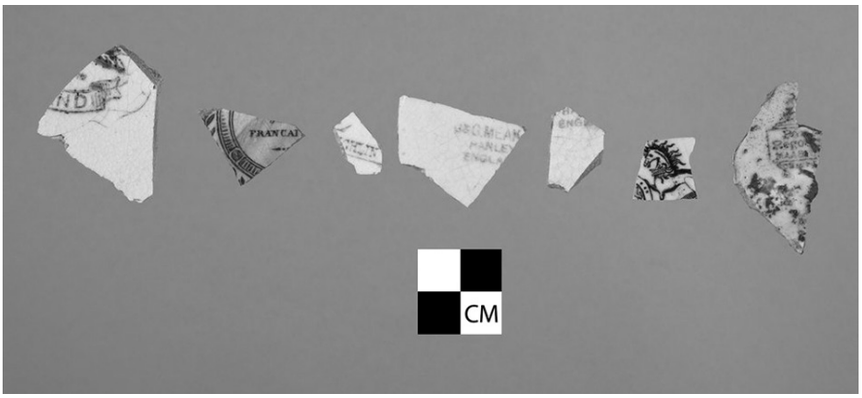


Figure 66. Examples of pottery maker's marks. Courtesy of the Kansas Historical Society.

"HELENA MONT" etched into the front of the bowl and "AGH" engraved on the back. AGH are thought to be the initials of Anna Goddard Huffaker, daughter of Kaw Mission director Thomas Huffaker and his wife Eliza. Anna and her husband Homer Carpenter purchased the mission building around 1907. The maker's mark on the back is that of Gorham Silver (later Gorham Manufacturing Company) of Rhode Island and New York, which was founded in 1831 in Providence, Rhode Island (925–1000.com 2018; medallicartcollector.com 2016).

An aluminum shot glass was recovered along the north side of the education center during the metal detection survey (Figure 69). The shot glass rim advertises the "M Wollstein Mercantile Co" of Kansas City, Missouri. The lettering is upside down for the drinker's benefit. Theodore Wollstein owned this company and was a liquor dealer in Kansas City from 1880 to around 1920 (Sullivan 2014). Prior to the development of the Hall-Heroult extraction method in 1889, aluminum was an expensive luxury item (Patrick and Thompson 2008:46–47). Because this advertising shot glass probably was given away, it likely dates after 1900.

Figure 69. Aluminum shot glass (Specimen 364-4). Courtesy of the Kansas Historical Society.

Bottles and Other Containers

During the excavations and surveys at the Kaw Mission grounds, many containers were recovered: glass containers in a variety of styles and colors and metal containers of aluminum, brass, copper, tin, and ferrous metals (iron or steel). There are containers for tobacco, soda, beer, milk, ink, and toiletries. Some could originate from the 1850s, and others are made of modern materials, such as plastic and Styrofoam.

The artifact assemblage contains more than 3,000 pieces of container glass, weighing 8.411 kg, which constitutes 82 percent of the container collection by weight. This includes 881 cataloged specimens. By weight 55 percent of fragments are clear. Very rare prior to 1870, most clear glass postdates 1915. Therefore, clear glass from 14MO368 generally is assumed to be relatively modern, although some may be non-solarized manganese glass (Lindsey 2020; Lockhart 2006). Bottle glass comprises 93 percent by weight of the clear glass, and milk bottles from F714 (Figures 25 and 40–42) account for 32 percent of that. Several of these bottles have maker's marks that span the 1910s through 1920s (Figure 70). There are also clear glass medicine bottles, toiletry bottles, and canning jars. Clear glass was present in F612, F613, F614, F700, and F714 (Figure 25).

Sixteen percent by weight (1,323.3 g) of the container glass is the purple/amethyst glass that contains manganese as a decoloring agent. Glass naturally has a greenish tint, but, when manganese is added during manufacturing, the reddish hue of the manganese offsets the green, resulting in clear glass (Lockhart 2006:45). Over time as this clear glass with manganese is exposed to the sun, the glass becomes increasingly purple. During World War I, due to a combination of new technology and decreased supply of manganese, the element ceased to be added to glass, giving a definite termination of 1915 for amethyst-tinted glass (Lockhart 2006:53). There are 158 pieces (897.9 g) of amethyst glass milk bottles, three of which have maker's marks

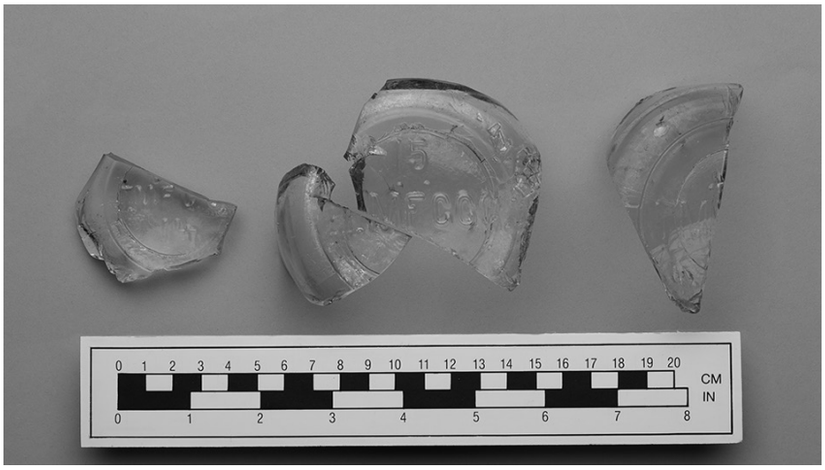


Figure 70. Milk bottle bases with datable maker's marks. Courtesy of the Kansas Historical Society.

from the 1910s to 1920s (Figure 70). Although most of these were from F714, where other milk bottles were found, 10 were from F614, including one with a maker's mark. Solarized glass milk bottles in F614 indicate a date of the early 1910s for the razing of this structure. The rest of the solarized glass consists of unidentified bottle fragments. Solarized glass was present in F612, F613, F614, and F714 (Figure 25).

Aqua is the predominant color for utilitarian food bottles from 1850 to 1930 (Lindsey 2020), and this is consistent with the 14MO368 assemblage. Fifteen percent by weight (1,235 g) of the container glass is aqua with 29 percent by weight from canning jars and 69 percent by weight likely from beverage and other food bottles. Two percent by weight are medicine bottles, and a single ink bottle (Specimen 908-6) was recovered from F614. Aqua glass was present in F612, F613, F614, F700, and F714 (Figure 25).

Nine percent by weight (776.1 g) of the glass containers are brown glass. Some may be modern, but most were associated with features. Twelve percent by weight are recognized as beer bottles, largely associated with F614 and F714. Seventeen percent by weight are medicine bottles with 53 percent from F614. Another 17 percent by weight are Clorox bleach bottles, which were produced from 1913 to 1962 (Lindsey 2020); they were not associated with features. Four percent are canning jars, and the remaining 50 percent are unidentified bottle glass. Brown glass was present at F612, F613, F614, F700, and F714 (Figure 25).

By weight 2 percent (184.2 g) of the container collection is the white glass commonly called milk glass. Of this, 62 percent by weight are canning lids primarily from F612 and F614. Thirty-four percent by weight are jars consistent with toiletry containers, 80 percent of which were from F612. Milk glass often was used in toiletry containers from 1870 to 1950 (Lindsey 2020). Sixty-one percent by weight of the toiletry containers are from the Mentholatum Company, which was founded in 1889 in Wichita, Kansas (The Mentholatum Company 2016). Milk glass was present in F612, F613, and F614.

Less than 1 percent by weight (82.2 g) of the container collection is blue/cobalt glass. This color is achieved by adding cobalt or copper to glass. This glass color was used for bottles for a variety of household items, including ink, beer, soda, mineral water, and poison (Lindsey 2020). Blue glass was present in F612 and F614.

Olive glass accounts for .5 percent by weight (47.48 g) of the container glass. This glass is from wine or champagne bottles and comes chiefly from F612. In addition, green glass (64.1 g, .8 percent) was found both inside and outside of features. Green glass has been used for just about every type of bottle and is still prevalent today (Lindsey 2020). Finally, F614 yielded two examples of yellow glass.

Medicine bottles make up 3 percent by weight (243.6 g) of the container bottles (Figure 71). These small bottles were ubiquitous from 1850 to 1920 (Lindsey 2020). Those at 14MO368 are clear, brown, blue/cobalt, and aqua and represent at least three bitters bottles, six patent medicine bottles, and

Figure 71. Medicine bottle and fragments. Courtesy of the Kansas Historical Society.

one prescription bottle. Many were associated with F612 and F614.

Ferrous metal is the second most common container material. Sixty-four cataloged specimens, made up of 276 individual pieces and weighing 1,713.5 g, are predominantly cans. Of the identifiable cans seven (115.2 g) are tobacco cans; the majority of the rest are probably food and beverage cans. Ferrous metal containers were present in F612, F614, and F714 (Figure 25).

White metal containers consist of brass, copper, tin, and zinc. Twelve artifacts, represented by 19 individual pieces, weigh 74.1 g. Three zinc objects are canning jar screw-on lids. A brass can key and a brass or copper oil can are recognizable. The purposes of the remaining white metal containers are unknown. White metal was present in F612 and F614 (Figure 25).

Fourteen aluminum segments, weighing 20.5 g, account for .19 percent of the container collection by weight. They are mostly cans recovered during the metal detection survey. Aluminum was rare prior to 1889 (Patrick and Thompson 2008:46–47).

Also in the container category are pieces of plastic (20), paper (2), Styrofoam (1), and rubber (1). These recent materials do not merit further discussion.

Toys

Several toys were found on the grounds of the Kaw Mission SHS. All likely date from the site's time as a private residence. Eight porcelain doll fragments were from F612, F614, and F714, and a glass figurine was from F612.

Four marbles include three ceramic (Figure 72) and one glass. Ceramic marbles were imported from Germany prior to 1884 and produced in the United States through the 1950s (Marbles Galore 2020). Glass marbles were mass produced starting in 1915 (Lammle 2015).

Pieces from two different children's tea sets include one sherd of whiteware that was retrieved from F612 and a partial porcelain cup that was found in the building basement (Figure 73). Tea sets for children have been manufactured since the sixteenth century. Germany dominated their production, first in pewter and copper and later in porcelain, through the eighteenth century, when output in France increased. After World War I porcelain tea

Figure 72. Ceramic marble. Courtesy of the Kansas Historical Society.

Figure 73. Child's teacup fragment from Kaw Mission basement. Courtesy of the Kansas Historical Society.

sets were replaced by tea sets made of various types of plastic, which were less prone to break during play (Decker 2020).

The badge (Specimen 488-1) was discovered during the metal detection survey and was imprinted, "Roving Operative Melvin Purvis Junior G-man" (Figure 74). Melvin Purvis was an agent who joined the Federal Bureau of Investigation in 1927. He became famous after leading FBI investigations that resulted in the deaths of John Herbert Dillinger, a Chicago murderer and bank robber, and Charles Arthur "Pretty Boy" Floyd, who committed a mass murder at Union Railway Station in Kansas City (Federal Bureau of Investigation 2016a, 2016b; Lathan 2016). Purvis resigned from the FBI in 1935 and moved to California, where he practiced law and signed endorsements, trading on his fame to earn extra money. He entered into a deal with General Foods to create a Junior G-man Club and a corresponding radio show in 1936. The badges were available in Post Toasties cereal boxes, and 260,000 children in the United States enrolled in the club (Lathan 2016).

Two toy guns and a segment of a third were found. One is cast ferrous metal, the second is cast zinc alloy (Specimen 501-1), and the partial is also a zinc alloy. Specimen 501-1 (Figure 75) was sold by the Hubley Manufacturing Company of Pennsylvania. The company first developed toy cap guns in 1909, and in the 1930s started making cast zinc alloy cap guns (Farber and Associates, LLC 2020). In 1965 Hubley was bought by another company, which was out of business by the 1970s.

Figure 74. G-man badge from Post Toasties cereal (Specimen 488-1). Courtesy of the Kansas Historical Society.

Figure 75. Zinc alloy toy gun by Hubley Manufacturing Company (Specimen 501-1). Courtesy of the Kansas Historical Society.

Tools of Learning and Office Supplies

The only artifacts observed that commonly would be connected with a school are slate pencils and slate boards (Figure 76). Starting about 1844, school children used slate pencils on personal slates to practice handwriting. This was cheaper than paper because slates could be wiped clean. In the early 1900s chalk replaced slate as the writing utensil of choice in schools (National Museum of American History 2020). Most slate pencils and board frag-

Figure 76. Slate pencils, slate board fragments, and pen nibs. Courtesy of the Kansas Historical Society.

Figure 77. Movable type letters. Courtesy of the Kansas Historical Society.

ments were recovered from F612, but one was acquired from the exploratory trenches excavated next to the education center (Figure 23). Also found were pen nibs.

Seventeen movable printing type letters (Figure 77) were retrieved, all but one in F614. They are made of "type metal," an alloy of lead, tin, and antimony. The type suggests the presence of a printing press at the mission prior to the razing of the blacksmith shop in the 1910s, but what it was used to print is unknown. Huffaker's brother-in-law, Arthur Baker, printed a newspaper before he was killed in 1863. The type could be from his press (Shimeall 2012).

FAUNAL ANALYSIS

John R. Bozell

Materials were identified through comparison with reference collections curated at History Nebraska (formerly the Nebraska State Historical Society). Various published identification manuals also were consulted, including Brown and Gustafson (1979), Getty (1975), Gilbert (1980), and Miller (1962). Variables recorded for each identified item include specimen number, provenience, analytic unit, taxon, element, side/portion, and narrative comments. Comment entries remarked on natural or cultural modifications, such as burning, butchering marks, and gnawing by carnivores and/or rodents. Immature specimens also were noted. These data were entered into a computerized data management program: Microsoft Excel 16.

The identified portion was quantified using the number of identified specimens (NISP) and minimum number of individuals (MNI) for each taxon. MNI values were tabulated using the standard method of determining the element, side, and portion that occurs in the greatest frequency for a given taxon (Grayson 1984). Relative age was taken into consideration. NISP and MNI values were calculated for each of the basic analytic units listed above.

General Sample Characteristics and Spatial Distribution of Faunal Debris

The faunal sample consists largely of heavily fragmented bone that predominantly is bird and mammal but otherwise unidentifiable. Much of the debris appears to be chicken, cattle, and pork, but specific identifications could not be made. Bone fragmentation seems to be a product of several processes. Many fractures likely were sustained during butchering. Natural processes linked to soil conditions and ravaging by carnivores also contributed.

The full sample consists of 1,042.3 g of bone, gathered from each of the six analytic units (Table 5). Analytic unit specific values range from slightly

Table 5. Summary of all bone debris.

	All bone debris	
Analytic unit	Weight	Percent of total
F612	404.5	38.8
F614	365.2	35.1
F700	1.2	.1
F708	2.7	.3
Non-feature north	198.9	19.1
Non-feature south	69.8	6.7
Totals	1,042.3	100.1

over 1 g to more than 400 g. Nearly 74 percent of the animal bone scraps came from F612, the circa 1900 midden (38.8 percent), and from F614, the circa 1850s blacksmith shop (35.1 percent). About 20 percent of the bone came from various non-feature proveniences in the northern part of the site.

Modified Remains

Three bones were fashioned into some form of implement.

Antler Handle. Specimen 837.003-1 is made of heavily polished antler and was retrieved from F612. It is 83.8 mm long, 17.8 mm wide, and 16.1 mm thick (Figure 78). The central cavity has been bored through and both ends are extensively ground and polished to smooth edges. One end is flat and the other slightly beveled. The bored hole through the middle is about 8.0 mm in diameter. The margin beyond the central hole is generally about 2.5 to 3.5 mm thick. The artifact is clearly a handle, although for what is not certain. It bears some similarities to antler handles for iron awls, recovered from post-contact Native American villages but could be some other type of large-diameter kitchen utensil or tool.

Antler or Bone Handle. Another handle made of either bone or antler (Specimen 858.002-1) was found in F614. It is cut or sawed and heavily ground and polished into a shape that is trapezoidal in cross section. It is 62 mm long (broken) and 5 mm thick. The width tapers from 16.1 mm on one end to 13.6 mm on the other. Both inner and outer sides are very

Figure 78. Antler utensil handle (Specimen 837.003-1). Courtesy of the Kansas Historical Society.

flat, although the inner face is covered with rust (Figure 79). Two very small holes are evident, and one has a metal pin inserted presumably for hafting this handle onto a metal blade or some other type of implement. This artifact resembles a utensil handle.

Unidentifiable Bone Object. Specimen 855-2 is a large mammal long bone fragment with extensive rodent gnawing and root etching that was collected during excavation of F612. Several of the surfaces are distinctively artificially polished (Figure 80). The item is 73.9 mm long, 31.6 mm wide, and 15.2 mm thick. The function is not known.

Unmodified Identified Remains

The unmodified identified faunal sample is limited to 83 specimens in 10 vertebrate taxa. The majority of the sample was recovered from F612 (31.3 percent), F614 (38.5 percent), and non-feature units in the northern portion of the site (26.5 percent). Only about 3.5 percent of the identified sample is associated with other analytic units. Summaries of NISP values are provided in Table 6, and Table 7 further separates the collection by analytic unit, tabulated by NISP and MNI values. Various cultural and natural modifications are summarized in Table 8. The values of meat cuts for the chicken, swine, and cattle are illustrated in Figure 81, based on data from Eakins 1924, Florea 1977, Levie 1979, and U.S. Department of Agriculture 1977, 1983. The following brief narrative offers a general characterization of the unmodified assemblage.

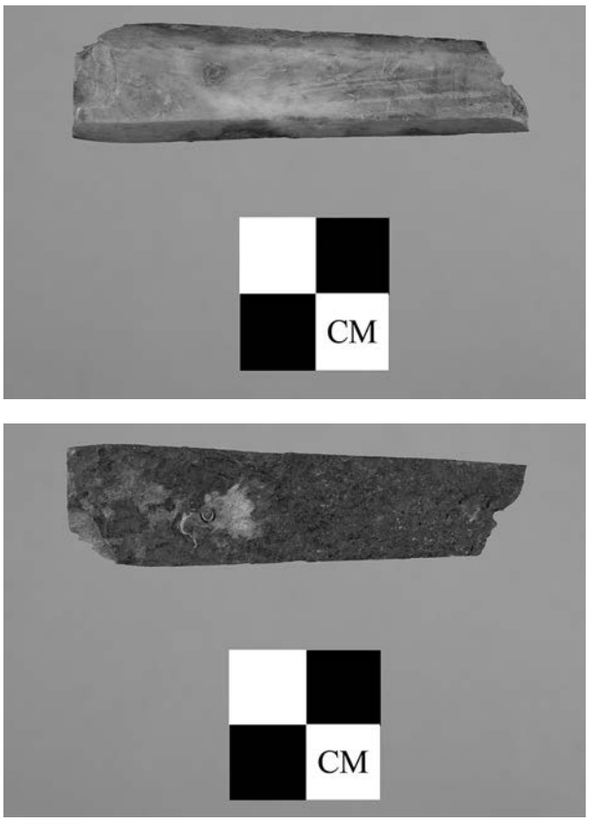


Figure 79a & b. Exterior and interior views of antler or bone handle, exterior view (Specimen 858.002-1). Courtesy of the Kansas Historical Society.

Figure 80. Unidentifiable bone artifact (Specimen 855-2). Courtesy of the Kansas Historical Society.

Ictaluridae (catfish)
Sample: One nearly complete right pectoral spine
Discussion: Recovered from F612, the bone is from an adult yet it is small, suggesting it is likely a bullhead (*Ictalurus*) or stonecat (*Notorus*). It is uncertain if this single fish bone is related to human subsistence, but, if so, fishing was clearly a minor component of the diet of Kaw Mission residents. This single element comprises 1.2 percent of the sample. Catfish occur with some regularity at Euroamerican farms (Koch and Bozell 1997:22; Snyder 1982:18) and trading posts (Bozell 1998:133) in the eastern Plains and Prairie Peninsula.

Table 6. Summary of identified faunal remains.

Taxon	NISP	Percent of total
Ictaluridae (catfish)	1	1.2
Colubridae (non-venomous snake)	2	2.4
Gallus gallus (domestic chicken)	28	33.7
Scalopus aquaticus (eastern mole)	3	3.6
Sylvilagus floridanus (eastern cottontail)	5	6.0
Muroidea (mice and voles)	4	4.8
Rattus norvegicus (Norway rat)	2	2.4
Sus scrofa (swine)	22	26.5
Bos taurus (cattle)	15	18.1
Homo sapiens (human)	1	1.2
Total	83	99.9

Colubridae (non-venomous snake)
Sample: Two non-specific vertebrae
Discussion: More than two dozen species of non-venomous snakes occur in central and eastern Kansas (Conant 1975:maps 99–168). These bones probably were deposited by natural processes and constitute 2.4 percent of the identified sample. Both elements were found in F612.

Gallus gallus (domestic chicken)
Sample: 28 elements, including carpometacarpus (1), coracoid (4), femur (1), humerus (2), phalange (1), vertebra (4), radius (5), scapula (5), tarsometatarsus (1), and ulna (4)
Discussion: Domestic chicken makes up 33.7 percent of the identified bone—a greater contribution than by any other taxon. The combined MNI is seven. They were recovered from all analytic units except for non-feature units in the southern part of the site. The majority of chicken bones were collected during excavations in the circa 1900 F612 and various non-feature units in the northern portion of

Table 7. Summary of identified faunal remains, organized by analytic unit.

	F612		Blacksmith shop area		Non-feature north		Non-feature south		Total	
Taxon	No.	MNI	No.	MNI	No.	MNI	No.	MNI	No.	MNI
Ictaluridae (catfish)	1	1	0	0	0	0	0	0	1	1
Colubridae (non-venomous snake)	2	1	0	0	0	0	0	0	2	1
Gallus gallus (domestic chicken)	10	3	4	1	14	2	0	0	28	7
Scalopus aquaticus (eastern mole)	0	0	3	1	0	0	0	0	3	1
Sylvilagus floridanus (eastern cottontail)	1	1	4	1	0	0	0	0	5	2
Muroidea (mice and voles)	0	0	4	1	0	0	0	0	4	1
Rattus norvegicus (Norway rat)	0	0	2	2	0	0	0	0	2	2
Sus scrofa (swine)	6	1	10	1	4	1	2	1	22	4
Bos taurus (cattle)	6	1	4	1	4	1	1	1	15	4
Homo sapiens (human)	0	0	1	1	0	0	0	0	1	1
Total	26	8	32	9	22	4	3	2	83	24

Table 8. Cultural and natural modification recorded on identified faunal remains.

Taxon	Cut marks	Chop marks	Saw marks	Burned	Rodent gnawing	Carnivore gnawing	Immature	Scatological
Catfish	0	0	0	0	0	0	0	0
Non-venomous snake	0	0	0	0	0	0	0	0
Domestic chicken	1	0	0	0	0	1	6	3
Eastern mole	0	0	0	0	0	0	0	0
Eastern cottontail	0	0	0	0	1	1	0	0
Mice and voles	0	0	0	0	0	0	1	1
Norway rat	0	0	0	0	0	0	1	0
Swine	1	2	8	0	0	6	8	0
Cattle	2	2	11	1	0	4	2	0
Human	0	0	0	0	0	0	0	0
Totals	4	4	19	1	1	12	18	4

14MO368. One bone bears cut marks, and another has been gnawed by a carnivore. Six pieces are immature, and three have been partially digested. About 90 percent of the chicken bones are mid quality wing segments. Several higher quality drumstick and thigh elements are also in the sample. Chicken remains are typically quite common at post-contact nineteenth-century sites in the Central Plains and Midwest, such as Fort Ellsworth (Bozell 2001:237), Kansas and Missouri farmsteads (Bozell 1994:176; Koch and Bozell 1997:22; Snyder 1982:19), and Missouri River fur trading posts (Bozell 1998:117).

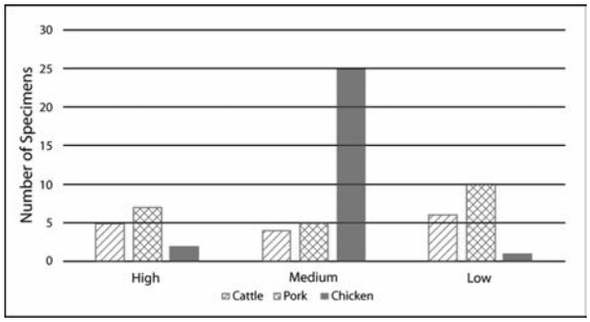


Figure 81. Relative values of meat cuts for cattle, swine, and chicken remains.

Scalopus aquaticus (eastern mole)
Sample: Three elements, including a humerus, an ulna, and a tibia
Discussion: The mole sample equals 3.6 percent of the identified sample, and one individual is represented. All mole remains came from F614 and are almost certainly a result of natural processes.

Sylvilagus floridanus (eastern cottontail)
Sample: Five elements, including a femur, a fibular tarsal, a lumbar vertebra, and two pelvic elements
Discussion: Cottontail bones constitute 6 percent of the identified materials. They were recovered from F612 and F614. No cultural modifications were noted, but one element displays gnawing by a rodent and a carnivore. Cottontail remains are quite common in post-contact era sites in the Central Plains and Prairie Peninsula (Bozell 1994:177, 1998:134; 2001:237–238; Snyder 1982:20). Many are natural intrusions, but some rabbit materials demonstrably result from local hunting (Bozell 1998:117).

Muroidea (mice and voles)
Sample: Single examples of mandible, tibia, femur, and ulna
Discussion: These four bones make up 4.8 percent of the identified sample, and all were found in F614. One bone is from an immature animal, and another is partially digested. A single individual is represented. In the absence of dentition, it is difficult to differentiate small rodent materials to genus or species. A wide variety of native and domestic small rodents occur in this region of Kansas. They frequently are recovered from Euroamerican settlements (Snyder 1982:20–21) and are almost certainly natural intrusions.

Rattus norvegicus (Norway rat)
Sample: Two tibiae, one complete and one proximal
Discussion: These tibiae comprise 2.4 percent of all identified remains. Two individuals are represented, based on one immature and one adult specimen. Both rat bones were collected during work in F614. Norway rat is an introduced species from Europe and commonly is retrieved from eastern Plains and Prairie Peninsula post-contact archeological contexts (Bozell 1994:177, 1998:134; Snyder 1982:21).

Sus scrofa (swine)
Sample: Twenty-two elements, including teeth (5), vertebra (5), rib (1), scapula (2), humerus (2), ulna (1), femur (3), tibia (1), tarsal (1), and phalange (1)
Discussion: Swine accounts for more than a quarter of the identified sample and is second in frequency only to chicken. The remains were recovered from all analytic units, and an MNI of one was tabulated for each. Modifications noted on swine materials include cut marks (1), chop marks (2), saw marks (8), and carnivore gnawing (6). Eight bones are from immature pigs. The cuts of meat reflect a fairly even cross section of high (chops, ham), medium (picnic shoulder), and low (pigs feet, jowl) quality cuts. Swine appear in nearly all eastern Plains and Prairie Peninsula post-contact sites. Typically, they are better represented at trading posts (Bozell 1998:134) and farmsteads (Koch and Bozell 1997:22; Snyder 1982:21) than at military sites (Bozell 2001: 234). Pork remains are a direct result of subsistence activity.

Bos taurus (cattle)
Sample: Fifteen elements, including femur (4), tarsal (2), humerus (1), vertebra (2), ribs (3), radius (2), and scapula (1)
Discussion: Cattle constitute 18.1 percent of the identified sample. Cattle bones were found in all analytic units with an MNI of one tabulated for each unit. Modifications include cut marks (2), chop marks (2), saw marks (11), burning (1), and carnivore gnawing (4). Two elements are from immature animals. Cuts of meat range from high (roast, steaks) to medium (chuck, ribs) to low (shank and stew) quality portions in relatively even proportions. Cattle remains occur at all post-contact sites in the eastern Plains and Prairie Peninsula but typically are better represented at military than civilian

sites (Bozell 2001:234; Mundell 1979). The Kaw Mission cattle sample is a product of subsistence activity by its occupants.

Homo sapiens (human)
Sample: One tooth
Discussion: This isolated tooth came from F614 and appears to be an adult canine with deep decay. It very well might have been extracted from an inhabitant of or a visitor to the Kaw Mission and discarded. The tooth equals 1.2 percent of the full sample.

Summary and Comment

This report considers the faunal assemblage recovered from 2016 and 2018 archeological investigations at 14MO368. Pertinent summary information and comments are provided below.

1. The total sample comprised 1,042.3 g of bone. Most of the sample is heavily fragmented bird and large mammal bone. While much of the damage is due to butchering and carcass reduction, soil conditions and carnivore ravaging are responsible for some.

2. The greatest volume of material originated in proveniences associated with the circa 1900 midden (F612), the circa 1850s blacksmith shop (F614), and various temporally unassigned non-feature units in the northern part of the site.

3. Due to extensive fragmentation, only a small percentage of the sample is identifiable to element and a taxonomic designation at the family level or below. The identified portion includes 83 specimens, representing 10 taxa. Chicken (33.7 percent) makes up the greatest share of the identified remains by NISP, followed by swine (26.5 percent) and cattle (18.1 percent). Most of the balance is composed of likely intrusive taxa, including snakes, insectivores, and rodents.

4. Three modified items were collected, including two knife or utensil handles and an unidentified polished object.

5. Cultural and natural characteristics noted on the identified specimens include knife marks (4), chop marks (4), saw marks (19), burning (1), rodent gnawing (1), carnivore gnawing (12), and partial digestion (4). Eighteen elements are from immature animals.

6. The identified remains are broadly consistent with data from numerous previous treatments of historic period subsistence studies in the Central Plains and Prairie Peninsula with a strong emphasis on a triad of domestic animal meat, namely chicken, pork, and beef. There is no direct evidence of hunting/fishing other than a single catfish bone.

7. This small sample is far too limited to draw any meaningful conclusions about butchering, socioeconomic status, and temporal subsistence change across the various occupations. However, the test excavations demonstrate that 14MO368 retains significant subsurface deposits of faunal remains that have the potential to address a variety of subsistence research themes if ever significantly larger samples are available for study.

SUMMARY AND CONCLUSIONS

Summary

Archeological investigations at the Kaw Mission SHS discovered 12 features and 6 sub-features (Figure 25):

1) F611 is a possible hearth.
2) F612 is a trash dump, dating from about 1900.
   a) Sub-feature 705 is an independent dumping episode inside F612.
3) F613 is an activity area, dating from the mid-1800s.
4) F614 is a blacksmith shop, dating from about the 1840s through 1910s.
   a) Sub-feature 704 is a builder's trench for F614.
   b) Sub-feature 706 is a burned area, possibly the location of the forge.
   c) Sub-feature 707 is a builder's trench for F614.
   d) Sub-feature 711 is a drip line off the blacksmith shop roof.
5) F632 is a brick extension of the driveway.
6) F633 is a lamppost base.
7) F700 is a gravel dump.
8) F701 is construction material.
9) F702 is a hearth associated with the Civil War camp.

10) F703 is a mortar mixing and limestone trimming area from 1954.
11) F709 is undetermined but contains milking-related artifacts from the 1910s to 1920s.
12) F714 is the remnant of a building.
    a) Sub-feature 712 is a builder's trench for F714.

In addition to the features identified, a Civil War-era camp was located in the southern yard.

Artifacts include items associated with the mission as a school: slate pencils and slates; as a Civil War camp: Minié balls and military buttons; as a residence: whiteware and bottles; as a farm: milk bottles and milking hoses; and as a place where pow wows were held: a piece of regalia and beads.

Conclusions

Artifacts and features are present from every era that the Kaw Mission SHS was occupied. Some give significant insight into the uses of the property, and others enhance previous understanding. When preparing for the investigations, nine research questions were developed to guide the excavations and analysis (Waggoner 2020:81). Not all of them could be answered fully, but each is discussed below. Questions one and two are addressed together.

1. Can archeological investigation find evidence of the different uses that were reported for the Kaw Mission (mission school for Kaw boys, schoolhouse for local white children, council house, courthouse, private residence, tourist attraction, and museum)?

2. What can archeology reveal about changes in how the property was used over time?

Evidence that the mission building was a school appear in the form of slates and slate pencils. This evidence is scant, probably because the structure served this purpose for only about 4 of its nearly 170 years. Nothing distinguishes its role as a mission for the Kanza from its role as a school for white settlers, although these coincided. F614 (Figures 25, 28–33) could have predated the mission and might be the government blacksmith shop run by Fort Leavenworth for trail travelers or the blacksmith shop for the Kanza, built by William H. Mitchell in 1847 and sold to Morris Baker and Emanuel Mosier in 1849 (Barry 1972:896, 977). The latter seems more likely. If the blacksmith shop already existed, it could explain the location selected for the Kaw Mission and why the shop does not match the measurements of the buildings erected by the MEC South and detailed in Johnson's 1851 letter (Barry 1972:962; Johnson 1851).

No archeological evidence exists of the mission building's use as a council house or courthouse. Most of the cultural material originated from the period that it was a private residence, which accounts for 96 percent of its life before it became a museum and 57 percent of its entire existence.

Artifacts from the mission building's stint as a museum and tourist attraction are modern. Aluminum cans and coins newer than 1960, recovered during the metal detection survey, were not kept. The regalia (Figure 64) and some of the beads are modern and may be linked to pow wows held on the grounds. F703, the mortar mixing and limestone trimming area, is directly connected to the property's time as a museum. It dates to 1954 when the Kaw cabin was moved to the mission grounds by the Council Grove Rotary Club.

3. Is there any evidence of Kanza influence at the mission?

Though the Kanza are represented in the museum displays, only the regalia (Figure 64) and possibly the white beads (Figure 63) are direct evidence of Kanza influence. During the time the mission was a school for Kanza children, their traditional culture was suppressed. This, the small number of Kanza students who lived at the mission and the short interval that the property served as a mission explain the lack of Kanza-affiliated artifacts.

4. Is there any evidence of uses of the property not previously recorded?

The remains of a blacksmith shop, a Civil War-era camp, and a dairy production area (Figures 25 and 45) are evidence of unrecorded uses. No previous written account specifically mentions a blacksmith shop on the grounds of the Kaw Mission, but it is embedded in Council Grove oral tradition. The principal investigator had assumed that the workshop mentioned in Johnson's 1851 letter was the blacksmith shop, but this proved not to be the case, as the dimensions of the blacksmith shop (28.71 by 26.90 feet) do not match the dimensions of the workshop from the letter (18 by 20 feet).

The Civil War camp was not part of the history nor the oral tradition of Council Grove, but its presence makes sense, given troop movements and soldiers stationed in and around Council Grove during the war (Bird 2004:57; Greene 1916).

F709 contains artifacts related to dairy production, though what activities created the feature are not known.

5. How did different communities (e.g. white and Kanza) view, use, and interact with the Kaw Mission and how did that change over time?

This question cannot be answered with the available archeological evidence. As noted in the answer to questions one and three, little evidence emerged that could distinguish different cultural groups at the site.

6. Is there evidence of a relationship with the Santa Fe Trail?

Though the evidence of a relationship with the Santa Fe Trail is not direct, some of the materials recovered presumably have to do with the trail. The blacksmith shop might have been the shop built by Fort Leavenworth, but there is no direct evidence of that. It is more likely that it is the blacksmith shop for the Kanza promised in the 1846 treaty (Kappler 1904). Still, it could have helped in repair of wagons and replacement of horse, oxen, and mule shoes for travelers on the trail. Most of this work would have been done by blacksmiths situated directly on the trail rather than a third of a mile north, where the mission sits.

The presence of the Civil War camp is perhaps due to the trail. The trail served as a thoroughfare for troop movements, and its strategic importance would have made protecting it a priority.

7. From what era are the cultural deposits, and what is their level of integrity?

Several time periods are represented in the cultural deposits at 14MO368, and four locations have retained high integrity: the blacksmith shop, the Civil War-era camp, the trash dump, and a dairy production area (Figure 25 and 45). The blacksmith shop (F614) dated from about the 1840s to 1910s and has several intact sub-features associated with it. These include the builder's trenches (F704 and F707), a burned area (F706), and the drip line (F711). The Civil War camp is in the southern yard of the mission grounds and dated from 1861 to 1865. The trash dump (F612) dated around 1900. F709 is of unknown origin but contains milking-related artifacts from the 1910s to 1920s.

8. Can archeological investigations locate the outbuildings that were on the grounds, ascertain their functions, and determine when they were constructed and razed?

The outbuildings that were on the grounds of the Kaw Mission remain undefined, other than the blacksmith shop. Neither of the outbuildings mentioned in Johnson's 1851 letter can be connected to the features discovered during the archeological investigations. F714 might be one of these, but its overall dimensions are not known. A different structure once stood where the education center is now. The basement beneath the education center likely belonged to this previous edifice, as its construction method does not match that of the current building. The original structure was erected at an unknown date and torn down before 1936, when the carriage house was built. The blacksmith shop was well defined. Based on recovered artifacts, it was razed in the early 1910s.

9. What is the effect of repeated flooding and other impacts on the property?

Deposits at 14MO368 were relatively shallow, with most cultural material uncovered starting at 20 cm below surface. The features and artifacts do not appear displaced by flooding. The various building episodes, utility work, and the berm on the east side of the property have impacted features, but many remain intact.

All but one of the research questions put forth before excavation could be answered. The chief mysteries that persist are F709 and F714. Is F714 one of the outbuildings mentioned in the Johnson's 1851 letter? If not, when was it constructed? How was it used? When was it razed? Does it encompass F709? What was the purpose of F709? Apparently F709 functioned as part of a dairy operation, so was F714 built for dairy production? If future archeological investigations are undertaken at the Kaw Mission SHS, they should target these features.

In Closing

The Kaw Mission State Historic Site (14MO368) is an important place for many reasons. It embodies the failed Mission Movement that sought to destroy American Indian lifeways by breaking the transmission of culture from one generation to the next. This included the United States government's attempts to turn American Indians into farmers in the European tradition and its disregard of both the Establishment Clause and the Free Exercise Clause concerning religion in the First Amendment to the U.S. Constitution. By suppressing the Kanza's traditional religion, the government violated the tribe's First Amendment rights to free exercise of religion. By contracting with the MEC South to convert Kanza children to Christianity, it violated the Establishment Clause. This pattern of disregard for American Indians' traditional religions was clearly spelled out in government documents regarding American Indians in drafting the "civilization fund" that passed Congress in 1819 and the Indian Removal Act of 1830 (Bowden 1981:167–170).

The Kaw Mission also exemplifies the government's attempts at controlling tribes through the accumulation of debt and the signing of treaties. These treaties tied the tribes to survival on annuity payments rather than traditional hunting and gardening. This policy was first outlined by President Thomas Jefferson in an 1803 letter to William Henry Harrison, who was governor of Indian Territory. The mission was paid for with annuity payments from the 1846 treaty between the Kanza and the United States that ceded the tribe's reservation on the Kansas River (Kappler 1904).

The mission portrays westward expansion, the Indian Removal Movement, and the Santa Fe Trail. The town of Council Grove was established due to the intersection of the Santa Fe Trail and the Kanza Reservation. Money that flowed from the United States government in the form of annuities helped the early settlers make a living there. Some of the earliest settlers in town were allowed in Indian Territory, which included Kansas until 1854, due to their ties to the Kanza: the Huffakers, the Bakers, and Seth Hays (Barry 1972:537, 671; Kappler 1904; Parks 2014:14). Also, the Kanza were moved to Council Grove in order to make room for Indian tribes from the east being relocated to Indian Territory. These tribes had to be relocated as mainly white settlers moved farther into the western frontier (Herring 1990; Parks 2014; Unrau 1971).

The mission building is significant because it was the home of Thomas Huffaker. In addition to serving a short duration as the head of the mission, he was active in Kansas Territorial politics and served in the Kansas State House as a legislator (Kansas State Library 2020).

Finally, the mission represents the Civil War conflict in Kansas. The Santa Fe Trail was an important thoroughfare during the war for troop movements and supplies (Bird 2004:57). Also, the United States wished to maintain the flow of goods from the southwest along the trail (Cutler 1883). This is likely the reason for the Civil War camp at 14MO368.

Kaw Mission SHS is a valuable cultural resource, both in its standing structures and archeological components. The property is unique in that it depicts the Mission Movement, the Indian Removal Movement, westward expansion, the Santa Fe Trail, an early Kansas politician, and the Civil War in a single site. Connection to any one of these themes makes it eligible for the National Register of Historic Places.

REFERENCES CITED

925–1000.com

2018 Online Encyclopedia of Silver Marks, Hallmarks & Makers' Marks. Gorham Marks & Date Codes. Electronic document, https://www.925-1000.com/Gorham_Date_Code.html, accessed June–October 2020.

Albert, Alphaeus H.

1976 *Record of American Uniform and Historical Buttons*. Boyertown Publishing Company, Boyertown, Pennsylvania.

American Battlefield Trust

2020 A Guide to the Small Arms of America's Wars. Electronic document, https://www.battlefields.org/learn/articles/glossary-small-arms-across-three-wars, accessed June–October 2020.

American Civil War Museum

2020 Spurs from the collection. Electronic document, https://acwm.pastperfectonline.com/webobject/408E4D8D-B89A-4390-89AB-514569540010, accessed June–October 2020.

Barry, Louise
1972 *The Beginning of the West, Annals of the Kansas Gateway to the American West, 1540–1854*. Kansas State Historical Society, Topeka.

Bird, Roy
2004 *Civil War in Kansas*. Pelican Publishing Company, Gretna, Louisiana.

Bowden, Henry Warner
1981 *American Indians and Christian Missions: Studies in Cultural Conflict*. University of Chicago Press, Chicago, Illinois.

Bozell, John R.
1994 Vertebrate Remains. In *Phase IV Salvage Investigations at the Martin Farmstead (14RP322) in Republic County, Kansas* by Christopher M. Schoen. Contract Archeology Publication No. 12, pp. 166–178. Kansas State Historical Society, Topeka.
1998 Provisioning the Post: Animal Bones, Diet, and Frontier Subsistence Economy. In *The Fontenelle and Cabanné Trading Post: The History and Archeology of Two Missouri River Sites, 1822–1838* by Richard E Jensen, pp. 111–141. Publications in Anthropology No. 11. Nebraska State Historical Society, Lincoln.
2001 Bone and Shell Remains. In *Historical Archaeology at Locality 6 of the Fort Ellsworth Site (14EW26), Kanopolis Lake, Ellsworth County, Kansas* by Robert J. Ziegler, pp. 228–248. Kansas City District, U.S. Army Corps of Engineers, Kansas City, Missouri.

Brabenec, James
2011 Field Artillery Museum Adds British Infantry Gun. Electronic document, https://www.army.mil/article/67226/field_artillery_museum_adds_british_infantry_gun, accessed June–October 2020.

Brigham, Lalla Maloy
1921 *The Story of Council Grove on the Santa Fe Trail*. Morris County Historical Society, Council Grove, Kansas.

Brown, Christopher L. and Carl E. Gustafson
1979 *A Key to Postcranial Skeletal Remains of Cattle/Bison, Elk, and Horse*. Reports of Investigations No. 57. Laboratory of Anthropology, Washington State University, Pullman.

Coggins, Jack
1990 *Arms and Equipment of the Civil War*. Dover Publications, Inc., Mineola, New York.

Conant, Roger
1975 *A Field Guide to the Reptiles and Amphibians of Eastern and Central North America*. Peterson Field Guide Series. Houghton Mifflin Company, Boston, Massachusetts.

Connelley, William E.
1918 *A Standard History of Kansas and Kansans*, Vol. III. Lewis Publishing Company, University City, Missouri.

Council Grove Republican (CGR)
1910 T. S. Huffaker Passes Away. 14 July 1910:1. Council Grove, Kansas.
1950 Community Pays Tribute to Mr. and Mrs. T. S. Huffaker as it Celebrates Centennial of Schools Today. 29 September 1950:3. Council Grove, Kansas.

Cutler, William G.
1883 *History of the State of Kansas*. A. T. Andreas, Chicago, Illinois.

Decker, Emile
2020 A History of Children's Tea Sets. Electronic document, http://www.childs-tea-set.com/child-tea-set-history.htm#:~:text=Thepercent20firstpercent20recordspercent20ofpercent20tea,ofpercent20itspercent20salespercent20ofpercent20toys, accessed June–October 2020.

Eakins, H.S.
1924 *Military Meat and Dietary Hygiene*. Williams and Wilkins Co., Baltimore, Maryland.

Electric Literature
2017 Black Glass and Jet Buttons. Electronic document, https://electricliterature.com/wp-content/uploads/2017/11/Black_Glass_and_Jet_Buttons.pdf, accessed June–October 2020.

Faith Project, Inc.
2003 This Far by Faith: 1776–1865 From Bondage to Holy War, Abolition and the Splintering of the Church. Electronic document, PBS.org/thisfarbyfaith/journey_2/p_5.html, accessed June–October 2020.

Farber and Associates, LLC
2020 Hubley Cap Guns. Electronic document, https://vintagetoycapguns.com/hubley-cap-guns, accessed June-October 2020.

Federal Bureau of Investigation
2016a John Dillinger. Electronic document, https://www.fbi.gov/history/famous-cases/john-dillinger, accessed June–October 2020.
2016b Kansas City Massacre/"Pretty Boy" Floyd. Electronic document, https://www.fbi.gov/history/famous-cases/kansas-city-massacre-pretty-boy-floyd, accessed June-October 2020.

Florea, J. H.
1977 *ABC of Poultry Raising*. Dover Publications, Inc., Mineola, New York.

Getty, Robert
1975 *Sisson and Grossman's Anatomy of Domestic Animals.* 2 vols. W. B. Saunders, Ltd., Philadelphia, Pennsylvania.

Gibson, Erica
2011 *Ceramic Makers' Marks*. Taylor & Francis Group, Oxfordshire, England.

Gilbert, B. Miles
1980 *Mammalian Osteology*. Modern Printing Company, Laramie, Wyoming.

Grayson, Donald K.
1984 *Quantitative Zooarcheology.* Academic Press, New York, New York.

Greene, A. R.
1916 Campaigning in the Army of the Frontier. Manuscript on file. Archives, Kansas Historical Society, Topeka, Kansas.

Gurrentz, Benjamin T.
2020 Association of Religion Data Archives: Methodist Episcopal Church, South. Electronic document, thearda.com/timeline/events/event_186.asp, accessed June-October 2020.

Herring, Joseph B.
1990 *The Enduring Indians of Kansas: A Century and a Half of Acculturation*. University Press of Kansas, Lawrence.

Horse Soldier
2020 Rare Ames Presentation 3-pounder Mountain Howitzer. Electronic document, http://www.horsesoldier.com products/artillery/15958, accessed June–October 2020.

Howell, Tom S.
1955 Baker Murder a Lurid Chapter in Early Day History. *Emporia Gazette* 26 May 1955:18. Emporia, Kansas.

Huffaker, Thomas Sears
1906 Letter to H. M. Hamblin. Archives, Kansas Historical Society, Topeka, Kansas.

Jefferson, Thomas
1803 Letter to William Henry Harrison, February 1803. Electronic document, http://www.digitalhistory.uh.edu/active_learning/explorations/indian_removal/jefferson_to_harrison.cfm, accessed June–October 2020.

Johnson, Thomas
1851 Letter to the Office of Indian Affairs. National Archives, Washington, D.C.

Jones, Elwood M.
1952 Correspondence with Nyle H. Miller. Archives, Kansas Historical Society, Topeka, Kansas.

Herald of Freedom
1859 Proceedings of the Meeting of the Settlers on the Kaw Reserve. 19 November 1859:1. Lawrence, Kansas.

Kansas State Library
2020 Kansas Legislators: Past and Present. Electronic document, https://kslib.info/BusinessDirectoryii.aspx, accessed June–October 2020.

Kappler, Charles J. (editor)
1904 *Indian Affairs: Laws and Treaties*, Vol. II. Government Printing Office, Washington, D.C. Electronic document Oklahoma State University Digital Collections, https://dc.library.okstate.edu/digital/collection/kapplers/id/25853/rec/1, accessed June–October 2020.

Katcher, Philip
2001 *American Civil War Artillery 1861–65 (1) Field Artillery*. Osprey Publishing, Long Island City, New York.

Kaw Nation
2020 The Kaw Nation: People of the Southwind. Electronic document, http://kawnation.com/, accessed June-October 2020.

Koch, Amy, and John R. Bozell
1997 *Bone and Shell Remains from the Taff Site, Texas County, Missouri*. Submitted to the Missouri Department of Transportation. Copies available from History Nebraska, Lincoln.

Kowalsky, Arnold A., and Dorothy E. Kowalsky
1999 *Encyclopedia of Marks on American, English, and European Earthenware, Ironstone, Stoneware, 1780–1980: Makers, Marks, and Patterns in Blue and White, Historic*

Blue, Flow Blu, Mulberry, Romantic Transferware, Tea Leaf, and White Ironstone. Schiffer Book for Collectors. Schiffer Publishing, Ltd., Atglen, Pennsylvania.

Lammle, Rob
2015 *A Brief History of Marbles (Including All That Marble Slang).* Electronic document, https://www.mentalfloss.com/article/29486/brief-history-marbles-including-all-marble-slang, accessed June–October 2020.

Lathan, S. Robert
2016 Experience of my Famous Uncle, Melvin Purvis, with Hoover's Jealousy and with Nazi Hermann Göring. Electronic document, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4900794/, accessed June–October 2020.

Levie, A.
1979 *The Meat Handbook.* 4th ed. Avi Publishing Company, Inc., Westport, Connecticut.

Lindsey, Bill
2020 Historic Glass Bottle Identification & Information Website. Bureau of Land Management, Society for Historical Archaeology. Electronic document, https://sha.org/bottle/index.htm, accessed June–October 2020.

Lockhart, Bill
2006 The Color Purple: Dating Solarized Amethyst Container Glass. *Historical Archeology* 40(2):45–56.

Lovett, Ralph
2020 Woodruff Gun. Electronic document, https://www.lovettartillery.com/Woodruff_Gun_American_Civil_War.html, accessed June–October 2020.

Luscomb, Sally C.
2006 *Collector's Encyclopedia of Buttons*. Schiffer Publishing, Ltd., Atglen, Pennsylvania.

Lutz, J. J.
1906 The Methodist Missions Among the Indian Tribes in Kansas. *Transactions of the Kansas State Historical Society* 9:160–230.
1906 The Methodist Missions Among the Indian Tribes in Kansas. *Transactions of the Kansas State Historical Society* 9:160–230.

Maki, David
2017 *A Non-Invasive Geophysical Investigation at the Kaw Mission State Historic Site (14MO368)*. Submitted to the Kansas Historical Society. Copies available from the Cultural Resources Division, Kansas Historical Society, Topeka.

Marbles Galore
2020 Clay, Ceramic and Stoneware Marbles. Electronic document, https://www.marblesgalore.com/clay/, accessed June–October 2020.

Marcel, Sarah Elizabeth
1994 Buttoning Down the Past: A Look at Buttons as Indicators of Chronology and Material Culture. Honors thesis, Department of Anthropology, University of Tennessee, Knoxville.

Maine Historical Society
2020 Mess Kit, ca. 1863. Electronic document, https://www.mainememory.net/artifact/4264, accessed June–October 2020.

Maloy, John
1886 History of Morris County Kansas 1820–1880. Manuscript on file, Archives, Kansas Historical Society, Topeka.

Melton, Jack W., Jr.
2019 Civil War Artillery. Electronic document, http://www.civilwarartillery.com/, accessed June–October 2020.

Medallicartcollector.com
2016 The Gorham Manufacturing Company. History. Electronic document, https://medallicartcollector.com/gorham.shtml, accessed June–October 2020.

Miller, Malcolm E.
1962 *Guide to the Dissection of the Dog.* New York State Veterinary College, Cornell University, Ithaca, New York.

Miller, Nyle H.
1952 Correspondence. Archives, Kansas Historical Society, Topeka.

Miner, Craig
2002 *Kansas: The History of the Sunflower State, 1854–2000*. University Press of Kansas, Lawrence.

Morehouse, George P.
1906 Probably the First School in Kansas for White Children. *Transactions of the Kansas Historical Society* 9:230–236.
1908 *The Kansa or Kaw Indians and their History, and the Story of Padilla.* State Printing Office, Topeka, Kansas.

Mundell, Raymond L.
1979 Descriptive Analysis of Vertebrate Remains from Fort Atkinson: The Military Period. In *Archeological Investigations at Fort Atkinson (25WN9): Washington County, Nebraska, 1956–1971* by Gayle F. Carlson, pp. 121–126. Publications in Anthropology No. 8. Nebraska State Historical Society, Lincoln.

National Public Radio
2010 Archaeologists Discover Civil War Artifacts in Georgia. Electronic document, https://www.npr.org/templates/story/story.php?storyId=129278077, accessed June–October 2020.

Olsen, Stanley J.
1963 Dating Early Plain Buttons by their Form. *American Antiquity* 28:551–554.

Pankratz, Richard
1970 National Register of Historic Places Nomination, Kaw Methodist Mission. On file, Cultural Resources Division, Kansas Historical Society, Topeka.

Parks, Ronald D.
2014 *The Darkest Period: The Kanza Indians and their Last Homeland 1846–1873*. University of Oklahoma Press, Norman.

Patrick, Bethanne, and John Thompson
2008 *An Uncommon History of Common Things*. National Geographic, Washington D.C.

Pearsall, Judy, and Bill Trumble
2002 *Oxford English Reference Dictionary*. Revised 2nd ed. Oxford University Press, Oxford, England.

Prioli, Carmine
1991 Rubber Dentures for the Masses. Electronic document, https://www.inventionandtech.com/content/rubber-dentures-masses-1, accessed June–October 2020.

Schiesser, Donald
2017 And Now-The Rest of the Story. Bloody Bill Anderson in Lyon County. Electronic document, nlchsmuseum.com/bloody-bill-anderson/, accessed June–October 2020.

Shaw, Harriet Bidwell
1851 Personal journal. Electronic document, https://www.kansasmemory.org/item/209694, accessed June–October 2020.

Sheehan, Bernard W.
1974 *Seeds of Extinction: Jeffersonian Philanthropy and the American Indian*. Omohundro Institute of Early American History and Culture, Williamsburg, Virginia.

Shimeall, Michael
2012 Judge Barker (sic) and the Vengeance of "Bloody Bill." In *Symphony in the Flint Hills Field Journal*, pp. 61–67. New Prairie Press, Kansas State University, Manhattan.

Snyder, Lynn M.
1982 *Unmodified Vertebrate Remains Recovered from Six Euroamerican Sites, Monroe County, Missouri: A Preliminary Analysis*. Technical Report No. 82-01. Division of Archeological Research, Department of Anthropology, University of Nebraska, Lincoln.

Sullivan, Jack
2014 Those Pre-Pro Whiskey Men! Electronic document, http://pre-prowhiskeymen.blogspot.com/2014/12/the-m-wollstein-liquor-tree-how-it-grew.html, accessed June–October 2020.

Thornton, Russell
1987 *American Indian Holocaust and Survival: A Population History Since 1492*. University of Oklahoma Press, Norman.

Topeka Tribune
1860 Advertisement for Council Grove Town Company. 31 March 1860:3. Topeka, Kansas.

Topeka State Journal
1910 School a Landmark. 11 July 1910:8. Topeka, Kansas.

Townshend Historical Society
2020 Civil War Mess Kit Ware. Electronic document, https://www.townshendvt.org/photo/civil-war-mess-kit-ware/, accessed June–October 2020.

University of Richmond
2015 The History Engine: Methodist Split. Electronic document, https://historyengine.richmond.edu/episodes/view/1785, accessed June–October 2020..

U.S. Department of Agriculture
1977 *Beef Slaughtering, Cutting, Preserving, and Cooking on the Farm*. Farmer's Bulletin No. 2263. Government Printing Office, Washington, D.C.
1983 *Pork Slaughtering, Cutting, Preserving, and Cooking on the Farm*. Farmer's Bulletin No. 2265. Government Printing Office, Washington, D.C.

U.S. Department of the Interior, Bureau of Indian Affairs
1857 *Annual Report to the Commissioner of Indian Affairs*. The History Collection. Electronic document, https://digicoll.library.wisc.edu/cgi-bin/History/History-idx?type=browse&scope=HISTORY.COMMREP, accessed June–October 2020.
1858 *Annual Report to the Commissioner of Indian Affairs*. The History Collection. Electronic document, https://digicoll.library.wisc.edu/cgi-bin/History/History-idx?type=browse&scope=HISTORY.COMMREP, accessed June–October 2020.
1872 *Annual Report to the Commissioner of Indian Affairs*. The History Collection. Electronic document, https://digicoll.library.wisc.edu/cgi-bin/History/History-idx?type=browse&scope=HISTORY.COMMREP, accessed June–October 2020.

Unrau, William E.
1968 The Council Grove Merchants and Kansa Indians, 1855–1870. *Kansas Historical Quarterly* 34(3):266–281.
1971 *The Kansa Indians: A History of the Wind People, 1673–1873*. University of Oklahoma Press, Norman.
1975 *The Kaw People*. *Indian Tribal Series*, Phoenix, Arizona.
1998 The Depopulation of the Kansa Indians. In *Kansas Revisited: Historical Images and Perspectives*, edited by Paul K. Stuewe, pp. 313–328. 2nd ed. Division of Continuing Education, University of Kansas, Lawrence.

Waggoner, Tricia J.
2016 A History of the Kansa People through 1873. *Central Plains Archaeology* 15:109–120.
2018 *Excavations at Fool Chief's Village (14SH305).* Contract Archeology Publication No. 28. Archeology Office, Kansas Historical Society, Topeka.
2020 *Archeological Investigations at the Kaw Mission State Historic Site*. Archeology Office, Kansas Historical Society, Topeka.

Washburn, Wilcomb E. (editor)
1988 *History of Indian-White Relations*. Handbook of North American Indians, Vol 4., William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Wedel, Waldo R.
1946 The Kansa Indians. *Transactions of the Kansas Academy of Science* 49:1–35.
1959 *An Introduction to Kansas Archeology*. Bulletin No. 174. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Weekly News Democrat
1860 Land Sale Announcement. 31 March 1860:4. Emporia, Kansas.

What the Victorians Threw Away
2020 What the Victorians Threw Away. Electronic document, http://www.whatthevictoriansthrewaway.com/, accessed June–October 2020.

KEEP THE WHISKEY IN THE CELLAR AND THE AMMUNITION ON THE WINDOWSILLS:

ARCHEOLOGY OF THE BAKER STORE (14MO701)

Christine D. Garst
Kansas Historical Society

In 1972 and 1973 Kansas State Teachers College, now Emporia State University, held archeological field schools at the Baker house and store (14MO701). Both structures, along with any outbuildings, burned in 1862. Through a series of unfortunate events, the archeological fieldwork and recovered collections were never reported fully. This article summarizes the archeology of the 1973 field season at the Baker store, discusses the artifacts acquired that year, and, where possible, compares the collection with that from another store of the same time period, the Last Chance Store (14MO367), located 8 miles away in Council Grove.

Thursday, July 3, 1862, must have seemed an ordinary day at the Baker house and store along the Santa Fe Trail in what is now Morris County, Kansas. Arthur I. Baker and his new wife Annis had just returned from a visit to Emporia that day. By evening Baker was dead, murdered by the vengeful Anderson brothers and their gang; Baker's brother-in-law George Secur was in hiding, slowly dying from a gunshot wound and burns; and the Baker store, house, and outbuildings were burned to the ground. Flash forward 111 years to 1973 when Kansas State Teachers College (KSTC), now Emporia State University, held its second archeological field school at 14MO701. Under the direction of Dr. Jeffery Brown, the field school focused on the Baker store. The artifacts recovered that year traveled with Dr. Brown when he moved to the University of Tennessee at Chattanooga. Brown died in 1980 before he could report on the excavations. The collection was returned to KSTC in 1986.

In 1993 KSTC donated the more than 25,000 artifacts from both 1972 and 1973 field seasons to the Kansas Historical Society (KSHS). More than a decade later those collections began to appear at annual Kansas Archeology Training Program (KATP) field schools, giving laboratory volunteers material to clean, sort, and catalog during the early days of the current project. Each year saw a few more boxes processed and stimulated more interest in researching the artifacts and reporting the findings. The question then became how to find the time to give this worthy collection—this snapshot of one hot July night in 1862—the attention it deserved. As it turned out, the COVID-19 pandemic of 2020 provided an opportunity, and this article is the product of working from home during the quarantine. The author decided to examine and report on the 1973 excavations of the Baker store only, with the hope of completing the analysis of the 1972 Baker house excavation later.

HISTORICAL BACKGROUND

Arthur Inghram Baker was determined to go places and to wield his influence. He was a nineteenth-century mover and shaker. His basic details are these: born in 1824 in Tyler County, West Virginia; married first Susan J. Sewell in 1848 and second Annis Segur in 1862; with Susan had at least one child, Sarah J., born around 1851; and murdered on July 3, 1862. Between 1824 and 1862 Baker was much more than "basic." Michael Shimeall (1978, 2012) described him as a paradox. Only a brief overview is presented here, based primarily on Shimeall's extensive research. The reader is urged to consult these works for a richer portrait of Baker's life and death.

Little is known of Baker prior to 1847, when he became first a blacksmith and then a trader with the Sac and Fox tribe until 1854. Later that year

Baker moved to the Council Grove area in Kansas Territory and soon thereafter established a farm and built a blacksmith shop, a store, and a prominent two-story house along the Santa Fe trail about 8 miles east of Council Grove at the Rock Creek crossing. This property in Breckinridge County (defunct, now Morris County) was meant to be the heart of Baker's proposed town, Agnes City, which was incorporated in 1857. Baker established the Agnes City post office, perhaps in his store, which not only traded with wagon trains moving along the Santa Fe Trail, but also with local Kaw Indians and settlers.

His interests branched into surrounding communities in the ensuing years. Baker was the first mayor of Americus, publisher of the *Council Grove Press*, and proprietor of the Union Hotel in Council Grove. He was a farmer, stockman, blacksmith, businessman, surveyor, self-taught attorney, and elected justice of the peace. He promoted towns (Agnes City, Americus, and Council Grove), speculated in land, and was determined to make a mark in politics. Baker helped organize the local Democratic party and then the Free Soil party, which later became the Republican party. He ran as a Free Soil candidate for the Kansas Territorial legislature in 1855, though he owned slaves until 1856.

Baker surely had planned to be in a comfortable position by 1861, but current events changed the direction of his life. His wife Susan died in March 1861. The Civil War began the following month, eventually disrupting traffic and trade along the Santa Fe Trail and causing his business interests in Council Grove to fail by October. In May Baker helped form the local militia and was elected its captain. Though the Unionist militia was never called into active duty, Baker, along with several Rock Creek-area neighbors, crossed the Missouri state line in 1862, when he was arrested by the northern military for being a secessionist. He was held in the military prison at Fort Scott and accused of being a bushwhacker intent on raiding along the border and ". . . in Missouri to accept a colonelcy in the Confederate Army under General Price" (Shimeall 2012:63). Baker was tried and acquitted, returning to his Rock Creek property in April 1862.

Once back at his Rock Creek home, Baker began courting neighbor Mary Anderson. Miss Anderson's family was pro-slavery, and her brothers Bill and Jim had accompanied Baker on his disastrous Missouri foray. Unlike Baker, the Andersons were not caught by the Federals. The Anderson brothers eventually joined Quantrill's raiders, terrorizing the populations of Kansas and Missouri, while Bill earned the moniker of "Bloody" Bill Anderson. However, in May 1862 the Andersons were pleasant neighbors to Baker and expected him to propose to Mary soon.

Unexpectedly, Baker changed his course and married Annis Segur in early May 1862. Like a string of firecrackers, events exploded around Baker and his new wife. By mid-May a team of horses was stolen from Baker's new father-in-law, and Justice of the Peace Baker issued a warrant for Lee Griffin, a cousin of the Andersons. A posse was formed, and the horses were located 80 miles west of Council Grove, but the warrant stood. William Anderson Senior visited Baker and threatened to kill him if the warrant is not removed. The next day, May 12, Anderson Senior returned, drunk and with a loaded gun. Anderson confronted Baker on the stairs of Baker's home, Baker fired once, fatally wounding Anderson in the chest.

Slight variances occur in the accounts as to what happened next, but Shimeall (1978) did a masterful job of organizing the facts and relating the happenings. The Anderson brothers, family, and friends swore vengeance for the murder of Anderson Senior, and Baker was on his guard over the next few weeks. However, on July 3 a knock sounded at the door of the Baker residence, and a man was admitted, claiming to be a wagon master of a nearby wagon train in need of supplies. It was late, around 8 or 9 o'clock, hot as Kansas is in July, and the women were busy preparing to bake pies for the next day's Independence Day celebrations. Baker strapped on his guns, and he, his brother-in-law and shop clerk George Segur, and the wagon master left the safety of the house for the store.

Once there Baker and Segur began gathering goods for the wagon train, one item of which was whiskey, evidently kept in the cellar. Suddenly armed men rushed the building, shooting at and hitting both Baker and Segur as they scrambled down into the cellar. Baker managed to get off a shot but only wounded Jim Anderson in the leg. Baker and Segur were not as lucky, both receiving critical, though not immediately fatal, wounds. The Andersons rolled a barrel of sugar across the closed

cellar trap door and set fire to the structure. The nearby house was burned at the same time.

After urging Segur to escape through the back cellar window, Baker shot himself in the head to avoid being burned alive. Segur escaped the fire, hiding near or in Rock Creek until the next morning, but he died of his gunshot wound and burns that day. He was able to tell others of Baker's final moments and identify some of the murderers, with prominent blame laid at the doorstep of the Anderson brothers and Lee Griffin.

Soon the area was in an uproar, and residents were terrified that they would be the Andersons' next target. The gang had stolen not only Baker's stock that night, but also other people's horses and food on their return to Missouri. Raids along both sides of the Kansas/Missouri border kept this fear alive for a time, but the memory of the tragic deaths of Arthur Baker and George Segur faded when compared to the incomprehensible death tolls of Chancellorsville, Gettysburg, Chickamauga, and Antietam. Annis Segur Baker remained in the area and remarried, but she and her husband drowned in 1872. Occasional county histories or newspaper accounts remembered Baker, and locals did visit the site for a while. Ironically, some historians began to confuse the location of the house and store with that of the Anderson home 5 miles to the east.

SITE SETTING

Baker built his house and store in what is now Morris County along Rock Creek and adjacent to the Santa Fe Trail. The house was, according to Shimeall (2012:62), ". . . a scaled-down version of the Kaw Indian Mission in Council Grove." The store sat next to the trail, about 100 feet southeast of the house. It had a door leading to the cellar, which had two windows, one next to the stairs and the other in the north wall. The property had a blacksmith shop and likely other outbuildings.

A 1994 letter in the KSHS site records described the site area as "overgrown with weeds and some small trees" with no indications of the exact location of the house. A few limestone rocks, some probably burned, on the surface marked the possible site of the store (Costa and Costa 1994). Only the site's approximate location and the general placement of the 1972 and 1973 excavations by Dr. Jeffrey Brown and the KSTC field school were known.

The Baker site was revisited in 2017 by KSHS archeologists Tim Weston and Virginia Wulfkuhle and National Register Historian Rick Anderson. They recorded GPS coordinates of "what appeared to be shaped building stones . . . at the site's western margin overlooking Rock Creek" (14MO701 site file). These coordinates were superimposed on a quad map and aerial imagery (Figure 1).

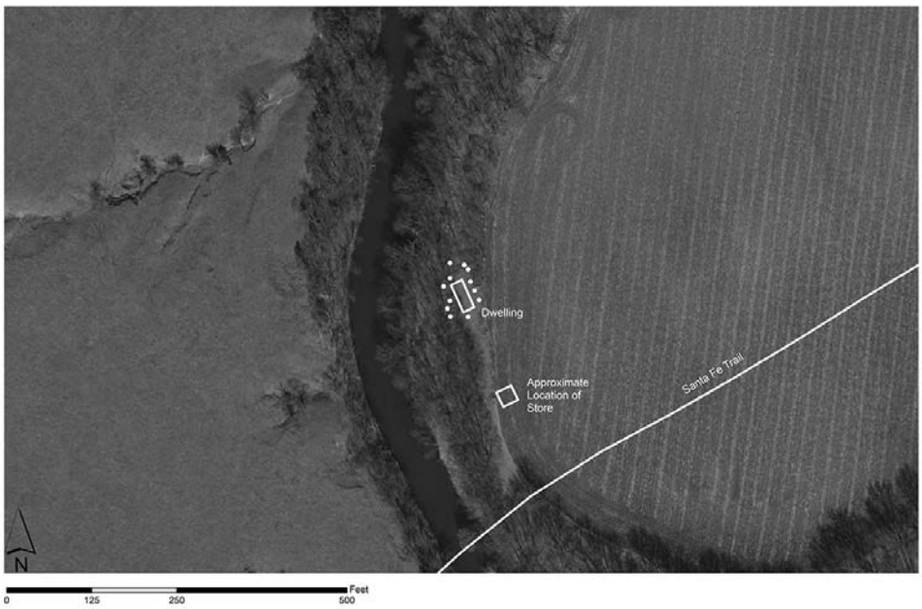


Figure 1. Map of 14MO701, showing the approximate locations of the Baker house and store in relation to Rock Creek and the Santa Fe Trail. Map created by Sherri Chaturvedi.

FIELD METHODS

Students participating in the 1973 KSTC field school were Frank Barnes, Alice Emerson, Ann Gustad, Steve Hanschu, Rodney House, Mary Leis, Linda McMurry, and Luann McWilliams. In the week prior to the field school, Dr. Brown and a small crew excavated trenches on the north (12 feet), east (16 feet, 7 inches), and south (approximately 4 feet) along the structure walls. During the field school trenches were completed along and outside all four walls, extending approximately 3 feet wide. Test units were 3 feet square in 1972 (Kansas State Teachers College 1972), and some might have been so in the following year. The cellar was divided into quadrants, and some tests were located within the quadrants (Figure 2). When the excavations were finished, the units were backfilled.

The site and certain diagnostic artifacts were mapped with transit and stadia rod (Figure 3). A compass was used atop the transit to align the instrument to magnetic north and aid in taking detailed angle shots in the English system of feet and inches, degrees from the datum, and depths in feet and tenths of feet. Limited data exists for the site's two datums. Datum #1 was located 10 inches below surface, as measured from the highest point on the interior of the northeast corner of the stone wall. Datum #2 was 25 feet, 5 inches from datum #1, possibly in the stone wall's northwest corner. The intention to produce a detailed excavation map is attested by a note on an artifact sack front: "bearing needs check, correct on map." Unfortunately, such a map was not found among the records, but a "working" map was located (Figure 4).

The 1973 excavations revealed the cellar walls, stairs, and windows of the Baker store. The walls were constructed of 12- to 18-inch-thick limestone rock, laid in regular courses and mortared in place (Figure 5). The depth of the cellar ranged from 4.16 to 5.5 feet below the ground surface (Leitnaker 1973). One wooden and four stone steps on the south side led down and north into the cellar with a window on the left (Figure 6). According to Shimeall (2012:66), ". . . Baker and his brother-in-law descended through the trap door of the cellar . . . ," using these steps to access the whiskey stored in the cellar. During the day the cellar would have had some natural light from windows on the north and south. One of these furnished George Sequr's escape route from the burning building.

Figure 2. View to the northwest of the 1973 KSTC field school excavation, showing the cellar divided into four quadrants and smaller excavations units within the quadrants.

Figure 3. View to the southwest of transit and stadia rod mapping by the 1973 KSTC field school crew. The datum appears to be over the store's northeast stone walls.

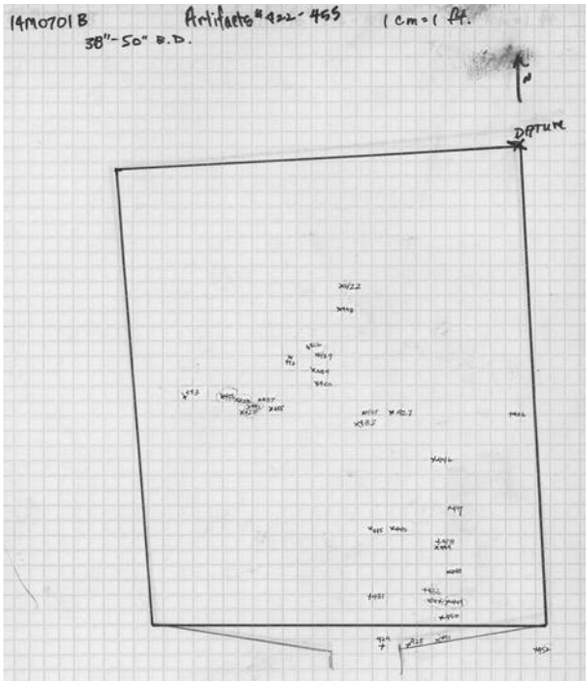


Figure 4. "Working" map of the Baker store, created during the 1973 KSTC field school.

Figure 5. Interior view of the north cellar wall at the northwest corner, showing a leaning stadia rod, measuring approximately 4.4 feet, and window location.

Figure 6. View of the south cellar wall, showing entrance and window locations.

RESEARCH QUESTIONS

Dr. Brown may well have had research questions or objectives, but no record of these could be found. Therefore, the following questions were generated.

Research Question 1. Can the types of goods for sale in the Baker store be inferred from the archeological remains? As far as is known, no bill of lad-

ing or inventory exists for the Baker store, nor were newspaper advertisements announcing merchandise discovered. One can look at other businesses' advertisements for hints as to what products Baker might have offered, but the excavated artifacts are the best indicators. Some materials undoubtedly were burned completely, but are the remains adequate to provide some notion of what Baker sold?

Research Question 2. How do the goods for sale at the Baker store compare to those at the Last Chance Store in Council Grove? At first glance the two enterprises should be comparable; both were situated along the Santa Fe Trail, less than 10 miles apart, and they operated within the same time period: ca. 1854 to 1862 for the Baker store and 1857 to the late 1860s (intermittently) for the Last Chance Store. However, preservation at the two sites is vastly different. The Baker store burned with all its contents on July 3, 1862. In contrast the Last Chance Store building is still standing, although during and after its commercial life, it housed numerous occupants, each leaving traces behind.

Research Question 3. What can the goods at the Baker store tell about the intended customer base—Santa Fe Trail, local, or both? Dr. Brown planned to write at least two papers analyzing the material culture from the Baker store and house. These were to discuss "the Santa Fe trail with an emphasis on how service along the trail aided in establishing a good local trade . . ." (Leitnaker 1973:4).

ANALYSIS OF 1973 ARTIFACTS

More than 15,979 artifacts were recovered during the 1973 KSTC excavations. At that time no artifact catalog was located, nor could it be ascertained that one had been created. Therefore, KSHS staff and volunteers undertook to catalog the 1973 collection over the course of several years. Provenience was based on information written on the artifact sacks: year, bearing, depth, excavator, and, if a single piece, assigned number and identification. Objects were sorted into 22 functional categories (Appendix). Artifact-specific information included specimen number, item count, weight, material, function, type, subtype, portion, color, decoration, and comments. At first specimen numbers were assigned only to unique and potentially diagnostic things (e.g., bullets, buttons, coins, vessels, or sherds with maker's marks or labeling), but during cataloging it was decided that all individual or groups of like artifacts would be assigned specimen numbers. Weights in grams (not counts) were measured for two categories: organics and byproducts.

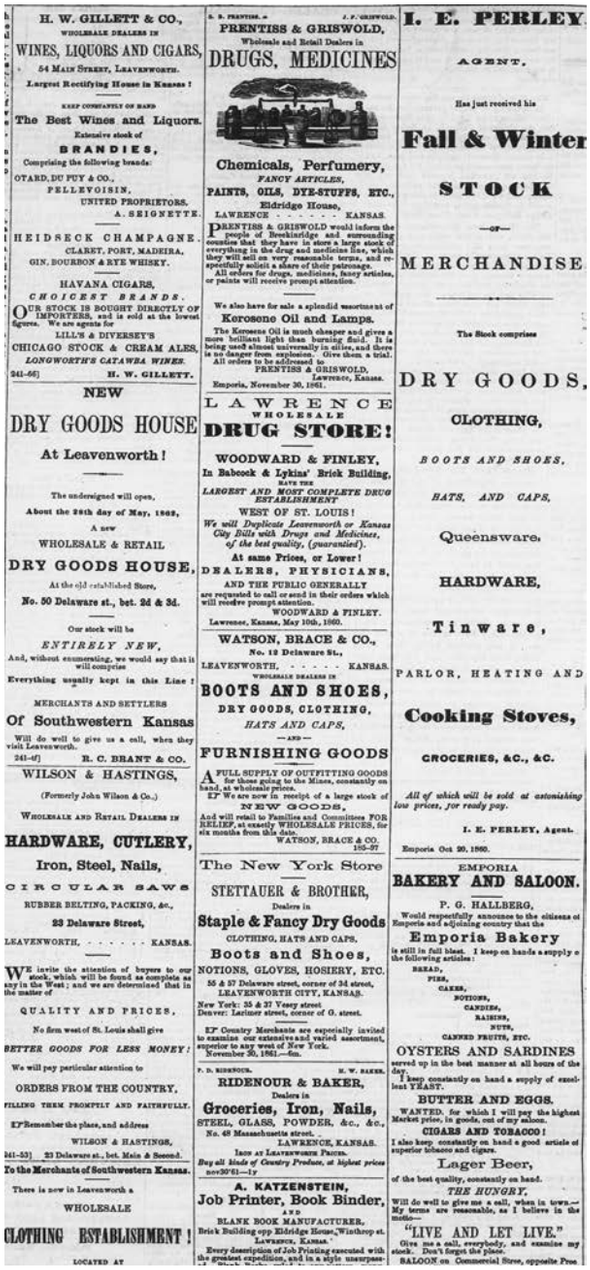
More artifact photographs were taken than can be shown here. Occasionally the reader is directed to Kansas Memory, KSHS's online digital archive for primary source documents and images. Additional pictures of Baker store artifacts can be found there by querying "14MO701." Select artifacts from the Last Chance Store may be viewed by querying "14MO367."

The Store

A store in 1862 was often more than a building housing goods for sale. It also could serve as a post office or a meeting place with neighbors and friends, perhaps over a game of checkers by a potbelly stove (Hays 2012). Baker's chosen location near the Rock Creek crossing of the Santa Fe Trail indicates that his primary purpose was trade, initially directed toward wagon trains and travelers along the trail. However, Baker was an ambitious man, and one can speculate that he planned to make his business a focal point for Agnes City.

Merchandise

Commodities in the Baker store comprised not only basic provisions and necessities but also included dry goods (bulk products from hardware, clothing, and groceries) and luxuries. An advertisement in the *Emporia News* (1862) showed the wide variety of supplies offered by local businesses (Figure 7). A listing of merchandise available closer to home can be found in Blasing's (2018:Figure 45) discussion of stock at the Last Chance Store. The interior of Baker's store might have resembled the one in Figure 8, although Al Nichol's General Store was photographed 30 years after the Baker store burned. For the current analysis nine categories or groups of artifacts are examined as potential Baker store inventory: clothing-related items, containers, cookware, table and utilitarian wares, flatware, organic material, personal items, recreation items, and toiletries.



H. W. GILLETT & CO.,
WHOLESALE DEALERS IN
WINES, LIQUORS AND CIGARS,
54 MAIN STREET, LEAVENWORTH.
Largest Rectifying House in Kansas!
KEEP CONSTANTLY ON HAND
The Best Wines and Liquors.
Extensive stock of
BRANDIES,
Comprising the following brands:
OTARD, DU PUY & CO.,
PELLEVOISIN,
UNITED PROPRIETORS.
A. SEIGNETTE.
HEIDSECK CHAMPAGNE.
CLARET, PORT, MADEIRA,
GIN, BOURBON & RYE WHISKY.
HAVANA CIGARS,
CHOICEST BRANDS.
OUR STOCK IS BOUGHT DIRECTLY OF IMPORTERS, and is sold at the lowest figures. We are agents for
LILL'S & DIVERSEY'S
CHICAGO STOCK & CREAM ALES,
LONGWORTH'S CATAWBA WINES.
241-56] H. W. GILLETT.

NEW
DRY GOODS HOUSE
At Leavenworth!
The undersigned will open,
About the 28th day of May, 1862,
A new
WHOLESALE & RETAIL
DRY GOODS HOUSE,
At the old established Store,
No. 50 Delaware st., bet. 2d & 3d.
Our stock will be
ENTIRELY NEW,
And, without enumerating, we would say that it will comprise
Everything usually kept in this Line!
MERCHANTS AND SETTLERS
Of Southwestern Kansas
Will do well to give us a call, when they visit Leavenworth.
241-tf] R. C. BRANT & CO.

WILSON & HASTINGS,
(Formerly John Wilson & Co.)
WHOLESALE AND RETAIL DEALERS IN
HARDWARE, CUTLERY,
Iron, Steel, Nails,
CIRCULAR SAWS
RUBBER BELTING, PACKING, &c.,
23 Delaware Street,
LEAVENWORTH, ... KANSAS.
WE invite the attention of buyers to our stock, which will be found as complete as any in the West; and we are determined that in the matter of
QUALITY AND PRICES,
No firm west of St. Louis shall give
BETTER GOODS FOR LESS MONEY!
We will pay particular attention to
ORDERS FROM THE COUNTRY,
FILLING THEM PROMPTLY AND FAITHFULLY.
☞Remember the place, and address
WILSON & HASTINGS,
241-53] 23 Delaware st., bet. Main & Second.
To the Merchants of Southwestern Kansas.
There is now in Leavenworth a
WHOLESALE
CLOTHING ESTABLISHMENT!
LOCATED AT

S. S. PRENTISS. J. P. GRISWOLD.
PRENTISS & GRISWOLD,
Wholesale and Retail Dealers in
DRUGS, MEDICINES
Chemicals, Perfumery,
FANCY ARTICLES,
PAINTS, OILS, DYE-STUFFS, ETC.,
Eldridge House,
LAWRENCE . . . . . KANSAS.
PRENTISS & GRISWOLD would inform the people of Breckinridge and surrounding counties that they have in store a large stock of everything in the drug and medicine line, which they will sell on very reasonable terms, and respectfully solicit a share of their patronage.
All orders for drugs, medicines, fancy articles, or paints will receive prompt attention.
We also have for sale a splendid assortment of
Kerosene Oil and Lamps.
The Kerosene Oil is much cheaper and gives a more brilliant light than burning fluid. It is being used almost universally in cities, and there is no danger from explosion. Give them a trial.
All orders to be addressed to
PRENTISS & GRISWOLD,
Lawrence, Kansas.
Emporia, November 30, 1861.

LAWRENCE
WHOLESALE
DRUG STORE!
WOODWARD & FINLEY,
In Babcock & Lykins' Brick Building,
HAVE THE
LARGEST AND MOST COMPLETE DRUG ESTABLISHMENT
WEST OF ST. LOUIS!
We will Duplicate Leavenworth or Kansas City Bills with Drugs and Medicines, of the best quality, (guaranteed).
At same Prices, or Lower!
DEALERS, PHYSICIANS,
AND THE PUBLIC GENERALLY
are requested to call or send in their orders which will receive prompt attention.
WOODWARD & FINLEY.
Lawrence, Kansas, May 10th, 1860.

WATSON, BRACE & CO.,
No. 12 Delaware St.,
LEAVENWORTH, ... KANSAS.
WHOLESALE DEALERS IN
BOOTS AND SHOES,
DRY GOODS, CLOTHING,
HATS AND CAPS,
— AND —
FURNISHING GOODS
A FULL SUPPLY OF OUTFITTING GOODS for those going to the Mines, constantly on hand, at wholesale prices.
☞ We are now in receipt of a large stock of
NEW GOODS,
And will retail to Families and Committees FOR RELIEF, at exactly WHOLESALE PRICES, for six months from this date.
WATSON, BRACE & CO.
155-57

The New York Store
STETTAUER & BROTHER,
Dealers in
Staple & Fancy Dry Goods
CLOTHING, HATS AND CAPS,
Boots and Shoes,
NOTIONS, GLOVES, HOSIERY, ETC.
55 & 57 Delaware street, corner of 3d street,
LEAVENWORTH CITY, KANSAS.
New York: 35 & 37 Vesey street
Denver: Larimer street, corner of G. street.
☞ Country Merchants are especially invited to examine our extensive and varied assortment, superior to any west of New York.
November 30, 1861.—6m.

P. D. RIDENOUR. H. W. BAKER.
RIDENOUR & BAKER,
Dealers in
Groceries, Iron, Nails,
STEEL, GLASS, POWDER, &c., &c.,
No. 48 Massachusetts street,
LAWRENCE, KANSAS.
IRON AT LEAVENWORTH PRICES.
Buy all kinds of Country Produce, at highest price
nov30'61—1y

A. KATZENSTEIN,
Job Printer, Book Binder,
AND
BLANK BOOK MANUFACTURER,
Brick Building opp Eldridge House, Winthrop st.
LAWRENCE, KANSAS.
Every description of Job Printing executed with the greatest expedition, and in a style unsurpass-

I. E. PERLEY
AGENT.
Has just received his
Fall & Winter
STOCK
—OF—
MERCHANDISE.
The Stock comprises
DRY GOODS,
CLOTHING,
BOOTS AND SHOES,
HATS, AND CAPS,
Queensware,
HARDWARE,
Tinware,
PARLOR, HEATING AND
Cooking Stoves,
GROCERIES, &C., &C.
All of which will be sold at astonishing low prices, for ready pay.
I. E. PERLEY, Agent.
Emporia Oct 20, 1860.

EMPORIA
BAKERY AND SALOON.
P. G. HALLBERG,
Would respectfully announce to the citizens of Emporia and adjoining country that the
Emporia Bakery
is still in full blast. I keep on hands a supply of the following articles:
BREAD,
PIES,
CAKES,
NOTIONS,
CANDIES,
RAISINS,
NUTS,
CANNED FRUITS, ETC.
OYSTERS AND SARDINES
served up in the best manner at all hours of the day.
I keep constantly on hand a supply of excellent YEAST.
BUTTER AND EGGS.
WANTED, for which I will pay the highest Market price, in goods, out of my saloon.
CIGARS AND TOBACCO!
I also keep constantly on hand a good article of superior tobacco and cigars.
Lager Beer,
of the best quality, constantly on hand.
THE HUNGRY,
Will do well to give me a call, when in town.—My terms are reasonable, as I believe in the motto—
"LIVE AND LET LIVE."
Give me a call, everybody, and examine my stock. Don't forget the place.
SALOON on Commercial Street, opposite Free

Figure 7. Grocery and dry good advertisements from the Emporia News, dated July 12, 1862.

Clothing-Related Items

The 1973 Baker store excavations yielded 318 clothing-related artifacts (Appendix). They are identified as cloth, fibers, and footwear fragments with complete and fragmented buckles, suspender hooks, overall rivets, and buttons, the latter accounting for 83.3 percent of clothing-related items. Buttons (Figure 9 and see Kansas Memory) made of shell, white glass, jet, metal, and bone in 2-hole, 4-hole, shank, loop, Sander's, Prosser, piecrust, and dish styles are distinguished, including a single domed gaiter button from a shoe. Some buttons are plain with solid colors, while others are decorated with bands, flora, stars, sunbursts, stippling, and calico patterns. Two General Service military buttons were recovered. Blasing (2018:37–38) documented that the Last Chance Store was used by the 2nd Colorado in 1863, so it is not unreasonable to conjecture military traffic on the nearby Santa Fe Trail. One of the suspender hooks advertised "FARMER'S BRACE," and two suspender slides have faint lettering, one of which may read "N M C" (see Kansas Memory). At this time no further information on these could be obtained.

Even though the Baker store had a shorter occupation than the Last Chance Store, the collections are not dissimilar when comparing footwear and clothing fastener counts. Both have numerous common white glass buttons, surely a basic need for both trail travelers and local customers. Preservation is much better for cloth and thread at the Last Chance Store (n = 156) than at the Baker store (n = 14), undoubtedly because of the fire at the latter.

Containers

A total of 5,294 artifacts are classified as containers, the largest category (33.1 percent) of the Baker store collection. Most specimens are bottle sherds (n = 4,230, 79.9 percent) that cannot be typed. However, some are recognizable as having once held beer (n = 27), soda pop (n = 27), and wine (n = 59). One complete ink bottle (Figure 10) and two sherds from a Cathedral bottle that might have held pepper sauce are identified (see Kansas Memory).

Four toiletry bottles include one clear glass base with a "T" maker's mark. According to Toulouse (2001:575) this is the mark for Verreries de Graville A. Tourres et Cie, S.A. in Le Havre, France. Several sherds are determined to have medicinal or pharmaceutical content (see Kansas Memory), particularly one patent medicine bottle that has "CHEMIST" on one panel, possibly from G. W. Merchant of Lockport, New York, manufacturing liniments and curatives from 1833 to 1900 (Lindsay 2020; Meyer

Figure 8. Interior view of Al Nichol's General Store in Osborne, Kansas, circa 1895. Courtesy of kansasmemory.org, Kansas Historical Society.

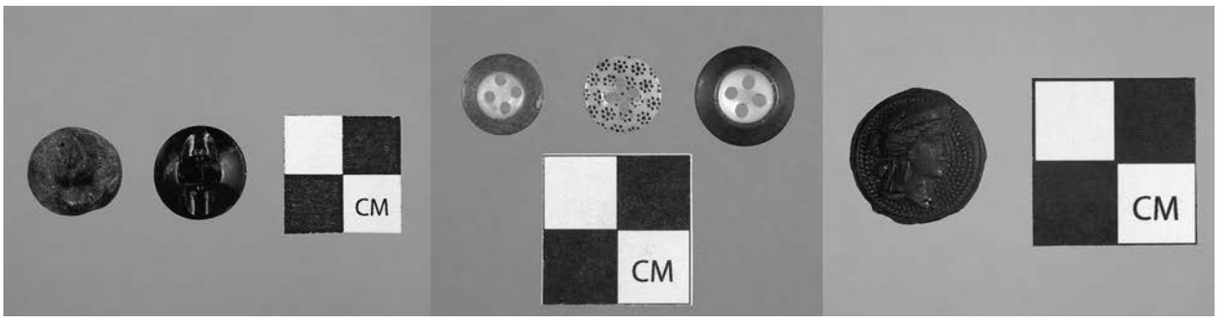


Figure 9. Assortment of buttons. Courtesy of kansasmemory.org, Kansas Historical Society.

and Meyer 2012). Twenty-seven body and base sherds represent bitters bottles. Some are from a Hostetter's bitters bottle. Dr. Jacob Hostetter and his son David developed and manufactured bitters in Lancaster, Pennsylvania, in 1853 (Fike 1987:36). Like many medicines of the age, Hostetter's bitters consisted mostly of alcohol, helping to assure their popularity.

There are 308 glass sherds identified as jars. Several have embossed pentagrams or five-pointed star polygons, and another has an embossed "A," but none can be described further (see Kansas Memory). The jars probably held fruits or vegetables for sale. Of the many tin cans, six originally contained meat, while others likely held fruits or vegetables. A barrel band was unearthed in the northeastern section of the cellar. Within the barrel band was a large section of charred wood, a dowel, a hoop fastener, a hinge, a nail, and a metal strap (Figure 11). A barrel bottom was exposed in the southwest quadrant of

Figure 10. Cone or conical ink bottle or inkwell. Courtesy of kansasmemory.org, Kansas Historical Society.

the cellar. Canning jar lids, liners, cork fragments, and a screw band type closure were recovered. Two glass bottle stoppers, one black and one clear (see Kansas Memory), and pry-off metal caps complete the container items.

It seems that Baker might have had a wide variety of groceries and supplies for sale: a few toiletries from exotic places; the standard medicines of the day; fruit, vegetables, and meats in jars and cans; and barrels of flour and sugar. Eight miles away the Last Chance Store in Council Grove advertised much of the same merchandise in addition to fresh fruits and vegetables, butter, and eggs (Blasing 2018:39). As Baker was also a farmer and stockman, he might have sold fresh produce, too.

Cookware

Thirty artifacts served as cookware, including cast iron and copper kettle fragments, cast iron cooking pot fragments, and a few stoneware bean pot sherds in different colors that indicate at least two vessels (Appendix). It seems unlikely that a great deal of cooking occurred at the store, so these objects probably represent inventory.

Table and Utilitarian Wares

A total of 2,872 artifacts are identified as having a table or utilitarian ware function (Appendix). They provide examples of luxury and essential goods, such as glass tumblers, mug, shot glass, stemware sherds, and one metal mug handle. Also recognized are fragments of an earthenware jug that might have held contents for sale, the remnants of a glass poultry waterer decorated with a star, decorated glass vase sherds, and numerous fragments of one or more stoneware chamber pots. The earthenware and redware crockery sherds display assorted colors, and several are decorated with a blue floral pattern. At least five different crocks are present in 1-gallon, 3-gallon (two different crocks), and 10-gallon (two different crocks) sizes (Figure 12). Several crockery fragments exhibit exterior salt-glazes or Albany-glazes. The crocks might have held commodities for sale, were for sale themselves, or had both uses.

Figure 11. Barrel band, exposed in the northeast quadrant of the cellar.

Figure 12. Reconstructed three-gallon crock rim section. Courtesy of kansasmemory.org, Kansas Historical Society.

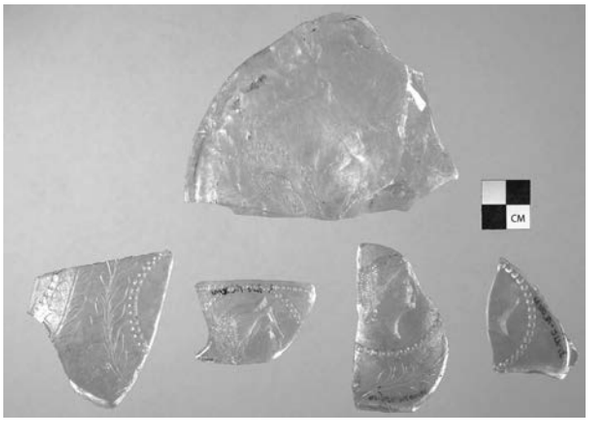


Figure 13. Mold-pressed serving dish fragments. Courtesy of kansasmemory.org, Kansas Historical Society.

Nearly a third (n = 893, 31.1 percent) of the table and utilitarian wares are glass and whiteware sherds that can be identified only as either a table setting or serving function. Tableware pieces consist of bowls, cups, plates, and saucers. This surely represents stock and not Baker's personal possessions. Most dishes are undecorated whiteware with some examples of spongeware, hand painted, transferware, shell edged, banded, flow blue, and pressed glass decorated ware (see Kansas Memory). The burned condition of many dishes makes it difficult to discern decoration and original color. A single metal cup handle is surprisingly the only tinware recognized in the collection.

Serving items comprise mixing and serving bowls, a sugar bowl, a butter pat (for serving butter), candy dishes, a cruet, pitchers, platters, and a teapot. Materials are glass, stoneware, porcelain, and yellowware. Decorations are much the same as those for tableware with the addition of Rockingham or Bennington patterns. Ten clear glass sherds, etched and molded in a floral pattern with a beaded edge, might have been part of a stemware and pitcher set for sale. Nineteen clear glass sherds are molded with a series of beads below the rim and around a profile of Lady Liberty or a Greek lady (Figure 13). Different rim styles and shapes suggest a set of dishes that include pitchers, serving bowls, dessert bowls, and possibly a vase.

Several table setting and serving dish bases have complete or partial pottery maker's marks (Figure 14, Table 1). All identifiable marks indicate English imports. One soup dish is distinguished by its shape name, the "President Shape," rather than a maker's mark. Kowalsky and Kowalsky (1996:185) denoted the shape name as being used by John Edwards (or John Edwards and Co.) of England between 1847 and 1900. Several marks from the Meakins family of potteries in England are present (Kowalsky and Kowalsky 1996:275–278). A puzzling sherd has a maker's mark listing "BISHO." The only reference to a Bishop pottery was Powell and Bishop of England, but they did not begin production until 1865 (Kowalsky and Kowalsky 1996:310–311). If manufactured by Powell and Bishop, this dish was deposited after the 1862 burning. Several sherds bear the maker's marks of the Wedgwood pottery. The spelling of Wedgwood changed over time, and the Baker store examples date from 1860 to 1895 (Kowalsky and Kowalsky 1996:364). Another mark advertised Burgess and Goddard of Trenton, New Jersey, importers representing several English potteries from the 1840s through the 1890s (Kowalsky and Kowalsky 1996:133).

Table and utilitarian wares compare well with those recovered from the Last Chance Store, with similar counts for dishes and crockery, decorative styles, and some of the same maker's marks. Likely both businesses purchased some goods from the same or similar suppliers, exporters, and importers, choosing popular merchandise that would sell well. Also, later occupants of 14MO367 probably

Figure 14. Selected dishes with maker's marks. Courtesy of kansasmemory.org, Kansas Historical Society.

Table 1. Pottery Makers Marks from 14MO701.

Potter of Mark	Location	Time Period	Reference
C. & W. K. Harvey	Longton, England	1835–1853	Kowalsky and Kowalsky 1999:226
John Edwards & Co.	Staffordshire, England	1855–1858	Kowalsky and Kowalsky 1999:184–185
Wedgewood Company	Tunstall, England	1860–1895	Kowalsky and Kowalsky 1999:364–367
Anthony Shaw	Tunstall, England	1851–1900	Kowalsky and Kowalsky 1999:332–333
J. & G. Meakins	Hanley, England	1851–1970	Kowalsky and Kowalsky 1999:275–276
Burgess & Goddard, Importers	Trenton, New Jersey	1840s–1890s	Kowalsky and Kowalsky 1999:133

would have possessed identical items. Differences arise when considering certain objects: flowerpots, for instance. The Baker store had no recognizable examples, while the Last Chance Store yielded 59 fragments in addition to earthenware bowls unearthed along a sidewalk that Blasing (2018:93) surmised were used as flowerpots. These might well come from occupations that postdate the commercial use of the building.

Flatware

Forty-five artifacts are classified as having a flatware, cutlery, or utensil function (Appendix, see Kansas Memory). As mentioned before, cooking would have been an uncommon activity in the store, so these must have been inventory, mostly concentrated on everyday eating utensils but with a few specialized cooking implements. The flatware count compares favorably with that from the Last Chance Store, where more than 20 flatware and utensil fragments were recovered, with more emphasis on flatware than on utensils and cutlery (Blasing 2018:98, 100–101). Cooking did take place at the Last Chance Store.

Organic Material

Organic materials were sorted into five subcategories: food fauna, other fauna, food flora, other flora, and other. Many are incomplete, making it difficult to decide in which group a given specimen might belong. Guidelines for placing pieces in the food fauna subcategory were signs of butchering (cut marks) or cooking (color change), large size, or element of an animal typically eaten (e.g., beef, pork, poultry). Color change is perhaps the least diagnostic of these characteristics when the artifacts in question have been through a fire. For the most part, the criteria apply to food flora rather than other flora.

The 2,237.1 g of food fauna remains include venison, beef, pork, poultry, and fish (Appendix). As a nearly complete articulated hog skeleton (Figure 15) was recovered, it is not surprising that pork remains account for more than half of the subcat-

Figure 15. Pig skeleton, exposed in the northeast quadrant of the cellar.

egory (1188 g, 53.1 percent). The presence of the skeleton in the northeast quadrant of the excavation may indicate a hog carcass hanging in the cool cellar or a livestock pen nearby. If the latter were the case, one can imagine the smell surrounding the premises and wonder why Baker chose to keep a hog so close. Fewer other fauna remains (1,072.2 g) were typified by mussel shell, gastropods, rodents, squirrel, turtle, and other unidentified remains. This assemblage would benefit from inspection by a zooarcheologist.

Food flora accounts for 723 g and is recognized as corn, melon, peach, walnut, other nuts, wheat, and oats, based on seeds, pits, shells, and cobs. However, the KSTC crew took only samples of corn cobs, grain, and nuts, leaving a large amount of burned remains. One account (Leitnaker 1973:4) mentioned ". . . a lot of burned grain," and a grain distribution map (Figure 16) supported this observation. A small amount of other flora (27 g) in the form of unidentified seeds also is present. Finally, 3,540 g of mud dauber's nests and fossils make up the entire subcategory of other organic material.

Some pork, beef, and venison might have been sold at the store, although it must have been hard to keep fresh during the hot summer months. Smoking or pickling would have helped in meat preservation. Not so for the corn, nuts, wheat, and oats. These grains might have been hung from the rafters or kept in lidded containers or barrels and probably represent goods for sale. What about the mud dauber nests? Surely the excavators were not collecting (and saving, much to the lab director's chagrin) these nests for dating purposes. No, it is likely that they were built under a protective overhang and may delineate the outer structure walls. Perhaps these nests would fit better within the construction materials category.

Weights in the fauna subcategories compare well with those from the Last Chance Store, even though that building had a much longer period of occu-

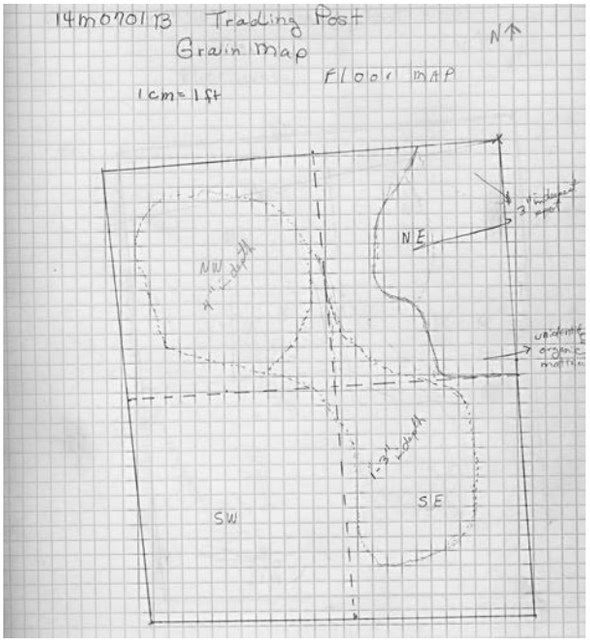


Figure 16. Grain distribution map of the "Trading Post" floor, created during the 1973 KSTC field school.

pancy. However, the species of the plant remains differ. The 14MO367 excavation revealed numerous nuts, such as black walnuts, pecans, peanuts, and acorns, but little in the way of corn, wheat, or oats from the earlier occupations, while 14MO701 had some nuts and walnuts but plenty of grain. Advertisements for the Last Chance Store specifically mentioned corn and oats as available commodities (Blasing 2018:Figure 45), rendering the differences between the two sites a matter of artifact preservation.

Personal Items

Classified as personal items are 150 artifacts (Appendix). The majority (n = 124, 82.7 percent) of this category are clay pipe bowls and stems, including one stem that was broken and repaired (Figure 17 and see Kansas Memory). Of several decorated pipe bowls, one bears lettering "MURRAY" on one side and "—ASGOW" on the other (Figure 17). William Murray of Glasgow, Scotland, manufactured pipes like this one from 1830 to 1891 (Museums Victoria Collections 2020).

A few objects are related to sewing: a straight pin fragment, two thimbles, and a single handle or bow from a pair of scissors. A thumbtack, fountain pen nib, slate pencil segments and slate board fragment with two incised lines (Figure 18), and binder clip constitute office supplies. As the first patent for binder clips was granted in 1910 (Baltzley 1910), this clip could have been left by the archeological crew in 1973. Also characterized as personal items are trunk decorative pieces and plates, eyeglasses lens, glass beads, jewelry chain links, cuff link stud decorated with red glass, and Morgan silver dollar (see Kansas Memory).

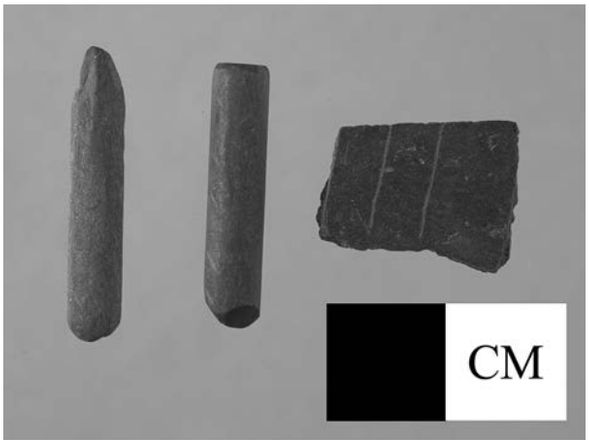


Figure 18. Slate pencils and a slate board fragment with two incised lines. Courtesy of kansasmemory.org, Kansas Historical Society.

Finding many pipe fragments at a nineteenth-century archeological site is not unexpected. The brittle pipe stems often were broken off, either accidentally or purposely to refresh the bit ends that became increasingly fouled with tobacco residue. Baker's stock probably contained some pipes for sale, but the pipe fragments also might represent the activity of customers enjoying a smoke while waiting for service and visiting with each other.

Not finding more straight pins or needles is surprising because they were needed in a time of handmade clothing and clothing repairs. As shown in the clothing-related items section, there was no shortage of buttons. Perhaps pins and needles were too fragile to survive intact, through the fire or the years following excavation.

The slate pencils and slate board likely were used for record keeping. Finally, a Morgan silver dollar

Figure 17. Pipe stems and bowls, including a stem at the far right with "MURRA" pressed into the mold. Courtesy of kansasmemory.org, Kansas Historical Society.

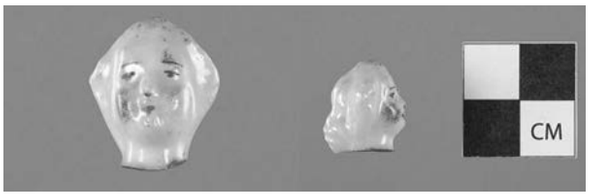


Figure 19. Porcelain figurine or doll head. Courtesy of kansasmemory.org, Kansas Historical Society.

was unearthed near the barrel bottom in the southwest quadrant. Morgan silver dollars were minted from 1878 to 1921. This example has a mint date of 18-9, specifying that it was minted in 1879, 1889, or 1899 and, therefore, is intrusive.

Blasing's report (2018:73–74) contained some interesting evidence of smoking (tobacco tags and matchsticks), possibly indicating that tobacco was sold at the Last Chance Store. However, no pipe fragments were recovered. Found in abundance were more than 290 straight pins, sewing needles, thread spools, thread, fabric, and scissors (Blasing 2018:79), as well as more slate pencils. Some or all of these artifacts could reflect the longer occupation at the Last Chance Store and its use as a residence.

Recreation Items

Sixteen toys from the Baker store include part of a tea set, a cast iron cannon barrel, a clay marble, figurine fragments, and china doll fragments (Figure 19, Appendix, see Kansas Memory). While these toys might have belonged to Baker's daughter Sarah, it seems improbable that she left them in the store that had been closed for more than a month. Perhaps they were luxury goods for sale.

Comparing these artifacts to those from the Last Chance Store (Blasing 2018:51–53) reveals similar things in slightly larger quantities: 7 different doll fragments and 23 clay marbles. The longer occupation at the Last Chance Store allowed for the accumulation of additional recreation items, like dominoes, dice, and more recent objects.

Toiletries

Sixteen artifacts are identified as toiletries: combs, mirrors, a straight edge razor, and toothbrushes (see Kansas Memory). Several toothbrush handle fragments were refitted, revealing the French inscription "BROSSES DE PARIS," which translates as

Figure 20. Toothbrush handle, labeled "BHOSSES DE PARIS." Courtesy of kansasmemory.org, Kansas Historical Society.

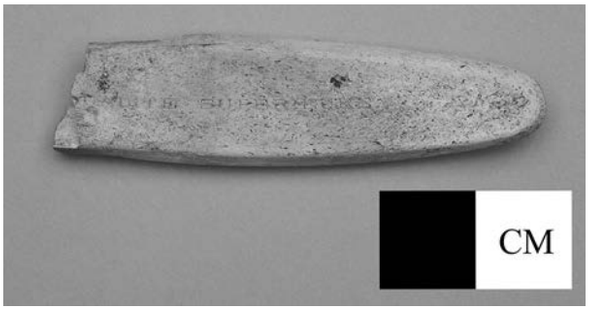


Figure 21. Toothbrush handle, labeled "QUALITE SUPER-URE." Courtesy of kansasmemory.org, Kansas Historical Society.

Brushes of Paris (Figure 20). While nothing further could be discovered regarding this marking, Samford (2017) noted that around 1840/1850 names and trademarks began to be imprinted on toothbrush handles. Another toothbrush handle (Figure 21) has the lettering "QUALITE SUPER-URE," but again no information could be found.

Apparently toiletries did not feature prominently in Baker's stock, but rather he carried just a few articles, such as a comb or two, a razor, and a few toothbrushes, at least one of which traveled far to reach Kansas. Many of the toiletries described in

Blasing's (2018:125) Last Chance Store report were more modern than those recovered from the Baker store.

Building and Property-Related Materials

Many artifacts from the 1973 KSTC excavation are related to the store structure and nearby outbuildings: hardware fasteners, construction materials, window glass, utilities, byproducts, furniture or appliances, harness and horse-related equipment, tools, farm machinery, and miscellaneous hardware. Other objects are difficult to differentiate, as they were not part of the building nor were they commodities for sale. These consist of specimens dating prior to the Baker occupation, firearms and ammunition, and unidentified items. There may be some crossover between structure-related artifacts and merchandise. These categories are examined below.

Hardware Fasteners

Many types of hardware fasteners were used in the building's construction, and some were likely also part of Baker's goods for sale (Appendix). Artifacts in this category comprise 20.5 percent (n = 3,273) of the total artifact count. The majority are cut nails in lengths ranging from 1 inch (2d, "d" being the abbreviation for pennyweight, the unit of measure for nail length) to 5 inches (40d). The 8d or 2.5-inch size (n = 2,941) was the most common. Bolts, including four carriage bolts; cotter pins; hooks, including one hand-wrought; spikes; spacer; tacks; screws; rivets; pins, including a picket pin; nuts; washers; fence staples; and roofing discs complete the hardware fastener collection.

Hardware items certainly were for sale at the Last Chance Store, where the word 'HARDWARE' was featured in prominent type in advertisements (Blasing 2018:Figure 45). About 3,200 cut nails, complete and fragmentary, were recovered. Although both stores had wood floors, stairs, and furnishings, would stone structures have needed thousands of nails for construction, or do at least some of these represent sale goods?

Construction Materials

Artifacts classified as construction materials are brick, limestone, wood, concrete, putty, metal, plaster, paint, and wire mesh screen (Appendix). Photographs taken at the conclusion of excavations (Figure 22) revealed that limestone figured prominently in the cellar walls and foundation of the store. Not surprisingly, some of the wood, plaster, and the single paint chip are burned.

Window Glass

A total of 1,295 window glass fragments (Appendix) were recovered from the 1973 KSTC excavations, signaling that windows were part of the build-

Figure 22. View to the north across the finished 1973 excavation with field school participants.

ing rather than that complete windows were for sale. Aqua-tinted glass accounts for 87.5 percent and clear glass for 12.5 percent of the collection. Scharfenberger (2004) contended that color is a reliable indicator of economic status and stated that dark green and thicker opaque panes with poor visibility were used by the lower classes. One wonders if Baker would have agreed with this assessment of his socioeconomic position, but window glass did come dear in Kansas in the 1850s and 1860s.

Excavation data established that two windows were present at the cellar level on the north and south sides of the structure, and likely there were one or more windows on the ground level. However,1,295 glass fragments are just over a quarter of the flat or window glass that was recovered from the Last Chance Store, where most of the aqua tinted glass was concentrated within the crawl space (Blasing 2018:126).

Utilities

Numerous utility-related items are subdivided by the functions of electrical, heating, lighting, and plumbing (Appendix). The electrical category contains some modern wire and insulators. The telegraph had connected the east and west coasts of the United States by fall 1861, so it is just possible that the glass insulator fragments were from 1862. A stove pipe and cast-iron leg, grate, door, and frame fragments attest to the presence of a stove in the store. Pipe, pump handle fragments, and a portion of a windlass indicate that a well and/or pump was not too far away.

Not only was light allowed into the building through possible windows and an open door, but burners, thumbscrews, mantles (see Kansas Memory), and 125 fragments of chimney glass provide evidence of lamps. One cut glass lamp base suggests that at least a few lamps were quite fancy. Some lamps or lanterns might have been for sale, but four zinc fixture plate fragments demonstrate that a light fixture was installed. The pieces (Figure 23) are impressed with wording "LIQUID CORNELIUS & BAKER GAS F," "AND," and either "HAT" or "MAT." Thus, the fixture was made by the firm of Cornelius and Baker of Philadelphia, Pennsylvania, who were "manufacturers of lamps, gas fixtures, Et Cetera" from 1835 to 1869 (Library of Congress 2015). Not surprisingly, the Last Chance Store had similar artifacts (Blasing 2018:80–81), as it operated during the age of coal oil and kerosene lighting.

Byproducts

Byproducts were measured in grams rather than counted. They total 2,516.5 g and include coal, clinkers, slag, an unknown burned material, a lead sprue, and 739.5 g of charcoal (Appendix). Some of the wood discussed under the construction materials category may fit more properly in the byproducts category. Even so, the amount of burned wood and charcoal seems small for a site that was burned to the ground. Two possible scenarios come to mind: the KSTC excavators in 1973 may have decided not to collect all of the charcoal or nearby Rock Creek might have flooded when the site was exposed and carried off some of these artifacts. Currently there are no clear answers.

Furniture and Appliances

The 119 items in the furniture and appliances category are subdivided into furnishing or structural artifacts, furniture fragments, and appliances (Appendix). Furnishings and structural artifacts, which helped the structure function, consist of 16 strap and butt hinge fragments, a door pull, doorknob fragments, latch hooks, and door lock fragments. Furniture-related objects comprise casters, a fragment of wood with a small butt hinge, and photograph or daguerreotype frames. Appliances are

Figure 23. Fragments of a Cornelius and Baker lighting fixture. Courtesy of kansasmemory.org, Kansas Historical Society.

represented by a crank handle for a small appliance (see Kansas Memory), clock gears, a pendulum rod, and a pendulum.

A dim picture emerges of how the Baker store interior might have appeared. A clock ticked. A few chairs were arranged around a stove. Tables or counters were there, and at least one piece of furniture, perhaps a table, desk, or even counter top, was hinged with an extension. A door led inside, and a hinged door gave access to the cellar below. Baker's store might have been similar to that of Nichol's General Store, shown in Figure 8. Blasing (2018:104) noted clock parts, keys, hinges, and possibly a stove at the Last Chance Store, although these things might be considered standard in any building.

Harness and Horse-Related Equipment

Among other occupations, Baker was a blacksmith, so it would be strange if no horse-related equipment for sale or for use in repairs were reflected by artifacts at the site. Thirty-seven specimens classified as harness or horse-related include two complete horseshoes, one horseshoe fragment, and an ox shoe (Appendix, see Kansas Memory). The horseshoe fragment and the ox shoe each have two nails still attached, and another used horseshoe nail was recovered. A complete jointed O-ring bit, rings from either a single or double tree, clips from a trace, a harness ring, fragments from the hames portion of a collar, and buckles (girth, center bar, half, and roller) were unearthed. Unlike the 14MO367 collection (Blasing 2018:105), no leather harness fragments were found during the 1973 KSTC excavation at 14MO701; otherwise the two assemblages are quite comparable.

Tools

Baker store excavations yielded 35 tools and tool fragments (Appendix): whetstones, a drill brace bit, an axe head, wrenches, a pulley and tackle fragment, a clamp, shovel parts, a trowel, a gouge, files, a thermometer, a sextant fragment (see Kansas Memory), a compass needle, and an assortment of tool handles, tangs, ferrules, or blades. Some of these might represent Baker's personal tools, but others probably were for sale, although it is easy to imagine the thermometer nailed outside the front door or on a bracket by a window.

These constitute a greater number and a wider variety of tools than those recovered at the Last Chance Store (Blasing 2018). If any significance is attached to these differences, it may lie in the fact that Baker was a blacksmith.

Horse-Drawn Vehicles and Farm Machinery

Six artifacts in this category are identified as wagon parts: a wagon staple, two brake levers, a coupler, a toolbox hook, and a rod (Appendix). They could represent a horse-drawn vehicle parked near the building or standard replacement parts for sale or for Baker's use in the smithy. Other items are classified as farm machinery, used after the structure burned: mower knives, corn sheller fragments, a drive chain, a hitch, and cast iron fragments that likely were part of some type of farm machinery. Blasing (2018:105) documented two wagon parts from the Last Chance Store, both wagon bolts.

Miscellaneous Hardware

A total of 1,316 artifacts are lumped as miscellaneous hardware (Appendix). The majority (n = 882, 67 percent) are metal fragments, unable to be further described. Also included are chain links, wire strands, a ring with charred wood attached, a spring, a gate latch, numerous bucket fragments, strap metal that possibly were barrel band segments, and round and flat bar stock. The latter might have been used in blacksmithing. Thirty strands of barbed wire were more recent intrusions, as many were patented after 1876. The specimens in this category might have been sale goods or components of the building and surrounding area.

Artifacts Prior to Baker Occupation

Nearby Kaw tribal members might have been customers at the Baker store from time to time. However, evidence of American Indian activity at the site prior to the construction of the store and house was found in the area of the 1973 KSTC excavations: modified bone, debitage, chipped stone tools, and trade beads (Appendix). Most are fragmentary, but a Fresno arrow point (Figure 24) and a side scraper are complete. Three complete round blue glass trade beads (Figure 25) date to a later time period than the arrow point.

Blasing (2018:107) believed that most of the pre-

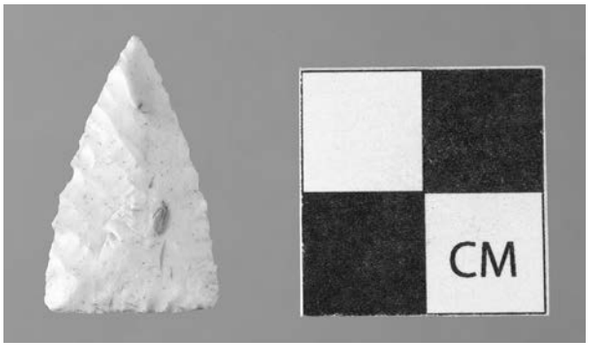


Figure 24. Fresno arrow point. Courtesy of kansasmemory.org, Kansas Historical Society.

Figure 25. Blue glass trade beads. Courtesy of kansasmemory.org, Kansas Historical Society.

historic artifacts at the Last Chance Store came from disturbed contexts. The same supposition may apply at the Baker store. A few items were recovered from deeper within the excavations: a bead from 2.86 feet and a flake from 2.38 feet. Most were located between the surface and 26 inches. Several objects definitely were displaced, as they were retrieved from backdirt piles. Shimeall (2012:62) stated that Baker traded with local Native Americans, and the Kaw tribe was located nearby. Perhaps the beads were meant for trade with the Kaw, but it is doubtful that Baker was trading in chipped stone tools or debitage. The Baker store and the Last Chance Store shared a location along a trail used by Native Americans long before it was named the Santa Fe Trail.

Firearms and Ammunition

Considering the events immediately prior to the burning of the store, one might be forgiven for raising an eyebrow in surprise at how few firearm-related artifacts were recovered. Shimeall (2012:65) noted that the 1972 KSTC excavations found unspent shells and gun parts at the doors and windows of Baker's house. Of 29 specimens in this category, 9 (31 percent) are pocketknife frames and blades (Figure 26, Appendix, and see Kansas Memory). A lock plate, trigger guard, gun forestock attachment, and cleaning rod and cap from a gun cleaning kit represent the firearms. Three primer caps (one exploded), two lead balls (.30 and .32 caliber), cartridge casings, and 12-gauge shotgun shells constitute the ammunition (see Kansas Memory). A partial gunflint was fashioned of local chert from the Flint Hills region (Figure 27). One of the cartridges with a headstamp is impressed with "J.G.", the headstamp for Joseph Goldmark of New York, New York, whose firm manufactured ammunition during the Civil War period (Cruse 2017; Thomas 1998).

Were the artifacts in this category goods for sale, used for defense, or a product of later hunting activities? The pocketknives likely were store products. The gun parts, cleaning kit pieces, lead balls, primer caps, and Goldmark ammunition seem insufficient for defense purposes or merchandise. However, one account does state, "Baker buckled on a pair of

Figure 26. Pocketknife, cleaned by electrolysis. Courtesy of kansasmemory.org, Kansas Historical Society.

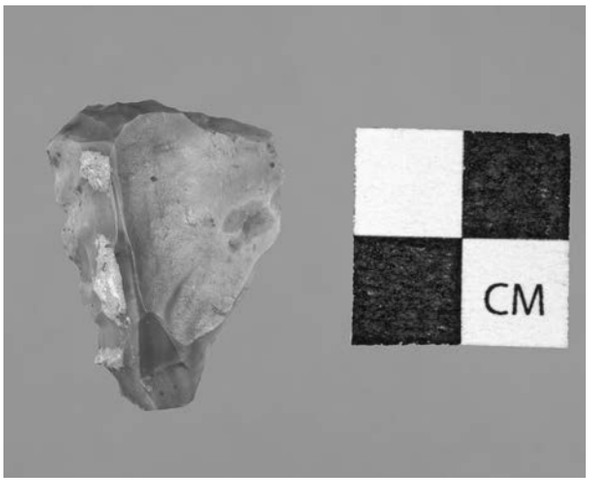


Figure 27. Partial gunflint, made of local Flint Hills chert. Courtesy of kansasmemory.org, Kansas Historical Society.

revolvers . . ." before his last trip to the store, and it is with one of these that Baker shot and wounded Jim Anderson (Maloy 1891:8). Quite possibly additional ammunition was exploded and burned during the fire.

In contrast, 185 guns and ammunition artifacts were discovered during the Last Chance Store excavation. However, Blasing (2018:73) attributed most of these to the 1880–1930 time period.

Unknown Artifacts

A small number of fragments of cuprous, plastic, and rubber materials could not be further identified (Appendix). Also placed in this category are naturally occurring river gravels.

CONCLUSIONS

Focusing on the three research questions, conclusions can be drawn nearly 50 years after excavations at the Baker store took place, even though the researcher who directed the field school is no longer present and some artifacts have deteriorated to the point of unrecognizability in the intervening years.

Research Question 1. Can the types of goods for sale in the Baker store be inferred from the archeological remains? Despite the Baker store being burned to the ground in 1862 and its location almost forgotten by posterity, the 14MO701 artifact collection, excavated by Dr. Brown and his 1973 KSTC field school students, has answered this research question. Baker's inventory included groceries, fresh and preserved in cans, bottles, jars, and barrels. Materials needed for repairs, such as nails and tools, were available, with blacksmith Arthur Baker standing by. Basic necessities like patent medicines, dishes, buttons, pipes, footwear, and chamber pots were stocked, perhaps more for local trade than travelers passing on the Santa Fe Trail. Luxury items featured toiletries, sardines, French toothbrushes, toiletries, toys, and dishes imported from England. The latter were more prestigious in name than in actual cost, as substantial amounts of English ceramics were mass produced and exported to cheaper markets in the United States (Birks 2021; Kowalsky and Kowalsky 1996:84).

Research Question 2. How do the goods for sale at the Baker store compare to those at the Last Chance Store in Council Grove? The lengths of occupation and preservation conditions were vastly different between the businesses, but some comparisons are possible. For example, little in the way of remains of fresh groceries were recovered from the Last Chance Store, but newspaper advertisements document that these were sold there. No advertising exists for the Baker store, but charred corn and other grains indicate that unprocessed commodities were stocked.

The advertisement for T. C. Hill and Co. (Blasing 2019:Figure 45) served not only as a checklist of items for sale at the Last Chance Store, but also what probably was available at the Baker store. Some of these are present in the archeological record of 14MO701 but do not appear at 14MO367. Why does the Baker store have no straight pins but many pipe fragments and the Last Chance Store have numerous straight pins but no pipe fragments? Did the Baker store sell pipes, while the Last Chance Store did not? Were straight pins preserved at the Last Chance Store but not at the Baker store? Intriguing questions remained to be answered.

Research Question 3. What can the goods at the Baker store tell about the intended customer base—Santa Fe Trail, local, or both? The Baker store certainly carried the basics needed for travel on the Santa Fe Trail: food, drink, and tools used in repairing or replacing equipment from clothing to wagons. Baker would not have located his enterprise, his smithy, and his house along the trail had he not

seen this as boon to trade. However, he always had greater aspirations and anticipated that Agnes City would grow into a prosperous community with him as the leading citizen. Merchandise like toothbrushes from France, toys, fine dishes, and fancy buttons speak of plans for nearby clientele coming to Agnes City to shoe a horse or shop for supplies. They would stay awhile, pick up their mail or learn the news, and go home feeling that they had been somewhere special . . . or so might be imagined.

ACKNOWLEDGMENTS

Completion of this project would not have been possible without the expert assistance of the volunteers at the KSHS archeology lab and at several KATP field school labs. These dedicated individuals are too numerous to mention, but I appreciate their generous contribution of time to processing the collection. Two volunteers deserve further acknowledgment: the late Paul Goebel (1952–2019) was instrumental in helping untwist the various threads of the events leading to the death of Baker and the burning of the store, and Mary Conrad offered encouragement and valuable research suggestions, oftentimes undertaking that research herself. Tim Weston helped me see what archeology was occurring in the pictures from 14MO701, sometimes the only record to be had. Tim Weston, Trisha Waggoner, Nikki Klarmann, and Ben Epps undertook the artifact photography for Kansas Memory and this article. Sherri Chaturvedi created the map in Figure 1. If this story is at all readable, it is due to the expertise of Virginia Wulfkuhle, editor and friend. One cannot begin to understand Arthur I. Baker without studying Dr. Michael Shimeall's Master's thesis and later publications on the man. As always, this work is truly for my dad, who imparted his love of history to a willing daughter.

REFERENCES CITED

Baltzley, Louis E.
1910 Paper-binding clip. U.S. patent 1,139,627 A. United States Patent and Trademark Office, 18 May 1915.

Birks, Steve
2021 Ironstone. Electronic document, http://www.thepotteries.org/types/ironstone.htm, accessed March 7, 2021.

Blasing, Robert K.
2018 The Little Stone Store on the Santa Fe Trail: Findings of the 2016 KATP Field School at the Last Chance Store (14MO367) in Council Grove, Kansas. *The Kansas Anthropologist* 39:33–113.

Costa, Delbert, and Lola Costa
1994 Letter on file. Archives, Kansas Historical Society, Topeka.

Cruse, J. Brett
2017 *Battles of the Red River War*. Texas A & M University Press, College Station.

Emporia News
1862 Advertisements. *Emporia News*. 12 July:4.

Fike, Richard E.
1987 *Bottle Book: A Comprehensive Guide to Historic Embossed Medicine Bottles*. Peregrine Smith Books, Gibbs M. Smith, Inc., Salt Lake City, Utah.

Hays, Jes
2012 Back In My Time: A Writer's Guide to the 19th Century. Electronic document, http://backinmytime.blogspot.com/search?q=the+general+store, accessed April 16, 2020.

Kansas State Teachers College
1972 History in Our Own Backyard. *Alumni News* 51(2): 10–13.

Kowalsky, Arnold A., and Dorothy E. Kowalsky
1996 *Encyclopedia of Marks*. Schiffer Publishing, Ltd., Atglen, Pennsylvania.

Leitnaker, Tom
1973 Archaeology Sights and Sounds. *The Summer Bulletin* 72(37):4.

Library of Congress
2015 Cornelius & Baker, 181 Cherry Street, Philadelphia. Manufacturers of Lamps, Gas Fixtures, Et cetera. *World Digital Library*. Electronic document, https://www.wdl.org/en/item/9471/, accessed May 13, 2020.

Lindsay, Bill
2020 Bottle Typing/Diagnostic Shapes. *SHA/BLM Historic Glass Bottle Identification & Information Website*. Electronic document, https://sha.org/bottle/medicinal.htm, accessed April 29, 2020.

Maloy, John
1891 History of Morris County Chapter XI. *Council Grove Republican* 20 March:8, Council Grove, Kansas. Electronic document, https://www.newspapers.com/clip/16219914/history-of-morris-county-by-john-maloy/, accessed May 19, 2020.

Meyer, Ferdinand, and Elizabeth Meyer
2012 Merchant's Gargling Oil–"Good for Man and Beast." Electronic document, https://www.peachridgeglass.com/2012/08/merchants-gargling-oil-good-for-man-and-beast/, accessed April 29, 2020.

Museums Victoria Collections
2020 Object: Clay Pipe–Ceramic, Cutty, William Murray, Glasgow, Scotland, circa 1830-circa 1891. Electronic document, https://collections.museumvictoria.com.au/items/1545576, accessed April 28, 2020.

Samford, Patricia
2017 Bone Handled Toothbrushes. *Diagnostic Artifacts in Maryland*. Electronic document, https://apps.jefpat.maryland.gov/diagnostic/SmallFinds/Toothbrushes/index-BoneHandledToothbrushes.html, accessed May 9, 2020.

Scharfenberger, G. P.
2004 Recent Evidence for Broad Window Glass in Seventeenth- and Eighteenth-Century America. *Historical Archaeology* 38:59–72. Electronic document, https://doi.org/10.1007/BF03376669, accessed May 8, 2020.

Shimeall, Michael
1978 Arthur Inghram Baker: Frontier Kansan. Master's thesis, Division of Social Science, Emporia State University, Emporia, Kansas.
2012 Judge Barker (sic) and the Vengeance of "Bloody Bill." *Symphony in the Flint Hills Field Journal*. Electronic document, https://newprairiepress.org/sfh/2012/stories/8, accessed May 13, 2020.

Thomas, Dean S.
1998 Federal Ammunition for Civil War Breechloading Carbines and Rifles. *American Society of Arms Collectors Bulletin* 78:3–19. Electronic document, https://americansocietyofarmscollectors.org/wp-content/uploads/2019/06/1998-B78-Federal-Ammunition-for-Civil-War-Breechl.pdf, accessed May 8, 2020.

Toulouse, Julian Harrison
2001 *Bottle Makers and Their Marks*. Blackburn Press, Caldwell, New Jersey.

APPENDIX. Artifacts from 14MO701.

Function	Artifact	Count or Weight
Clothing-related items	Cloth and fibers	14
Clothing-related items	Footwear	28
Clothing-related items	Accessories: buckles, suspender hooks, and overall rivets	11
Clothing-related items	Buttons	265
Subtotal		318
Containers	Bottles	4,230
Containers	Jars	308
Containers	Cans	704
Containers	Barrel fragments	2
Containers	Closures	50
Subtotal		5,294
Cookware	Kettle	21
Cookware	Bean pot	5
Cookware	Cooking pot	4
Subtotal		30
Table and utilitarian wares	Beverage glasses	49
Table and utilitarian wares	Table setting – cups	99

APPENDIX. (continued)

Function	Artifact	Count or Weight
Table and utilitarian wares	Table setting – bowls	65
Table and utilitarian wares	Table setting – plates	272
Table and utilitarian wares	Table setting – saucers	35
Table and utilitarian wares	Serving – bowls	316
Table and utilitarian wares	Serving – mixing bowls	145
Table and utilitarian wares	Serving – butter pat, sugar bowl, candy dishes, dishes, teapot, and pitchers	116
Table and utilitarian wares	Serving – platters	31
Table and utilitarian wares	Table setting or serving – sherds	893
Table and utilitarian wares	Utilitarian – crockery	779
Table and utilitarian wares	Utilitarian – vase, jug, poultry waterer, and chamber pot	72
Subtotal		2,872
Flatware	Knives	12
Flatware	Spoons and forks	8
Flatware	Flatware and utensil handles	13
Utensil	Pickle fork and serving spoon	4
Utensil	Grater	6
Cutlery	Butcher knife	2
Subtotal		45
Organic material	Food fauna	2,237.1 g
Organic material	Other fauna	1,072.2 g
Organic material	Food flora	723.0 g
Organic material	Other flora	27.0 g
Organic material	Other – fossils and mud dauber nests	3,540.0 g
Subtotal		7,599.3 g
Personal items	Smoking	124
Personal items	Sewing	4
Personal items	Office supply	10
Personal items	Trunk fragments	1
Personal items	Beads and jewelry	9
Personal items	Eyeglasses	1
Personal items	Coin	1
Subtotal		150
Recreation items	Marbles	1
Recreation items	Doll and figurine fragments	11
Recreation items	Toy dishes and cannon barrel	4
Subtotal		16
Toiletries	Hair care – comb	2
Toiletries	Grooming aides – toothbrush fragments	9
Toiletries	Grooming aides – razor fragments	3
Toiletries	Grooming aides – mirror	2
Subtotal		16

APPENDIX. (continued)

Function	Artifact	Count or Weight
Hardware fasteners	Cotter pin, hooks, grommets, fasteners, and rivets	45
Hardware fasteners	Bolts	13
Hardware fasteners	Screws	26
Hardware fasteners	Nuts and washers	16
Hardware fasteners	Pins, staples, and roofing disks	13
Hardware fasteners	Nails	3,160
Subtotal		3,273
Construction materials	Door or window screen and window putty (3)	45
Construction materials	Wall – lathe, paint chips, and plaster	33
Construction materials	Foundation or structural – brick	13
Construction materials	Foundation or structural – stone	128
Construction materials	Foundation or structural – wood	143
Construction materials	Foundation or structural – mortar	54
Construction materials	Structural – flag stone	7
Subtotal		423
Window glass	Window glass fragments	1,295
Utilities	Electrical – wire and insulators	5
Utilities	Heating – stove parts	181
Utilities	Lighting – lamp or lantern glass and fragments	133
Utilities	Lighting – fixture plate	4
Utilities	Plumbing – coupling, pump handles, and windlass	4
Subtotal		327
Byproducts	Fuel – coal, clinkers, and slag	1,332.5 g
Byproducts	Fuel – charcoal and unknown burned material	1,046.3 g
Byproducts	Raw material – lead sprue	137.7 g
Subtotal		2,516.5 g
Furniture and appliances	Furnishings and structural – hinges	18
Furniture and appliances	Furnishings and structural – door pull and doorknobs	20
Furniture and appliances	Furnishings and structural – latch hooks and door locks	24
Furniture and appliances	Furniture – casters and wood fragments	14
Furniture and appliances	Furniture – clock fragments	5
Furniture and appliances	Furniture – picture frame and glass	31
Furniture and appliances	Minor appliance – sad irons and crank	7
Subtotal		119
Harness and horse-related equipment	Harness – rings and buckles	27
Harness and horse-related equipment	Harness – hames fragments	2
Harness and horse-related equipment	Harness – trace clips	2
Harness and horse-related equipment	Riding tack – bit	1
Harness and horse-related equipment	Shoes and nail	5
Subtotal		37

APPENDIX. (continued)

Function	Artifact	Count or Weight
Tools	Measuring tools	8
Tools	Sharpening tools	2
Tools	Masonry tools	3
Tools	Horticultural tools	4
Tools	Holding tools	3
Tools	Fastening tools	4
Tools	Cutting tools	2
Tools	Boring tools	1
Tools	Shaping tools	3
Tools	Tool fragments	5
Subtotal		35
Horse-drawn vehicles and farm machinery	Horse-drawn vehicles – wagon parts	6
Horse-drawn vehicles and farm machinery	Farm machinery – mower and corn sheller	8
Horse-drawn vehicles and farm machinery	Farm machinery – unidentified fragments	17
Subtotal		31
Miscellaneous hardware	Bucket	62
Miscellaneous hardware	Gate latch	1
Miscellaneous hardware	Fence – barbed wire	30
Miscellaneous hardware	Wire	53
Miscellaneous hardware	Chain, ring, and spring	10
Miscellaneous hardware	Scrap metal	882
Miscellaneous hardware	Strap metal	273
Miscellaneous hardware	Bar stock	5
Subtotal		1,316
Artifacts prior to Baker occupation	Modified bone	2
Artifacts prior to Baker occupation	Trade beads	4
Artifacts prior to Baker occupation	Debitage	13
Artifacts prior to Baker occupation	Modified flakes and scrapers	4
Artifacts prior to Baker occupation	Arrow point	1
Artifacts prior to Baker occupation	Pottery sherd	1
Subtotal		25
Firearms and ammunition	Pocket knives	9
Firearms and ammunition	Accessories	2
Firearms and ammunition	Balls	2
Firearms and ammunition	Cartridges and shotgun shells	8
Firearms and ammunition	Primer cap	3
Firearms and ammunition	Flintlock and gun parts	4
Firearms and ammunition	Gunflint	1
Subtotal		29
Unknown artifacts	Unknown items of assorted materials	73
Total count of collection		15,724
Items weighed only		10,115.8 g

"IT WAS DOUBTLESS AN ACT OF RASHNESS . . ."

A COMMEMORATIVE ARTIFACT FROM FORT HAYS

Christine D. Garst
Kansas Historical Society

While processing artifacts from the historic Fort Hays (14EL301) collection, several sherds of a single pitcher were discovered to have molded figures on the body of the pitcher. Researching the representational figures of Colonel Elmer Ellsworth and J. W. Jackson and their story led to a link from the opening days of the Civil War in Washington, D.C., and Virginia to Fort Hays in western Kansas seven or more years later.

President Abraham Lincoln described the events of May 24, 1861, in Alexandria, Virginia: "It was doubtless an act of rashness, but it only shows the heroic spirit that animates our soldiers, from high to low, in this righteous cause of ours. Yet who can restrain their grief to see them fall in such a way as this, not by the fortunes of war, but by the hand of an assassin" (Boltz 2002:B03). What follows is one story, no greater or lesser than other stories, that the artifacts recovered from historic Fort Hays or the Civil War can tell. The narrative crosses time and space: from the opening days of the Civil War in Alexandria, Virginia, to Fort Hays' abandonment in 1889. The incident quickly changed the thinking of a generation of young men and women and was just as abruptly thrust into the background and forgotten when overtaken by the horrors of the Civil War.

While cleaning artifacts from historic Fort Hays (14EL301), eight rim, body, handle, and base fragments from what appeared to be a pitcher were revealed. A rim sherd and a body sherd refit, indicating that they came from the same vessel and that it was a pitcher. They could be either Rockingham or Bennington ware, both buff-bodied earthenwares with clear glazes, often used for teapots, pitchers, and doorknobs (personal communication Marsha King, November 12, 2003). While examining the sherds closely, molded figures and lettering emerged: a grisly scene of two men, fighting and dying on a staircase, with the words "J. W. JACKSON THE TRAITOR" and "COL" (Figures 1 and 2). Most Rockingham and Bennington wares are not dated or marked with a pottery name, but Leibowitz (2002:13) stated that producers used molds, which allowed decorative scenes to be depicted, from the 1860s into the twentieth century. Thus began a search for the men's identities and the circumstances portrayed.

James W. Jackson (1824–1861) was co-proprietor of the Marshall House Inn at the corner of King and South Pitt streets in Alexandria, Virginia. Jackson, 6 feet tall and a boxer, was a staunch Confederate and known to have a "fractious nature," "always spoiling for a fight" (Boltz 2002:B03; Goodheart 2011:284). To show his Confederate pride, he had placed a large Confederate flag atop a high flagpole on his inn and proclaimed it would come down "over my dead body" (Boltz 2002:B03).

Colonel Elmer Ephraim Ellsworth (1837–1861) was smaller in stature than Jackson but no less fascinating. President Lincoln described him as "the greatest little man I ever met" (Boltz 2002:B03). Ellsworth found appeal in the ornate uniform and intricate drills of the 11th New York Volunteer Infantry Regiment, nicknamed the New York Fire Zouaves. He served as their First Commander in addition to clerking for President Lincoln in Washington, D.C. (Carola 2011). Jackson's Confederate flag was visible from the windows of the White House and had become a "symbol of the administration's slowness" for some and a great annoyance to Ellsworth in the early days of the Civil War (Goodheart 2011).

Virginians voted to leave the Union on May 23, 1861, and Federals planned an immediate response to their rebellious actions: the occupation of Alexandria, Virginia. On March 24, 1861, Colonel Ellsworth, a squad of six Fire Zouaves,

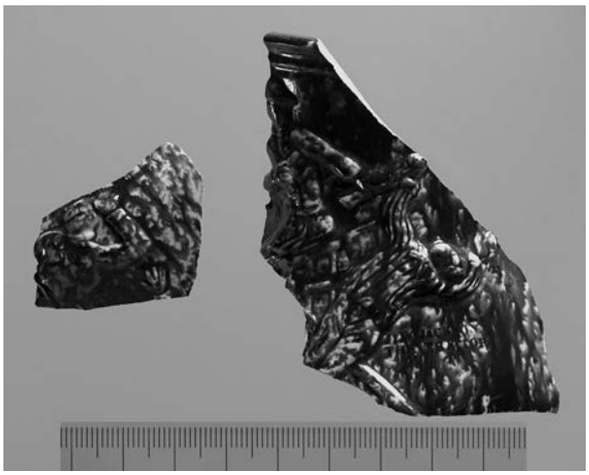


Figure 1. Two sherds from the pitcher show parts of the scene depicted in Figure 3. Colonel Ellsworth and Mr. Jackson are shown dying The two fragments refit at the end of the stair rail. Courtesy of kansasmemory.org, Kansas Historical Society.

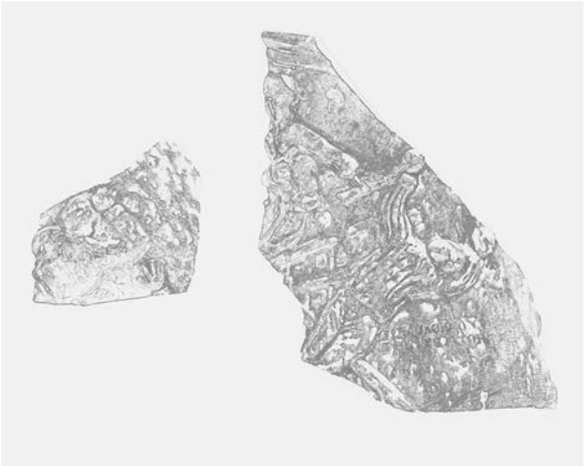
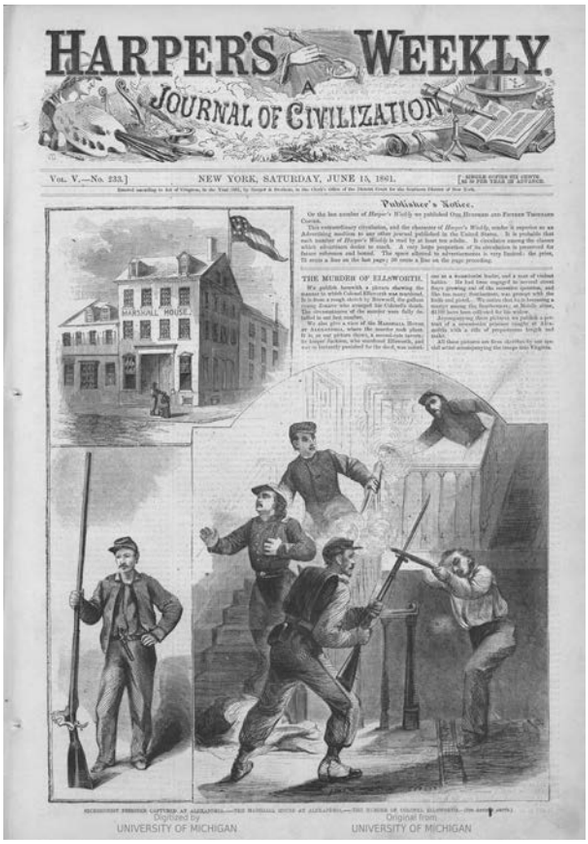


Figure 2. The same image as Figure 1 with a sketch filter.

including their chaplain, and Edward House, a correspondent for the New York Tribune, traveled the two miles from Washington D.C, to Alexandria, Virginia (Goodheart 2011; Randall 1960). This small group's objective was to take the telegraph office, but the large Confederate flag atop Jackson's Marshall House Inn must have angered them, and they determined to bring it down. The group met no resistance climbing the stairs to the roof. When the flag was removed, Ellsworth clutched it to himself and shouted, "Look boys, my trophy!" The men headed down the stairway, and on a landing between floors Jackson appeared and allegedly shouted back, "Look boys, my trophy!" (Boltz 2002:B03). Jackson then shot Ellsworth with a double-barrel shotgun. In a blur of action, Ellsworth, dead, pitched forward, Corporal Francis Brownell fired at Jackson, hitting him in the head, and followed with a bayonet thrust into Jackson's lifeless body. This is the scene depicted on the pitcher from Fort Hays.

Word of the tragic event soon spread across the North and South. Each side claimed a combatant and proclaimed him a martyr to be glorified in newspapers (Figure 3), songs, poems, pocket biographies, memorial lithographs, memorial envelopes, and sheet music. Sales of souvenirs expanded while the Marshall House Inn diminished; the oil-



HARPER'S WEEKLY.
A JOURNAL OF CIVILIZATION

Vol. V.—No. 233.] NEW YORK, SATURDAY, JUNE 15, 1861.

Publisher's Notice.

THE MURDER OF ELLSWORTH.

MARSHALL HOUSE.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Figure 3. The cover of Harper's Weekly: A Journal of Civilization for June 15, 1861, depicting the murders of Colonel Elmer Ellsworth and J. W. Jackson on the staircase of the Marshall House Inn. Courtesy of HathiTrust https://babel.hathitrust.org/cgi/pt?id= mdp.39015085429630&view=1up&seq=355.

cloth floor covering, floorboards, stairsteps, banisters, doors, door frames, and wallpaper were taken away as keepsakes or for sale. Enlistments surged in the North (and likely the South) and one regiment, the 44th New York, changed its name to "Ellsworth Avengers" (Carola 2011; Cobb 1963; Goodheart 2011; Smithsonian Institute 2003). Funds were collected for Jackson's family, while Ellsworth's funeral was held in the White House, even though Lincoln admitted that the venture into Alexandria had been rash (Goodheart 2011).

Both men's actions served as a template for proper, loyal, brave, and right-hearted behavior for the North or the South. However, the horrors wrought during the Civil War in the following years soon pushed the Jackson and Ellsworth story into the background, but the men and the event were never completely forgotten. In 1877 Bownell was awarded a Medal of Honor for killing Jackson. A commemorative plaque once stood on the site of the Marshall House Inn, pageants were held on significant anniversaries, mentions of the foray appeared in plays and even in television shows of the twentieth century.

The commemorative pitcher sherds were excavated from Fort Dump #1 in 1970 by Kansas Historical Society archeologists and Kansas Anthropologist Association volunteers. Fort Hays in Ellis County was occupied at its present location from 1867 to 1889, certainly not too far into the future for Ellsworth's and Jackson's deeds to have been forgotten. While enlisted men were unlikely to own a fancy pitcher, it was well within the financial means of an officer's family. A curious, though tenuous, connection between Alexandria and Fort Hays exists in Frank Brownell, who shot and killed Jackson. In 1868, as Judge Advocate for the United States Army, Brownell presided over a court martial at Fort Hays (Armes 1900). At this time it is not known how or when the pitcher arrived at Fort Hays, who owned it, where or when it was acquired, or how it broke.

REFERENCES CITED

Armes, Colonel George Augustus
1900 *Ups and Downs of an Army Officer*. McGill & Wallace, Washington, D.C.

Boltz, Martha
2002 Flag Encounter Kills Va. Innkeeper, Yank Officer. *The Washington Times* 28 December 2002:B03.

Carola, Chris
2011 NY honoring 1st Union officer killed in Civil War. The Associated Press. Electronic document, http://www.nbcnews.com/id/43038693/ns/us_news/t/ny-honoring-st-union-officer-killed-civil-war/, accessed March 5, 2018.

Cobb, Josephine
1963 Decorated Envelopes in the Civil War. *Records of the Columbia Historical Society, Washington, D.C.* 63/65:230–239. Electronic document, http://www.jstor.org/stable/40067362, accessed December 10, 2020.

Goodheart, Adam
2011 *1861 The Civil War Awakening*. Vintage Books, New York, New York.

Harper's Weekly
1861 The Murder of Ellsworth. *Harper's Weekly* 5(233):1. 15 June:1. Harper & Brothers, New York, New York.

Randall, Ruth Painter
1960 *Colonel Elmer Ellsworth*. Little, Brown and Company, Boston, Massachusetts.

Smithsonian Institution
2020 First Blood. The Smithsonian Collections. Electronic document, First Blood Introduction (si.edu), accessed December 10, 2020.

BOOK REVIEWS

Art of Native America: The Charles and Valerie Diker Collection. GAYLORD TORRENCE, with contributions by NED BLACKHAWK and SYLVIA YOUNT. Metropolitan Museum of Art, New York, New York, 2018. Distributed by Yale University Press, New Haven, Connecticut. 232 pp., 76 photographs, 116 plates, 1 map, notes, total works in exhibition, selected readings, and index. $50.00 (hardcover). ISBN 978-1-58839-662-4. *Reviewed by* Jim D. Feagins.

The *Art of Native America: The Charles and Valerie Diker Collection* is a somewhat misleading title, as none of the objects shown in this volume come from Central or South America. However, the title is forgiven by this reviewer, who must confess a profound and longtime interest in North American indigenous art and thus has a favorable bias toward books of this genre. The concept of "art" did not have the same connotations for early Native Americans as it did for the Europeans arriving on the shores of this continent. Furthermore, the meaning of the term itself, as well as the recognition of what is accepted as art, is evolving constantly.

After the customary foreword and acknowledgments, the volume's first 61 pages contain three essays. The first, "Entangled Narratives: Encountering Native American Art in the American Wing," is by Sylvia Yount. She presents the story of the gradual acceptance of Native American art as "art" by the art museum community, focusing on the topic's history at the Metropolitan Museum of Art. These same objects had long been recognized as important "ethnographic artifacts" in other museums.

The second essay by Gaylord Torrence is the longest (27 pp.) and most enlightening. In "Venerable Objects, Their Creators and Cultures," Torrence describes in great detail 13 exhibit items and discusses their histories and cultural backgrounds. Some emphasize individual expression, several render iconic images of profound religious meanings, and others illustrate the effects of trade and commerce.

Ned Blackhawk is the Native American author of the last essay, "The Radical Potential of America's Indigenous Art History." Following critical comments on European and American colonialism, he presents selected examples of two centuries of indigenous art, starting about 1800. New to this reviewer was his story of the Reverend Peter Jones (1802–1856), which is a clear instance of selective acculturation as reflected in material culture.

The majority of the book consists of outstanding color plates, showing each of the 116 objects in the exhibition. Some artifacts are depicted in multiple views and/or with overviews coupled with close-ups of details. All were either previous donations from Charles and Valerie Diker or on loan from them with a promise of future donation. Unfortunately, these items are minimally described. While experienced students of Native American ethnology and art should be able to infer the function and understand much of the background for most of the artifacts, less knowledgeable readers may hunger for enhanced identifications and interpretations.

This, the heart of the volume, is divided into seven sections, based on different cultural regions of North America (Figure 1). No artworks came from the Sub-Artic region. Starting in the east (southeastern Canada and eastern United States), the Woodland region is represented by 18 objects, pictured in 22 photographs: a man's coat, belt pouch, wooden war club, moose antler comb, shoulder bags, women's hoods, sashes, wooden bowls, and moccasins. The textiles, many with bead and porcupine quill work, are spectacular.

One of the two best represented regions is the Plains. This section contains 25 objects, illustrated in 33 photographs. They are a Pawnee war club, shield, beaded blanket strip, elk antler quirt handle, bison hide parfleche flat case, parfleche envelopes, girl's robe, model leather tipi cover, tipi bag, moccasins, war shirt, woman's dress, boy's jacket, pipe-stem case, tobacco bags, and cradleboards. Of utmost interest are multiple ledger art drawings on paper and hides; much can be learned by their careful study.

Only 7 items, shown in 10 photographs, serve as examples of the Plateau region's art. They are a war shirt, woman's dress with attached awl case, beaded blanket strip, quiver with attached bow case, bag,

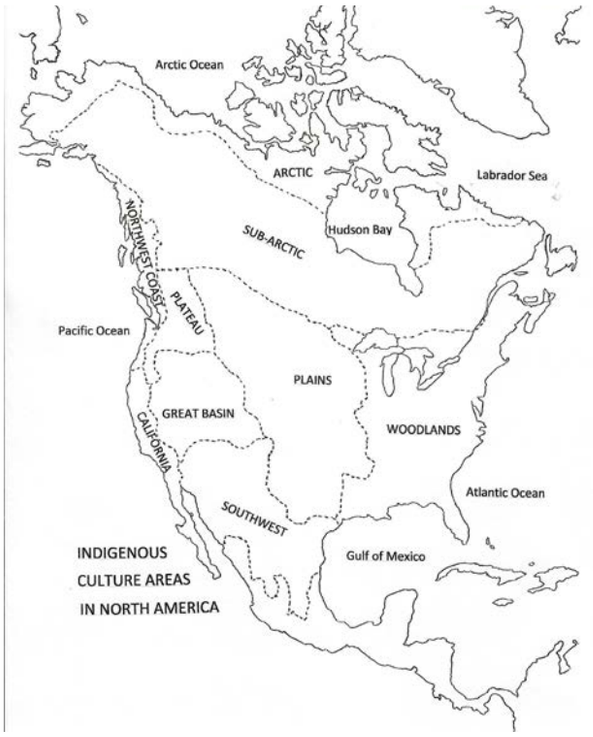


Figure 1. North American cultural regions, as redrawn by the reviewer.

carved horn bowl, and carved bone figure that may be a pendant. The bowl, made from the horn of a bighorn sheep, is especially intriguing.

The next section combines California and the Great Basin. Beautiful basketry is the apex of art for both of these regions, as portrayed by 14 objects in18 photographs: a bottleneck basket, basket tray, basket jars, basket bowls, and gift baskets.

The Southwest region is exemplified by 14 artifacts in 18 photographs, which include a Socorro Black-on-White storage jar, Powhoge polychrome storage jar, San Ildefonso polychrome canteen, Maria and Julian black-on-black jar, cape or dress, first-phase chief's blanket, Apache quiver and arrows, storage basket, basket tray, carved Katsina figures, and polychrome water jars. A 1,000-year-old Ancestral Pueblo polychrome jar is the oldest specimen in the exhibit.

The art of the Northwest Coast is well represented by 25 objects, depicted in 34 photographs. They include an iron dagger, carved wooden shaman's rattle, carved wooden bowl, bone "soul catcher," shaman's amulet, headdress frontlet, raven rattle, decorated wooden bowls, maskette, mask, shaman's mantle, tunic and leggings, copper rattle, dagger, wooden combs, woman's portrait figure, basket, woven hat, clapper, ladle, guardian figure staff, and whalebone war club. The wood and bone/ivory carvings are especially outstanding.

The last section on the Arctic cultural region contains 13 items, pictured in 20 photographs, and includes a transformational figure carved from walrus ivory, carved handle fragment (?), toggle, snow goggles, harpoon counterweight, wood and ivory atlatl, complex wooden dance accessory, parka made from sewn strips of marine mammal intestine, and many wooden masks. Most of these artifacts are from Alaska. The atlatl, a spear or harpoon thrower ca. 1750–1780, came from Kodiak Island off Alaska's southern coast. It is quite impressive and of special interest to this reviewer.

The *Art of Native America: The Charles and Valerie Diker Collection* is a lavish volume with abundant and especially fine color photography. The publishers should be congratulated. The book is a worthy addition to one's library and may be obtained from Yale University Press, P.O. Box 209040, New Haven, Connecticut 06520-9040 or elsewhere online.

Plains Indian Buffalo Cultures: Art from the Paul Dyck Collection. EMMA I. HANSEN, with forward by Arthur Amiotte. University of Oklahoma Press, Norman, with the Buffalo Bill Center of the West, 2018. xviii + 185 pages, 161 figures, notes, bibliography, and index. $50.00 (hardcover). ISBN 978-0-8061-6011-5; $34.95 (paper). ISBN 978-0-8061-6012-2. *Reviewed by* Jim D. Feagins.

Plains Indian Buffalo Cultures: Art from the Paul Dyck Collection will be of considerable interest to artists and art lovers, as well as those interested in the material culture of prehistoric and early historic Native Americans and Euroamericans: anthropologists/archeologists (professional and avocational), historians, the indigenous community, and many of the general public. Archeologists most often deal with utilitarian, broken, discarded, and partially decayed remains found in ancient sites, so it is refreshing to examine well preserved or even pristine artifacts before they have been subjected to exposure to the elements. While being enjoyed as art, they can enhance interpretations and instill added appreciation for the desires and beliefs of peoples who walked and rode over these prairie grasslands in the past.

Plains Indian Buffalo Cultures is a large-format, slick-page, mostly color volume, typical of books designed to accompany museum exhibits. In this reviewer's house, after reading and sometimes accompanied with notes, such volumes find their way to a temporary display on the coffee table before being filed for reference in the library. Author Emma I. Hansen is very selective, as the publication illustrates and describes only about 160 artifacts or 8 percent of the more than 2,000 given by the late Paul Dyck (1917–2006) to the Plains Indian Museum at the Buffalo Bill Center of the West in Cody, Wyoming. What is shown stimulates a desire to see more of the collection.

Dyck donated a truly outstanding art and ethnography assemblage, focused on the Plains Indians during the heyday of their buffalo hunting years, the late 1700s–1890s (p. 6), within the latter portion of the era between the introduction of the horse to the Plains and the demise of the great bison herds. Hansen rightly emphasizes the sacredness of the symbolism and the materials from which these artifacts were created. These historic masterworks illustrate in various ways the worldviews of many Plains tribes, e.g., Arapaho, Arikara, Blackfoot, Cheyenne, Comanche, Crow, Dakota, Hidatsa, Kiowa, Lakota, Mandan, Nez Perce, Otoe, Pawnee, and Shoshone. They speak of a time now long past but depict certain aspects of the material culture oftentimes still used in modern public and private celebrations and sacred ceremonies.

An artist himself, Paul Dyck died in 2006 at the age of 88, after amassing one of the premier private Plains Indian art collections, an amazing accomplishment considering the late date when he began acquiring items. Dyck was born on August 17, 1917, in Chicago, Illinois. His family had emigrated from Czechoslovakia and during his early childhood spent time in the United States and Canada before returning to Czechoslovakia and Germany. Dyck studied art at many locations across Europe.

Starting in 1886, Paul's father Tony Dyck lived near the Blackfoot Indian Reserve in southern Alberta, Canada; his small collection became the nucleus of his son's. Tony's experiences undoubtedly stimulated Paul's interest in the Blackfoot and other Plains tribes and was a catalyst for accumulating Plains Indian art during adulthood. In 1932 Paul met One Elk, a Lakota from the Standing Rock Reservation, in Dresden, Germany, while One Elk was on a European tour with the Carl Hagenbeck Circus. Later he became good friends with the entire family and married one of One Elk's daughters. She died during childbirth. In 1938 he settled on a 312-acre ranch in Arizona's Verde Valley. Except for a stint in the U.S. Navy during World War II, he remained at the ranch to manage it and pursue his painting career. He specialized in western and Native American art, and his paintings can be found in many prestigious museums; one of a Cheyenne warrior appears in this volume.

Dyck described his outstanding assemblage of Native American cultural materials as the "Buffalo Culture Collection." That is a bit of a misnomer, as Plains indigenous peoples depended on bison for many thousands of years, while his collection generally spans only a little more than a century. That said, the first chapter of *Plains Indian Buffalo Cultures* is "Buffalo Culture Era," which encompasses the best of times—a cultural high point with bison relatively easy to hunt on horseback and

many war honors to win—and the worst of times, as much of Native American cultural demise was tied to bison extermination, diseases, and warfare with neighboring tribes and Americans. Included in this chapter are black and white photographs of Sun Chief (Pawnee), bison on the open range, and a Motoki (Blood) women's society and color photographs of a bison rawhide (scrotum) rattle and other rattles, bison horn bonnets, bison dance belt, bonnet and trailer, shields, shield cover, bone knife, parfleches, buffalo robe, painted deer hide, and eagle bone whistle.

"Protecting the Land and the People" is the title of the second chapter. Here the reader learns of the warrior way of life with all its heraldry, danger, and traditions. This information is generally well known by scholars and the general public, so it will not be rehashed here. This chapter contains an 1890 black and white photograph of Lakota warrior High Bear and color photographs and descriptions of bow cases and quiver with bows and arrows, lances, bow lance, knives with cases and sheathes, various war clubs, staff, Dog Soldier feather bonnet with trailer, sash, ledger-style drawing, Dog lodge sash, warrior or Grass Dance Society whip, painted hide, and many shields and shield covers.

Chapter 3 is devoted to a ledger art-style painting by White Swan, a Crow warrior, who participated in the Battle of the Little Big Horn on June 25–26, 1876. He was one of the six Crow scouts assigned to the U.S. Seventh Cavalry led by Lieutenant Colonel George A. Custer. The native combatants facing the army were traditional enemies of the Crow, a relatively small tribe completely surrounded by groups with which they were at war. White Swan was severely wounded during the first day of the battle and was handicapped the remainder of his life. In about 1904 at age 53, he was the first of the Crow scouts to die but not before he painted a number of images of the battle, documenting the roles that he and others played. White Swan's very important painting of the battle is a large pencil, ink, and watercolor on muslin, depicting in detail various enlarged battle scenes. It is fortunate to have a published reproduction of the American Indian heraldry in one of the United States' most famous battles.

"Artistry of Women" is an extremely important chapter. The work of Native American women is often shortchanged in both history and the art world, overshadowed by the excitement and glamour of warfare. Weaponry and spiritual aspects of fighting, hunting, and raiding attract more interest, and material culture reflecting these activities is more sought after and obtained by collectors. Also, Plains women's art traditionally was confined to geometric designs, thus diminishing the storytelling nature of their crafts, compared to the more artistic freedom of expression by their male counterparts. Furthermore, Euroamericans' disparagement of American Indian women, evidenced by the common derogatory terms used to describe them, served to diminish attention and appreciation given their art. However, this was not the viewpoint of indigenous peoples—male or female; both sexes had certain defined tasks and different paths to success and honor. Male outsiders were seldom in a position to observe the various ways in which Native American women could achieve honor and recognition for their skills by their respective tribes, and Native women rarely were interviewed due to language and cultural barriers. Although this topic has been addressed more frequently in recent decades by other authors, this chapter is one that most readers could find beneficial. It depicts photographs of Annie (a Cheyenne woman), women making a bison hide tipi, a painted tipi liner, parfleches, cylinder cases, blanket strips, hide dresses, shirts, moccasins, coat, toy tipi, cradles, toy cradle, and vest.

The fifth chapter addresses how Plains Indians achieved leadership and honor, as well as some of the related ceremonies, associated regalia, and sacred symbols. This topic has long been of considerable interest to the general public and scholars. Among the sacred items pictured and discussed in these categories are many men's shirts, leggings, feather bonnets, bear claw necklaces, and pipe tomahawk. Women's honors often are noted by their quality of craftsmanship, as displayed on a decorated hide scraper and decorated bison bladder bag. Other ceremonial objects described in detail are sacred rattles, drum and drumstick, pipe bowls and stems, pipe bags, tobacco bag, and tobacco cutting board.

As emphasized in Chapter 6, horses played an essential role in the lives of indigenous peoples in the "buffalo culture." It is hard to think of protohistoric and historic Plains Indians without consider-

ing horses. Both the village farmers of the eastern prairies and wide-ranging nomadic bison hunters quickly became dependent on the mobility and carrying capacity of these animals. Only to a slightly lesser degree, this was also true of the eastern woodland tribes forced westward onto the Plains. Chapter 6 focuses on horses and the tack used in their management, as well as expressions of their sacred nature in certain settings, such as warfare. Equipment described and pictured are saddles and stirrups, pad saddle, quirt, martingales, crupper, bridle, pipe stem, carved horse pipe bowl, and an extraordinary number of horse masks. The chapter concludes with some spiritual aspects in which the horse is involved (vision quests, spirit helpers, and songs) and entertainment and sporting uses, as in parades or in horse racing. As pointed out by Butler (2018) and Feagins (2016), the latter has been generally poorly documented in historical sources. This volume contains commentary and a useful photo of a modern Indian relay horse race.

"Enduring Legacies of the Paul Dyck Collection" focuses on the changes during the Plains treaty and reservation period and the Dyck collection as a source of art inspiration and cultural understanding by modern Native Americans. The assemblage is a source of interest and understanding for the non-native public as well. This final chapter incorporates a photograph of a Crow boy in beaded coat (ca. 1898), ration cards (1905), passports (1923), decorated cup, bag, cuffs, belt, dresses, and modern photographs of individuals from several Plains tribes.

The Plains Indian lifeway brightly blossomed into an especially exciting era, only to fade with the demise of the great woolly herds and with indigenous peoples' confinement on reservations. This volume would have benefited many readers by inclusion of a Great Plains map, showing the general ranges of various tribes in the mid-nineteenth century and locations of modern reservations.

Dyck's collection represents much more than a series of individual and cultural artistic expressions. It also materially reflects a rich way of life now long gone and a world view that was tremendously modified. These artifacts speak of creative peoples and the ways they once lived. Portions of these legacies continue but are adapted to fit needs in a modern world. For this reviewer *Plains Indian Buffalo Cultures: Art from the Paul Kyck Collection* is expected to be a useful reference. It can be obtained at a reasonable price from the University of Oklahoma Press, Norman, by calling 800-848-6224, ext. 1, or by ordering online at www.oupress.com.

REFERENCES CITED

Butler, William B. 2018 Indian Horse Racing in Colorado. *Southwestern Lore* 84(1):29–35.

Jim D. Feagins 2016 A Kickapoo Horse Race North of Fort Leavenworth, Kansas, in 1833. *The Kansas Anthropologist* 37:46–52.

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SWANEK	ED	12779 HEADWATERS RD	HARVEYVIILLE	KS	66431-9319
* THURMOND	J PETER	RT 1 BOX 62B	CHEYENNE	OK	73628-9729
TITUS	REV MARY AL	700 MONTEREY PL APT 506	HUTCHINSON	KS	67502-2266
TREMBLAY	LELAND	316 N MIDDLE ST	HILL CITY	KS	67642-1740
TSUKAMOTO & STUART McGREGOR	KATHLEEN	PO BOX 112	BERRYTON	KS	66409-0112
TUCKER	VITA	15560 S RATNER RD	OVERBROOK	KS	66524-9378
UNIV OF KANSAS	WATSON LIB RETRIEVAL SERV	1425 JAYHAWK BLVD R 210S	LAWRENCE	KS	66045-7594
UNIV OF OKLAHOMA	BIZZELL MEM LIB SERIALS	401 W BROOKS ST	NORMAN	OK	73019-0528
VEHIK	DR SUSAN	2622 S PICKARD AVE	NORMAN	OK	73072-6922
WALKER	DANNY	1687 COUGHLIN ST	LARAMIE	WY	82072-2321
WALLEN & CARSTEN HOLM	ANNE	1720 W 22ND ST	LAWRENCE	KS	66046-2724
WALLEN	MIRIAM	825 HUMBOLDT ST APT A	RICHMOND	CA	94805-1467
WALLEN	ROSE MARIE & MIKE	116 E MILL ST	LINDSBORG	KS	67456-2815
WARD	ROGER	828 AUDREY DR	EL DORADO	KS	67042-2220
WEDEL	DALE	2675 MONROE ST	LARAMIE	WY	82070-6551
WERNER	NORBERT	2302 POST AVE	DODGE CITY	KS	67801-2556
* WEST	JOHN	7001 W WISCONSIN	HEALY	KS	67850-5046
WIECHERT	SANDRA	1501 INVERNESS APT 330	LAWRENCE	KS	66047-2063
WILDGEN	MIKE & LINDA	801 LOUISIANA ST	LAWRENCE	KS	66044-2649
WILLIAMS	BARRY & HEDY	1720 N CENTER VALLEY RD	SANDPOINT	ID	83864-7154
WING	EUGENE	9751 PINE KNOLL RD	MOBILE	AL	36608-9239
* WULFKUHLE	VIRGINIA	840 N 1500 RD	LAWRENCE	KS	66049-9195
YARMER	ROBERT E	PO BOX 158	ELLINWOOD	KS	67526-0158
* YOUNG	A L	PO BOX 467	BELOIT	KS	67420-0467