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Robert Blasing

The Kansas Anthropologist

Journal of the Kansas Anthropological Association

KANSAS ANTHROPOLOGICAL ASSOCIATION

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ERRATA

for *Archeological Investigations at Chief Whitehair's Village Site (14WN143), Wilson County, Kansas* by Andrea A. Hunter, John K. Williams, James Wiederhold, Leslie Bush, Christopher G. Leary, Aaron Ridley, Jon Stroik, Ben Goodwin, and Christopher A. Bergman

The authors of the paper entitled, "Archeological Investigations at Chief Whitehair's Village Site (14WN143), Wilson County, Kansas," which appeared in *The Kansas Anthropologist* 36:50–73, wish to draw attention to an important error. The site number that was assigned and cited in our paper, 14WN143, Wilson County, is incorrect. The correct site number is 14MY115 in Montgomery County.

Notes

A WINDOW TO ARCHAIC GATHERERS

Allison K. Douglas
University of Oklahoma

On the Central Plains the Archaic period represents the onset of regional subsistence diversification as a response to the Altithermal. However, archeologists are often limited in their understanding of plant use at sites predating cultivation due to poor preservation of floral remains and, therefore, typically draw inferences through the analyses of material culture. Bifacial knives from the Coffey site (14PO1) in northeastern Kansas, dating to the Middle Archaic Munkers Creek phase, are a case in point. Based on microscopic use-wear analysis, this paper shows that the knives represent a hyper-specialized plant-gathering technology that predated plant cultivation on the Central Plains. Experiments support this conclusion by demonstrating that plant-cutting striations are created by abrasive materials within the plants themselves rather than by surface soil or sediment adhering to the plants. Additionally, the presence of this hyper-specialized plant-gathering technology provides greater visibility of Plains Archaic women.

Studies of the material culture of Plains Archaic hunter-gatherers traditionally have focused more on hunting than on gathering. Ubiquitous chipped-stone technology informs understanding of hunting behavior when artifacts are recovered in direct association with faunal remains. On the other hand, researchers are infrequently able to interpret collecting behavior in the same manner because floral remains rarely preserve in the archeological record. As a result, they inevitably create a biased perspective of Archaic hunter-gatherers. This bias extends to gender; the less that is known about Archaic plant processing, the less visibility Archaic women have in Plains prehistory. Information about Archaic peoples' interactions with plants can decrease these biases and help scientists develop a more nuanced conception of subsistence strategies, resource-procurement behavior, technology, and gender roles.

Middle Archaic peoples engaged in subsistence diversification in response to Altithermal climate change (McBrinn 2010; Meltzer 1999; Wedel 1986), but this is not robustly expressed through the material culture left behind at Middle Archaic sites. Archeologists glean these data primarily and most directly from faunal remains and charred floral remains. A technology from eastern Kansas, i.e., Munkers Creek knives, is an exception. After excavations at the William Young site (14MO304) near Council Grove Lake in east-central Kansas, Thomas Witty (1982) argued that a particular form of bifacial knife in the site's Middle Archaic (6,000–4,000 B.P.) assemblage served as a plant-processing implement. He based this inference on the knives' pronounced surface polish, which resembled polish associated with plant silica. On the basis of these knives and other unique material culture, Witty designated the William Young site's Middle Archaic component as part of the Munkers Creek phase. This newly coined phase became the prevailing Middle Archaic cultural expression in eastern Kansas.

The Coffey site (14PO1), located in northeastern Kansas along the Big Blue River near Tuttle Creek Lake, is another well-researched site with a Munkers Creek record (Schmits 1978). Excavations yielded knives like the ones Witty discovered at 14MO304. In this study the author examined the Munkers Creek knives from the Coffey site to evaluate Witty's conclusion that the knives functioned as plant-processing tools. Specifically, the author conducted a high-power use-wear analysis of both the 14PO1 Munkers Creek knives and an experimental set. The purpose of the experimental set was to determine whether striation patterns varied according to degree of soil contact (and thus,

cutting location) and if observed patterns matched those on the Coffey site artifacts. This study compared the experimental and archeological samples to a control sample of other knives from the 14PO1 Middle Archaic assemblage, using the same use-wear methods and protocol to assess all three tool groups.

The first section of this paper defines the Middle Archaic on the Central Plains in the context of the Altithermal, explaining the resource diversification that occurred in response to changing climate. Next are descriptions of the Munkers Creek phase, the Coffey site, and its Munkers Creek knives. Following is ethnographic information on plant gathering, details of the investigation's methods, and a report on the results. Finally, the author discusses the broader implications of the findings for the Central Plains Archaic period as well as Plains archeology as awhole.

BACKGROUND

This section provides necessary background information, beginning with context on the Middle Archaic, the Munkers Creek phase, and the Coffey site. Following is an examination of the ethnographic record of grass cutting, specifically presenting documented uses of big bluestem, the grass selected for the experimental component of this analysis. Last is an explanation of the features of use-wear that indicate the function of lithic implements for grass cutting.

Altithermal and Middle Archaic Period

The Altithermal climatic episode took place ca. 9,000–5,000 B.P and introduced a hot, dry climate to the Great Plains. The shift in climate increased erosion and changed the landscape significantly (Antevs 1948). Overlapping the Altithermal, the Middle Archaic period extended from ca. 6,000 to 4,000 B.P. (Thies and Witty 1992). The effects of the Altithermal varied across the Plains; consequently, local adaptations of Archaic peoples living in the Plains in response to climate change varied extensively as well (McBrinn 2010; Meltzer 1999; Wedel 1986).

On the Central Plains the Archaic was marked by a shift away from specialized bison hunting to a more generalized small-game hunting and fishing subsistence strategy, as Altithermal environmental changes resulted in loss of land for bison to graze. Bison did remain an important resource for Central Plains hunter-gatherers, especially during the Early Archaic (Widga 2007), but their numbers decreased significantly relative to the preceding Paleoindian era (Meltzer 1999). Altithermal climate change also prompted diversification in the use of floral resources during the Middle Archaic period. Although the floral record is relatively sparse for this time period, flotation samples from various sites have afforded a glimpse of some of the plants Central Plains peoples exploited during the Altithermal. These include sunflower, bulrush, and marshelder (Adair 2006). Because people selected plant resources from several different environmental zones across the landscape, archeologists can gain a sense of mobility and settlement patterns during the Middle Archaic by examining the varied occurrences of plants at different sites.

Munkers Creek Phase

The Munkers Creek phase is the predominant Middle Archaic cultural expression in the Central Plains. Based on detailed excavations at three deeply buried sites (Reynolds 1984; Schmits 1978; Witty 1982), the Munkers Creek phase is well defined on the basis of diagnostic material culture (Blackmar and Hofman 2006; Thies and Witty 1992). In his report on the William Young type site, Witty (1982) first defined the Munkers Creek phase by its distinctive projectile points, knives, gouges, and axes. He described the nine complete Munkers Creek (Type I) knives as narrow, curved, thin, and having silicate polish on both faces. These knives are the focus of this study.

In terms of time frame, Witty (1982:219) placed the Munkers Creek phase "in the 3,000 B.C to 3,500 B.C. range." However, corrected (uncalibrated) dates using updated technology indicate that the culture appeared as early as 6,250 B.P., peaked at 5,640 B.P., and waned by 4,850 B.P. (Banks and Wigand 2005). Therefore, although Witty (1982) initially assigned the Munkers Creek phase to the Late Archaic based on dates and the composition of the artifact assemblage, updated dating techniques and general understanding of the Archaic make the

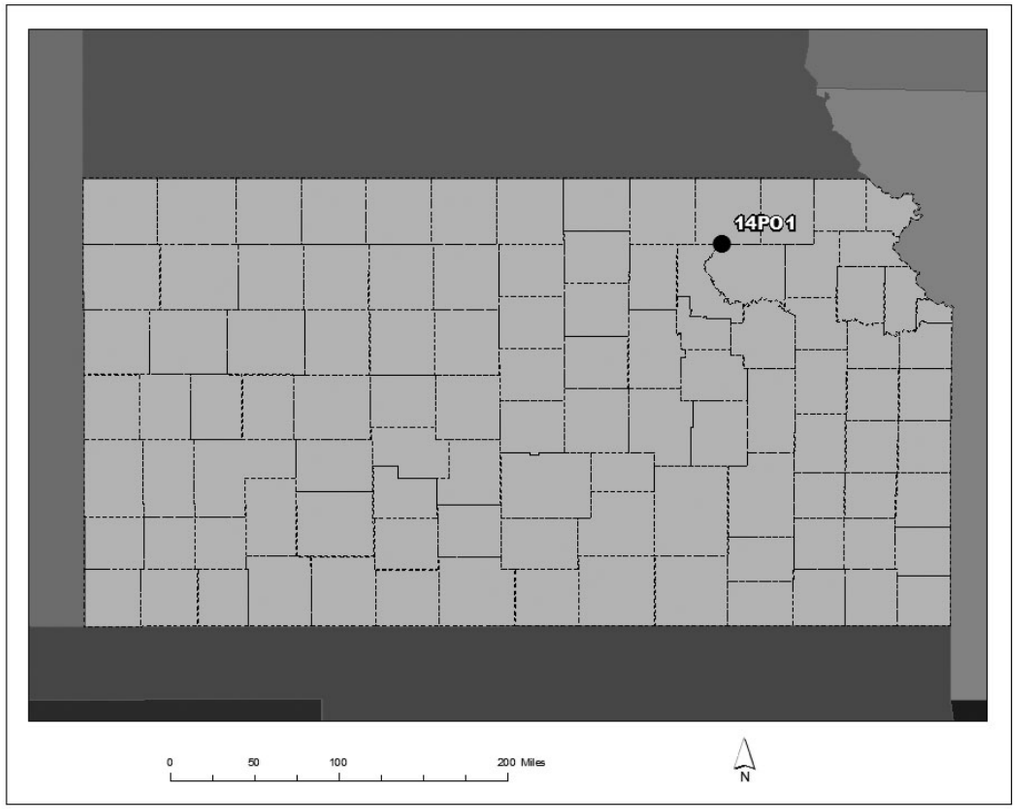


Figure 1. Location of the Coffey site (14PO1).

Middle Archaic a more fitting temporal classification (Thies and Witty 1992). The corrected dates place the Munkers Creek phase at the end of the Altithermal.

Finally, the spatial distribution of sites distinguishes the Munkers Creek phase. Current data suggest that the Munkers Creek phase is geographically confined to eastern Kansas and is particularly concentrated in the Flint Hills and Osage Cuestas regions. Its sites occur on floodplains of major rivers and tributaries in the region (Witty 1982).

Coffey Site

The Coffey site is among the best documented Archaic sites with a Munkers Creek component. The site is in Pottawatomie County, 30 miles north of Manhattan, Kansas, in an ecotone between woodlands and grasslands (Schmits 1978; Figure 1). Archeologists have conducted excavations there over several decades, but the data herein pertain only to Schmits' excavations of the Middle Archaic component. The area is now in the middle of the Big Blue River due to recent meandering and erosion, but at the time of excavation, it was located on a floodplain along the river's east bank. Mean radiocarbon dates for the Munkers Creek horizons are as follows: Horizon III-5 at 5,163 B.P., Horizon III-7 at 5,175 B.P., and Horizon III-8 at 5,270 B.P. (Schmits 1978:85). This succession of dates is consistent with site stratigraphy and with Banks and Wigand's (2005) corrected dates for Munkers Creek. People occupied Horizon III-5 during the early fall and Horizons III-7 and III-7 from late summer to early winter (Schmits 1978; Unruh 2009).

The Coffey site produced an extensive faunal assemblage. According to Schmits (1978:133), the MNI for faunal classes is 22 mammals, 16 birds and waterfowl, 172 fish, 3 amphibians, and 6 reptiles. Eleven mammal species were represented, with bison and deer more numerous than the various small mammals. Fish were by far the most abundant resource, which comes as no surprise considering the proximity of 14PO1 to a river. Although other faunal resources were less prevalent than fish and mammals, residents clearly utilized a diverse

resource base and did not restrict their subsistence to a small number of species, bison or otherwise (Schmits1978:160).

The Coffey site's floral remains also vary significantly. From the earliest occupation (Horizon III-8), Schmits (1978:164) recovered bulrush (*Scirpus*), grape (*Vitis*), Solomon's seal (*Polygonatum*), and knotweed (*Polygonum*). The middle occupation (Horizon III-7) yielded goosefoot (*Chenopodium*) and bulrush. The latest (Horizon III-5) had goosefoot, knotweed, and hackberry (*Celtis*). Wood charcoal provided evidence for ash and elm, as well as trees of the *Acer*, *Populus*, and *Salix* genera. Overall, the faunal and floral assemblages reveal the presence of various biotic communities at and around 14PO1 and indicate that the inhabitants exploited grassland, woodland, and river resources (Schmits 1978:152).

Schmits (1978) recovered 11 bifacial Munkers Creek knives (Figure 2). All are made from local Florence chert, and the two complete specimens measure roughly 12 cm long, 3.5 cm wide, and 1 cm thick. The remaining nine broken knives have the same relative thickness and width, when applicable. These measurements are consistent with those of the Munkers Creek knives that Witty (1982) recovered at the William Young site. All have macroscopically visible silicate polish, consistent with having served as grass-cutting blades and known as "sickle gloss" (Bettison 1985; Kamińska-Szymczak 2002; Kamminga 1979; Keeley 1980; Vaughan 1985; Witthoft 1967). Furthermore, the Coffey site Munkers Creek knives with intact bases were left with some cortex remaining. This feature is consistent with the William Young site knives (Witty 1982:150).



Figure 2. Munkers Creek knives from the Coffey site: (a) Horizon III-5; top row, left to right: H5-5, H5-7; bottom row, left to right: H5-1, H5-2, H5-3, H5-4, H5-6 (b) Horizon III-7; left to right: H7-1, H7-2 (c) Horizon III-8; left to right: H8-1, H8-2. Specimens are housed at the University of Kansas.

Big Bluestem

This study involved replication of plant-gathering activities through experimentation. The author chose big bluestem grass (*Andropogon gerardii*) as the focus for these experiments because of its likely presence in the vicinity of 14PO1 at the time of occupation. Big bluestem is one of the main species of Kansas' tall grass prairie in the glaciated province (Küchler 1974). Some of the modern tall grass prairie probably was converted to mixed grass during the Altithermal; however, tall grass prairie was likely still present near the Coffey site despite some range constriction, especially in the lowland floodplain areas that the people exploited for resources (Schmits 1978:105–106).

Another reason for choosing big bluestem is that its uses by historic Plains Indians have been chronicled in the ethnographic record, providing a

suite of documented customs potentially associated with plant-use behaviors at 14PO1. For example, Omahas and Plains Apaches employed it as building material (Gilmore 1919**;** Jordan 2008). Grass collecting was part of the dwelling construction process for earth lodge-building peoples, such as Pawnees, Omahas, and Hidatsas. In these societies procuring materials and constructing or repairing lodges were jobs done by women with very little aid from men (Fletcher and La Flesche 1911; Spector 1983; Weltfish 1965). Also, Omahas and Pawnees lined residential storage caches with grass (Fletcher and La Flesche 191; Weltfish 1965). Archeological data reveal that big bluestem functioned as a construction material for Mississippian dwellings (Powell 1980; Simon 2002).

Ethnographers have documented the use of different types of grasses, including big bluestem, or grass-like plants like sedges to weave mats (Densmore 1928; Gilmore 1919; Grinnell 1889; Jordan 2008; Ritzenthaler and Peterson 1956). In addition, big bluestem has medicinal properties that past people exploited. For instance, Plains Apaches utilized it as a switch in their sweat lodges to cure pain and drive away evil spirits (Jordan 2008), and Chippewas and Omahas made decoctions out of it to treat various ailments (Densmore 1928; Gilmore 1919).

Use-Wear of Plant Processing Implements

Although ethnographic analogy is a helpful strategy for understanding plant-processing behavior, chipped stone can provide direct evidence about plant use via microscopic use-wear studies. Striation patterns associated with plant processing (in this case, grass cutting) are well defined, based on use-wear analyses of stone sickle blades (Clemente and Gibaja 1998; Del Bene 1979; Keeley 1980; Miller 2014; Semenov 1964; Vaughan 1985). This kind of wear has three major characteristics: 1) striations oriented parallel to the working edge of the tool, 2) comet-shaped striations, and 3) occurrence of wear on both faces of a working edge. These attributes indicate a cutting motion directed toward the handler, where the comet shapes are etched into the implement from head to tail. Witty (1982) detected striations at low-power magnification on one of the Munkers Creek knives from the William Young site, and they fulfilled the criteria for plant processing. The striations typically appeared more oblique to the edge than parallel, which probably had to do with the way the tool was held, and this finding did not deter Witty from interpreting the striations as indicators of plant cutting.

Although use-wear experts have defined the wear pattern for sickle blades, disagreement remains as to how this wear forms (Anderson 1980; Christensen et al. 1998; Kamińska-Szymczak 2002; Unger-Hamilton 1984). Some experimental investigations suggest that soil particles are the abraders that produce striations on stone (Clemente and Gibaja 1998; Unger-Hamilton 1985). However, in an examination of threshing sledges, Anderson et al. (2006) argued that striations were created not on the stone itself, but on a sheet of phytoliths transferred to the stone from the straw being cut. Wear associated with grass cutting may be well documented, but there is still much to learn about the creation of striations. This inquiry contributes to the debate.

METHODS

The three Middle Archaic horizons at the Coffey site yielded a total of 11 Munkers Creek knives, all inspected for microscopic striations. Seven of the knives came from Horizon III-5, and Horizons III-7 and III-8 each contained two knives. All 11 were made of locally available Florence chert. Only two of the knives were complete: one from Horizon III-5 and the other from Horizon III-8. All specimens exhibit varying degrees of the previously mentioned "sickle gloss."

This study accepts Schmits' (1978) classifications of the knives as Munkers Creek because they neatly fit Witty's (1982) type description of this artifact. Based on Schmits' (1978) classifications and the obvious morphological differences between them, the author differentiated the 11 Munkers Creek knives from other objects in the assemblage that previously had been labeled "knives." Other knives compared well with Munkers Creek knives in thickness, width, or length but not in all three dimensions.

Furthermore, the pronounced silicate polish is unique to the Munkers Creek knives. The difference between the oldest and youngest Munkers Creek horizons is roughly 100 years, so based on this knife sample, it does not appear that the morphology of



Figure 3. Tools knapped from Florence chert, comprising nine cutting edges, used as experimental grass-cutting tools to compare with Coffey site tools. Each edge, not complete tool, numbered E1-E9 from left to right.

Munkers Creek knives changed much in that time span. As archeological controls, two other bifacial knives (not Munkers Creek type) were examined for comparison to the sample specimens to ensure that the Munkers Creek knives exhibited wear unique to that tool type.

The investigation incorporated an experimental control as well. Dr. Frederic Sellet of the University of Kansas and avocational flintknapper Tommy Leach of Oklahoma City, Oklahoma, created five Florence chert implements with nine distinct cutting edges (Figure 3). The author used these to cut big bluestem grass and assessed the resulting use-wear with the same protocol employed for the archeological specimens.

Experimental Research

The author harvested big bluestem from the field with the Group 1 tool edges (Figure 3: E1, E2, E3; Table 1). These cut the grass at ground level, which allowed for collection of the entire plant but forced gathering stems one-by-one rather than in clusters. Because these three edges cut the grass at ground level, they had the greatest degree of soil contact of all the experimental edges. The implements cut the grass in a parallel motion (toward the handler) for 45 minutes each. As determined through trial and error, this was the amount of time needed for recognizable and abundant striations to develop. At the end of the three 45-minute cutting sessions, the accumulated grass bundles were retained for

Table 1. Experimental Tool Edge Groups and Big Bluestem Grass.

Experimental edge group	Grass bundle 1	Grass bundle 2	Grass bundle 3	Sediment contact	Cutting height
Group 1	E1	E2	E3	Ground	Ground level
Group 2	E4	E5	E6	Windblown	1 foot above ground
Group 3	E7	E8	E9	None	2 feet above ground

subsequent rounds of grass cutting, ensuring that the amounts of grass cut in the second and third intervals remained constant.

The author used the Group 2 edges (Figure 3: E4, E5, E6; Table 1) to cut the same bunches of grass approximately 1 foot above the first cut (Figure 4). As the plants already had been removed from the ground, it was necessary to find a way to simulate procurement from the field. A partner held the grass firmly near its base so that it responded to cutting as if it were still in the ground. Unlike the stem-by-stem collection strategy used in the field, the Group 2 tools cut the grass in bundles of four to six stems. Big bluestem occurs in patches of this size in the field, and, when the cutting location is a foot above the ground, it makes sense to cut the whole patch at once. In other words, there is no need to harvest the grass stem-by-stem at this cutting height; doing so simply causes extra work. The second tool-edge group experienced less soil contact between implement and grass, as they never touched the ground. Still, they could have contacted windblown sediment adhering to the stems.

Group 3 (Figure 3: E7, E8, E9; Table 1) was a "clean" sample, meant to represent no soil contact with the tools. Before cutting the grass, the author wiped the plants as clean as possible with a damp towel. Then the Group 3 three edges cut the grass in the same fashion as Group 2, except 2 feet above the ground. This proved to be the least strenuous gathering strategy, as it required much less crouching and bending.

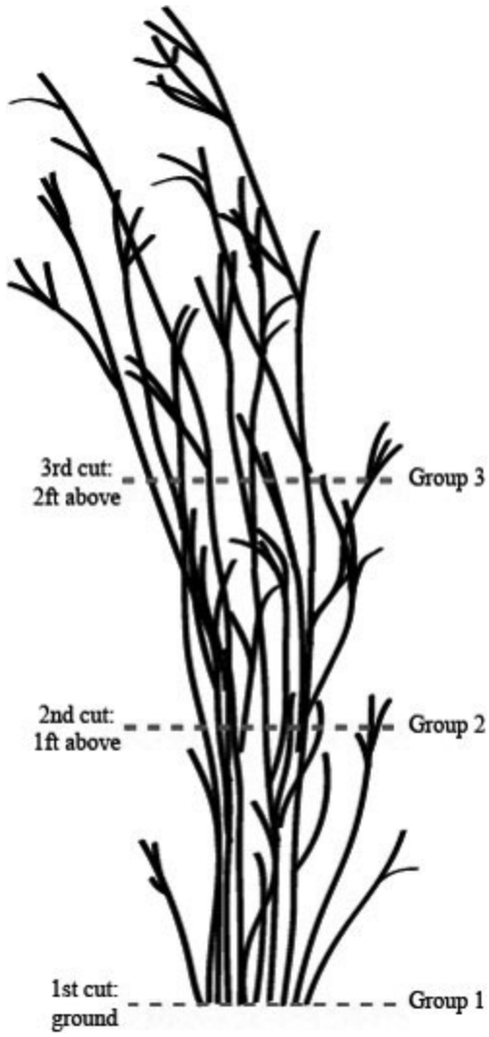


Figure 4. Cutting locations of big bluestem and corresponding experimental tool edge groups.

Analysis

Upon completion of the experimental grass cutting, the author inspected the Munkers Creek knives, the two archeological control knives from 14PO1, and the nine experimental edges, using a Nikon Eclipse microscope (model LV150NL) at 50X, 100X, and 500X magnification. The experimental edges were observed before and after use and before washing away sediment accrued during the operation, ensuring that any documented striations resulted from the experiment and not from transportation, cleaning, or other unrelated processes. The microscope was connected to a camera integrated with Lumenera Infinity analysis software, capturing multi-focus composite photographs of striations on the specimens. Photographed locations were marked on illustrated artifact images, keeping track of how the striations were oriented to the edges.

After recording location and orientation, the striations were digitally measured at 500X magnification. In taking these measurements, one photograph from each face of each tool and experimental edge served as a representation of overall patterns. This produced a total of 22 photographs. Wherever striations were most abundant in each photograph, the author drew a circle 100 microns (μm) in diameter and measured the maximum width and minimum spacing of striations within it. A micron or micrometer is one millionth of a meter. These measurements

served as the parameters for comparing the Coffey site implements to one another and to the experimental tools. Striations that could not be delineated clearly were not measured. This is particularly pertinent to the minimum spacing measurements: if a striation was not clear enough to be measured, then it could not be factored into the spacing measurements. Consequently, if the space between two measured striations was occupied by an unmeasured striation, it generated a misleadingly large number. Omitting large, outlying numbers when calculating average minimum spacing mitigated this problem and avoided skewing mean values.

RESULTS

This section reports on the outcomes of analyses and experiments. Use-wear on the experimental edges, the Coffey site implements, and archeological control knives are described in terms of both the quantitative and qualitative criteria outlined in preceding sections. The summary concludes by highlighting the similarities and differences between the 14PO1 knives and both experimental and archeological controls, based on the study criteria, providing insight about the author's interpretation of the findings.

Experimental Edges

Table 2 presents the dimensions of the five experimental tools, four of which had two cutting edges. All nine edges developed weak silicate polish and striations typical of sickle wear, and the striations only formed in the polished areas. Polish was weakly developed and at times almost entirely invisible to the naked eye, but it was seen readily under magnification of 50X or greater. The sickle-wear striations within these polished areas were likewise weakly developed but clear enough to delineate and measure. Examination revealed that 45 minutes of grass cutting did not result in as high a degree of sickle wear as expected, but it was sufficient to create a suitable comparative collection for evaluating the Coffey site artifacts.

The Group 1 edges, i.e., those cut at ground level, acquired the most polish, and their striations differed substantially from those on the Group 2 and 3 edges. Although the Group 1 edges included a few examples of classic sickle wear, striations oriented oblique to the cutting edge dominated. Unlike sickle-wear striations, they were uniformly thick rather than comet-shaped and had a random character instead of reflecting a one-directional cutting motion. After cleaning the artifacts to remove the sediment accrued during the cutting experiment, the author conducted a second analysis and was unable to relocate the oblique, thick striations as initially observed. However, there were faint traces of sickle wear that had been obscured by the sediment. It appears that two different abrasive processes took place to produce two different wear patterns on the Group 1 edges: one by grass cutting and the other by soil contact (Figure 5).

The average maximum width of striations for all tools was 2.21 µm, and the average minimum spacing between striations was 1.79 µm (Tables 3 and 4). Although the uniformly wide striations on Group 1 edges appeared in photographs to be the widest of the three groups, measurements indicated that their maximum widths were similar to other edges. The different shapes of the striations accounted for this apparent but misleading discrepancy: striations on the Group 2 and 3 edges were comet shaped, whereas those on the Group 1 edges were uniform. The "heads" of the comet-shaped sickle-wear stria-

Table 2. Maximum Length, Width, and Thickness of Five Tools Comprising Nine Edges Used in Experiments Cutting Big Bluestem.

Edges comprised by tool	Maximum length (mm)	Maximum width (mm)	Maximum thickness (mm)
E1, E2	121.46	37.76	13.15
E3, E4	99.56	37.26	12.61
E5, E6	101.38	44.92	13.62
E7, E8	98.03	42.95	15.74
E9	96.14	50.36	14.61

Table 3. Average Maximum Width and Minimum Spacing of Striations for Each Group of Experimental Tool Edges.

Group	Average maximum width (µm)	Average minimum spacing (µm)
1 (E1, E2, E3)	2.11	2.28
2 (E4, E5, E6)	2.12	1.43
3 (E7, E8, E9)	2.34	1.69

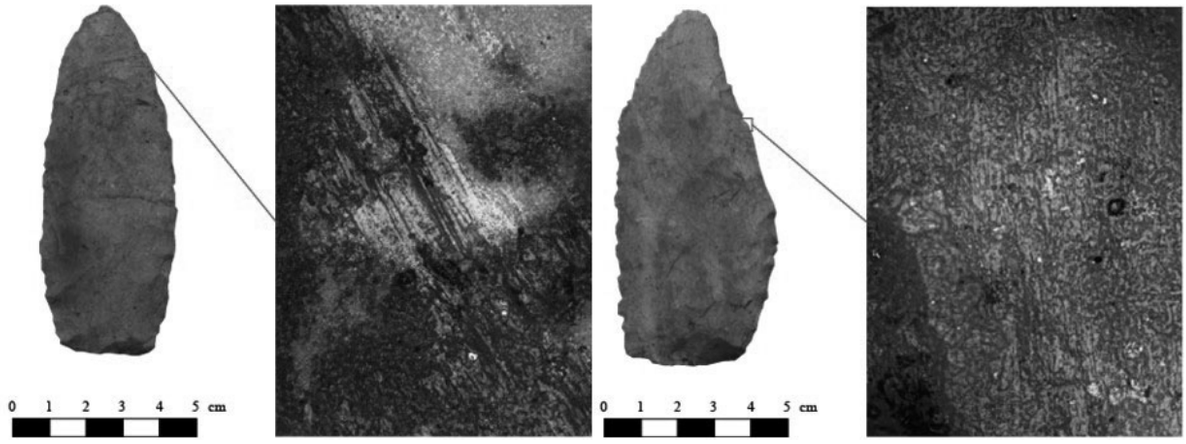


Figure 5. Comparison of use-wear at 500X magnification on experimental tool edges from Group 1 (left) and Group 2 (right).

Table 4. Number of Striations and their Summary Statistics of Width and Spacing.

Specimen	Number of striations	Average maximum width (µm)	Standard deviation for width	Average minimum spacing (µm)	Standard deviation for spacing
E1	29	1.90	.43	3.10	2.51
E2	34	1.95	.62	1.64	1.18
E3	46	2.37	.65	2.11	2.10
E4	47	2.20	.51	1.72	1.14
E5	29	2.04	.49	.90	.35
E6	49	2.09	.37	1.44	1.10
E7	49	2.39	.40	1.77	1.06
E8	44	2.17	.52	1.48	.80
E9	26	2.52	.54	2.00	1.01
H5-1	30	2.26	.63	2.64	2.21
H5-2	31	2.32	.62	4.41	2.56
H5-3	33	2.53	.63	2.74	1.96
H5-4	37	2.50	.68	2.24	1.94
H5-5	23	2.46	.84	3.54	2.80
H5-6	33	2.68	.52	3.29	2.46
H5-7	31	3.09	.55	2.73	1.74
H7-1	57	1.92	.58	1.61	1.92
H7-2	41	2.73	.53	2.50	1.60
H8-1	39	2.48	.40	2.47	1.44
H8-2	31	2.76	.48	2.41	1.36

tions were comparable to all striations on the Group 1 edges in terms of maximum width. Therefore, the average maximum widths for almost all edges fell between 2 and 3 µm.

The minimum average spacing of striations in all three groups was more consistent than the maximum average widths, with only Group 1 showing any variation. The majority of the experimental set of edges yielded minimum average spacing measurements primarily in the 1–2 µm range, but Group 1 had two outlying spacing measurements (Table 4: E1, E3).

Coffey Site's Munkers Creek Knives

Table 5 summarizes the dimensions of the Coffey site artifacts. Specimens labeled "H5" originated in Horizon III-5 of 14PO1; "H7" and "H8" represented their respective horizons. All 11 of these Munkers Creek knives exhibited the three characteristics of "sickle wear" outlined earlier. Instances of sickle wear were uniform in terms of striation thickness and spacing with some minor exceptions (Figure 6). This was true for each tool, as well as for different instances of wear on the same tool. Notably, the author could not easily delineate some striations for measurement, even in cases where their presence was discernible.

The average maximum width of striations for all tools was 2.55 µm, and the average minimum spacing between striations was 2.98 µm. As with the experimental edges, average maximum striation width almost always fell between 2 and 3 µm, but with two outliers (Table 4: H5–7, H7–1). The widest point was usually the striation's "comet head."

Average minimum spacing was somewhat more variable, and the striations were slightly farther apart than those on the experimental edges. Whereas the experimental set yielded measurements primarily in the 1–2 µm range, the Coffey site tools' minimum average spacing never fell below 2 µm and sometimes was greater than 4 µm. This is a minuscule difference to the naked eye and difficult to detect when comparing microphotographs, but the difference was present nonetheless.

Archeological Control Knives

The two archeological control knives from 14PO1 (Table 4: B1, B2) proved to be substantially different from the Munkers Creek knives in terms of appearance and wear. Both were complete specimens but with different shapes (ovate and triangular, respectively). They had worked bases, unlike those of the Munkers Creek knives, and neither had visually identifiable sickle gloss. Some small polished areas occurred on the high ridges of the flake scars, but they were visible only at 50X magnification. The author seldom detected striations on the control knives, and, when they were present, the striations were weakly developed and not oriented parallel to the edge, making them inconsistent with sickle wear. Striations were often multi-directional, and they tended to occur on flake scar ridges in the polished areas. In short, these two knives differed significantly from Munkers Creek knives in terms of morphology as well as wear characteristics.

Comparisons

Average maximum striation width in particular was remarkably similar across all specimens within the archeological and experimental groups. A two-sample t-test for statistical significance provided

Table 5. Measurements of Munkers Creek Knives and Archeological Control Knives.

Specimen catalog number	Maximum length (mm)	Maximum width (mm)	Maximum thickness (mm)	Fragment
H5-1	123.13	36.04	11.69	Complete
H5-2	74.59	30.53	9.35	Distal
H5-3	54.26	27.58	10.86	Distal
H5-4	80.71	39.39	10.49	Proximal
H5-5	54.15	27.52	6.89	Distal
H5-6	59.74	40.49	10.24	Proximal
H5-7	37.97	34.25	9.23	Distal
H7-1	53.89	30.83	10.84	Distal
H7-2	60.61	32.47	12.17	Distal
H8-1	121.12	33.35	13.71	Complete
H8-2	63.01	34.38	9.82	Distal
B1	80.64	49.43	7.23	Complete
B2	117.74	56.16	14.09	Complete

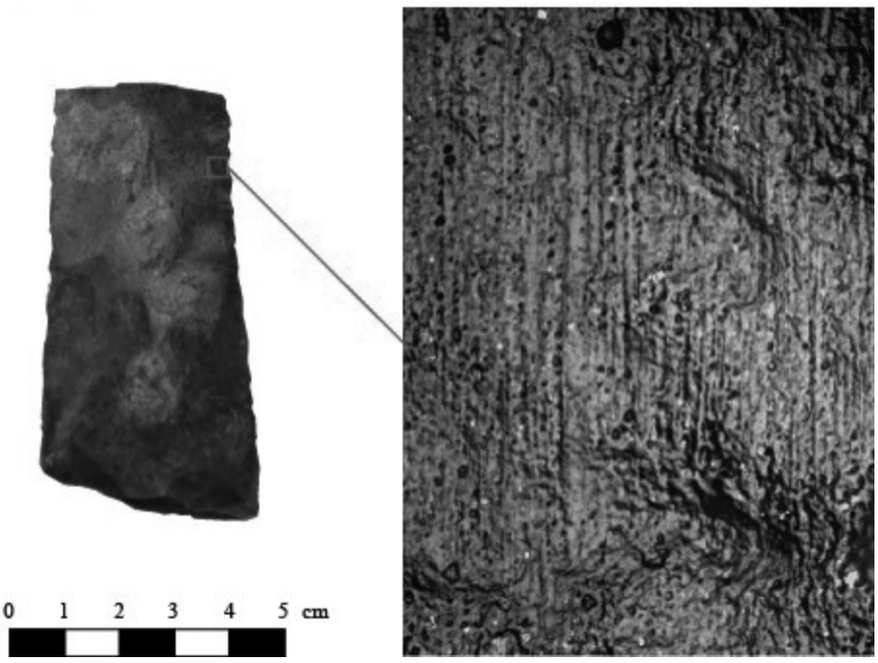


Figure 6. Sickle wear at 500X magnification on Munkers Creek knife specimen H5-4.

evidence to the contrary, as it demonstrated that maximum average widths were statistically significant between the two groups and that the Coffey site implements had slightly wider striations ($t(38) = 3.22$, $p < .05$). Still, this only revealed a significant difference between the archeological and experimental tool groups; it did not negate the fact that the similarities in numerical averages within each group showed a great degree of consistency.

Average minimum spacing was more variable than width both within and between the experimental and archeological tool sets. Within the 14PO1 set averages deviated no more than approximately 3 µm from one another, and their standard deviations differed even less (Table 5). Within Groups 2 and 3 of the experimental set, both averages and standard deviations varied only about 1 µm from each other, and their mean spacing averages were not statistically significant ($t(10) = 1.72$, $p > .05$).

However, a distinct difference in minimum average spacing measurements occurred between the prehistoric and experimental sets despite the consistencies within them. Average minimum spacing for the Coffey site implements ranged roughly from 2 to 4 µm, while this measurement for the experimental edges in Groups 2 and 3 fell between ca. 1 and 2 µm. This is a statistically significant difference ($t(38) = 3.22$, $p < .05$). There was a clear pattern that striations were closer together in the experimental set than they were in the 14PO1 set. Nevertheless, each set of specimens displayed a high degree of consistency within its respective maximum width and minimum spacing averages.

Quantitative data from experimental Group 1 were anomalous (Table 6). Maximum width averages differed significantly from the Coffey site artifacts, but there was no significant difference in average maximum width between Group 1 and Groups 2 and 3. Average minimum spacing was significantly different between Group 1 and Group 2 but not between Group 1 and Group 3 or the 14PO1 tools. No clear pattern existed in the relationship between the Group 1 striations and those of Coffey site or other experimental groups.

In this case quantitative measurements were misleading considering numerous distinctive qualitative differences between the wear in Group 1 and the rest of the objects, as previously explained. Although the Group 1 edges did exhibit some parallel-oriented striations, probably associated with plant processing, they did not occur as frequently as the uniformly thick striations that were photographed, measured, and tested. The latter striation pattern was a better indicator of the overall striation patterns in Group 1.

Table 6. Results of T-tests for Statistical Significance for Experimental Group 1.

Specimen group tested for comparison	Average measurement tcompared	t-Test results	Statistically significant?
Archeological knives	Maximum width	$t(26) = 2.74, p < .05$	Yes
	Minimum spacing	$t(26) = 1.33, p > .05$	No
Experimental Group 2	Maximum width	$t(10) = .38, p > .05$	No
	Minimum spacing	$t(10) = 2.30, p < .05$	Yes
Experimental Group 3	Maximum width	$t(10) = 1.81, p > .05$	No
	Minimum spacing	$t(10) = 1.43, p > .05$	No

DISCUSSION

When compared to existing use-wear literature, the experimental set of tool edges, and the control knives, the striation patterns on the 14PO1 Munkers Creek knives strongly support the conclusion that Middle Archaic gatherers utilized them as plant-processing implements. Data from the two archeological control knives suggested that they were unused or only minimally used, and likely not for grass cutting. Conversely, all characteristics of sickle wear outlined earlier were ubiquitous on the Coffey site's Archaic knives. The presence of comparable wear on the experimental edges, particularly Groups 2 and 3 (Table 1), supported this claim. Despite some statistically significant differences between the archeological tool set and those of experimental Groups 2 and 3, the consistencies of the quantitative measurements within them support the existence of sickle wear in both, indicated by the qualitative characteristics of their striations.

Wear on the experimental tools did not develop as fully as the wear documented on the 14PO1 implements. The author attributes the difference to the fact that experimental edges spent just 45 minutes cutting only one species of grass. In all likelihood the gatherers at the Coffey site employed the knives to cut a variety of grasses and other plants, and their use-life almost certainly exceeded 45 minutes. Regardless, the weak wear on the experimental edges was enough to provide a suitable sample for both qualitative and quantitative comparison, and it showed marked similarities to the wear on the Coffey site tools.

The results of these experiments and analyses give rise to two major interpretations that carry-broader significance for Central Plains Archaic hunter-gatherers: 1) the knives were a unique form of technological specialization for the Central Plains Archaic, and they were a physical marker of the adaptations established in the Altithermal and intensified in the Late Archaic and beyond, and 2) sickle-wear striations were created by abrasive particles within the plant itself rather than the soil in which the plant was growing.

Striation Formation

It is striking that the Group 1 striations disappeared after washing. Removing the sediment that covered the artifacts also removed the striations in the sediment-covered areas. Looking at the cleaned specimens under the microscope, the author found striated areas that apparently had been obscured by sediment and, therefore, were undetected prior to washing. These newly exposed striations were sparse, but compared to the striations found before washing, they were far more consistent with the sickle-wear pattern detected on all of the other experimental tool edges. The striations photographed, measured, and presented for experimental Group 1 were superficial and only etched into the sediment-covered surfaces of the edges. Furthermore, no such striations were present on the Group 2 and 3 edges that did not cut the grass at ground level. Therefore, the conclusion was that striations produced by plant-cutting differ from striations caused by soil contact. If a tool made direct contact with the ground while cutting, parallel plant-cutting striations, indicating motion, formed, but uniformly thick and randomly oriented striations also developed in the sediment that accumulated on the object.

Because these different striations formed simultaneously, two distinct abrasive materials must have been present and created the use-wear in different

ways. Plant-cutting striations were etched into polished areas by abrasive materials in the plant itself (perhaps by phytoliths [e.g., Anderson et al. 2006]), whereas soil contacted during the cutting process accumulated on the specimen and then abraded the same dirtied surface. When the artifact was washed, the sediment-generated wear disappeared. Therefore, any sickle wear found on washed prehistoric implements, such as 14PO1 Munkers Creek knives, was created solely by abrasive materials in the plants that they cut. A study determining precisely what these abrasive materials were and if/how they differed among plant species might be a promising avenue of future research. Such information could allow archeologists to interpret site behavior by identifying specific floral resources exploited by prehistoric groups.

Hyper-Specialized Technology in the Middle Archaic

The sickle wear on the Coffey site Munkers Creek knives confirmed the presence of a specialized plant-processing technology on the Central Plains during the Archaic. In fact, the author conceives of the technology as "hyper-specialized," as the use-wear was highly developed and plant processing was intensive. To understand why Munkers Creek knives are hyper-specialized and to grasp just how unique they are, it is helpful to situate the Munkers Creek phase within the larger system of Central Plains Archaic adaptations.

Two sites besides Coffey have well-defined Munkers Creek occupations: William Young (Witty 1982) and Cow Killer (14OS347) (Reynolds 1984). The Coffey, William Young, and Cow Killer sites represent seasonal camps along rivers or major tributaries. In addition, all are in ecotonal settings in eastern Kansas, have evidence for semi-permanent settlement, and contain Munkers Creek knives. This suggests that Archaic subsistence diversification, presumably in response to climate change, is visible not only at 14PO1 but may be represented by the Munkers Creek phase as a whole. However, to best comprehend Munkers Creek and its specialized knives as a unique adaptation to Middle Holocene environments on the Great Plains, one must examine it within the greater context of Archaic complexes in eastern Kansas. Most useful is a look at the traditions that bracket the Munkers Creek phase: the preceding Logan Creek complex and succeeding El Dorado phase.

The Early Archaic Logan Creek complex dated to ca. 8,600–6,000 B.P. (Anderson et al. 1980), so its end coincided with the onset of the Middle Archaic and the appearance of the Munkers Creek phase. Logan Creek sites included seasonal camps, bison kills, and human burials (Kay 1998). Early Archaic sites are often thought to represent a "'Small Game Hunting Tradition' developed in response to environmental stress and the apparent unavailability of larger animals" that were more abundant in the preceding Paleoindian period (Thies and Witty 1992:144). Logan Creek complex sites demonstrate a reliance on small animals and riverine resources, but the "Small Game Hunting Tradition" moniker may be misleading, given that Logan Creek sites (notably Spring Creek in Nebraska) continued to show a heavy dependence on bison relative to later complexes (Wedel 1986; Widga 2007). Thus, the Logan Creek complex represents a bison-reliant adaptation to the climate change brought on by the start of the Altithermal. This differs from the subsistence diversification that evolved later during the Munkers Creek phase, so it is unsurprising that plant-processing implements like Munkers Creek knives have not been documented in association with the Logan Creek complex.

The El Dorado phase (ca. 3980–3240 B.P.) followed Munkers Creek and resembled it in some ways but was distinct. The culture appeared at the beginning of the Late Archaic, and sites generally dated to after the Altithermal (Thies and Witty 1992). Sites of this phase, such as the Williamson site located along a tributary of the Neosho River in eastern Kansas, were often seasonal residential camps with associated mortuary areas (Kay 1998; Schmits 1987). El Dorado sites are best interpreted as base camps that were part of a logistical mobility pattern (in the sense of Binford 1980), and they represent a broad-spectrum subsistence adaptation. This inference is based on the high diversity of resources in faunal assemblages and material evidence for plant processing, like grinding stones (Grosser 1973; Schmits 1987; Thies and Witty 1992). Based on this information, the El Dorado phase represents an intensification of strategies established by inhabitants of Munkers Creek sites.

The Munkers Creek phase appears to embody a transition between bison-centric adaptations and more generalized ones. Throughout the Archaic, subsistence diversification gradually increased over time. Logan Creek sites exemplify initial adaptations to the drought brought on by the Altithermal, providing evidence of brief movements into ecotones where multiple resources could be exploited. However, the heavy reliance on bison, often associated with the preceding Paleoindian period, continued. Munkers Creek sites like Coffey demonstrate a decreased reliance on bison, although bison remained an important resource, and clear seasonal exploitation of ecotonal alluvial settings. A slight increase in sedentism and subsequent development of specialized technologies for resource collecting (like Munkers Creek knives) coincided with this change. Finally, El Dorado phase sites show an even greater degree of subsistence diversification in environs similar to those occupied by Munkers Creek people. Inhabitants of these sites employed a logistical mobility strategy and began to engage in different types of social behavior, as exemplified by mortuary areas.

By examining Archaic subsistence adaptations on the Central Plains and confirming the existence of one of the oldest hyper-specialized technologies in the region, archeologists may interpret the Middle Archaic as a dynamic period on the Central Plains. The foundations of broad-spectrum subsistence, logistical mobility, and technological specialization, more markedly manifested in the Late Archaic and onward, were initiated with the Munkers Creek phase, and Munkers Creek knives are material indicators of this process.

Broader Significance

Munkers Creek knives do not represent only the behaviors of Archaic hunter-gatherer groups in response to the Altithermal; they also give visibility to the people who used the tools to process plants. Compared to what is known about Archaic plant gatherers, preservation bias and the general priorities of Plains archeology have led to a more complete understanding of the hunting half of the hunter-gatherer lifestyle. However, the Munkers Creek knives allow a glimpse into the daily lives of Archaic gatherers.

More poignantly, they reveal the lives of Archaic women, who almost certainly were the primary users of Munkers Creek knives. As pointed out earlier, the rich ethnographic record of the Plains indicated that women traditionally handled most plant collecting and processing in Plains societies. Although ethnographic analogy must be invoked with care, it can be a powerful means for more robust interpretations. In the Plains Archaic record organic remains are sparse, and chipped stone implements dominate archeological assemblages. This has had the effect of disproportionately emphasizing men's contributions to Plains Archaic life, and for that matter, to nearly all Plains cultures throughout time. Fortunately, Munkers Creek knives are one type of chipped stone tool that demonstrably represents gathering, and, therefore, they are uncommon yet valuable representations of the lives of Archaic women.

This study produced valuable information about use-wear and the processes of striation formation on stone specimens. Microwear analysts should take note that artifact cleaning can significantly impact the appearance of wear. The processes by which different striation patterns form are well documented (Del Bene 1979; Keeley 1980; Semenov 1964; Vaughan 1985), but when a tool comes into heavy contact with soil, a unique wear pattern can develop within the sediment layer itself. These striation patterns differ distinctly from those that are etched directly on an object's surface and represent a cutting motion. This outcome had little meaning for this particular inquiry, as it did not affect the ability to verify the Munkers Creek knives as plant-processing implements, but it may be an important consideration for use-wear analysts with other research questions.

CONCLUSION

This study supports the existence of a hyper-specialized plant-gathering technology at a Middle Archaic Munkers Creek site in eastern Kansas. Other Munkers Creek sites have yielded the same Munkers Creek knives, but sites predating and postdating the Munkers Creek phase have not, suggesting that this technological specialization is unique to the Middle Archaic for the Central Plains. Munkers Creek knives already were considered temporal

markers for sites in the region, but now it is clear that they also signal the beginning of subsistence diversification in response to the Central Plains Altithermal. Munkers Creek knives represent a marked increase in reliance on plants within the Middle Archaic hunter-gatherer economy, and they reveal clues about the lives of Middle Archaic women on the Central Plains.

However, although ethnographic data yields strong suggestions, archeologists cannot yet definitively interpret how plants were used by the Coffey site's inhabitants or Munkers Creek peoples in general. According to this study's findings, the manner in which grasses were harvested (cutting height) made no discernible difference in lithic usewear. However, the experiments did confirm that grasses themselves, rather than soil at the base of or adhering to the stems, created an unmistakable and distinctive wear pattern on lithic implements. Future microwear researchers should take this into consideration and design investigations with the understanding that sediment striations can easily be obliterated by washing artifacts.

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14MO414: SURFACE COLLECTION OF ARTIFACTS INDICATING POSSIBLE KAW OCCUPATION (1848–1873)

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This paper gives a brief history of 14MO414 and examines artifacts recovered there. The majority date to the mid-nineteenth century and indicate a possible Kaw Reservation period occupation. The site was discovered and reported to the Kansas Historical Society by amateur archeologists, and all the artifacts discussed were found by amateurs, either on the surface or just below. A metal detector was used in the recovery of many, but none was retrieved from below the plow zone. All artifacts were collected with permission from the landowner.

Archeological site 14MO414 is multicomponent, containing artifacts that range from Archaic through Historic times. The focus of this article is the Historic period, probably dating to the Kaw Indian Reservation period (1848–1873).

The site has been surface hunted for many years. In his notes the late Richard Stauffer mentioned that he found a steel point here in May 1957. He also made the notation: "One of Mosher's sites. Gazette articles. (Kaw) Oral History." He was referring to Dr. Orville W. Mosher, Jr., curator of the Lyon County Historical Museum in Emporia, Kansas, during the 1950s and 1960s.

In 1929 Mosher began interviewing the old pioneers of the area about their early days in Kansas and their contacts with the Kaw Indians. The oral histories from his many interviews painted an interesting picture of the Kaw, their customs, and their relations with "whites." These accounts might have led him to 14MO414, although this cannot be known for certain. What is known is that he searched for and collected Native American relics and is believed to have shown Stauffer this site in the 1950s. In the mid-1960s Mosher (1965) published a series of articles in the *Emporia Gazette* pertaining to the Kaw Indians' stay on the "Diminished Reserve" southeast of Council Grove.

The author received information about 14MO414 from Stauffer in 1990 but did not conduct a field survey until 2001. He made several return visits to the site and collected more than 300 historic and many prehistoric artifacts. All were found on the surface or just below. None was retrieved below the plow zone. It is hoped that the information in this report, along with the dating of the specimens, will establish a timeline indicating when and by whom the site was occupied.

GEOGRAPHICAL SETTING

14MO414 is located in Morris County, Kansas (Figure 1). It lies on the Neosho River bottom land between the towns of Dunlap and Council Grove. It sits on a terrace north of an unclassified drainage that comes from the west-northwest and empties into the Neosho River approximately 200 yards to the south.

The main soil association in the area is the Mason-Tully-Reading. Located on stream terraces, this group consists of deep to nearly level soils that have a clayey and loamy subsoil. They are excellent for producing food and cover for upland, woodland, and wetland wildlife (United States Department of Agriculture 1974:6). The site is on good farm ground and currently is used as cropland.

HISTORICAL SETTING

At one time the Kaw had control or access to a large portion of what is now the State of Kansas. Beginning in the early 1800s, several treaties were signed that began to reduce their land and put them on reservations. By 1848 the Kaw were relocated from their reservation along the Kansas River onto a 20-mile-square tract with Council Grove as the agency (Unrau 1971).

About 1,600 Kaw were moved to this reservation, and three villages were established within 10 miles southeast of Council Grove. The largest of the villages on Kahola Creek was led by the prin-

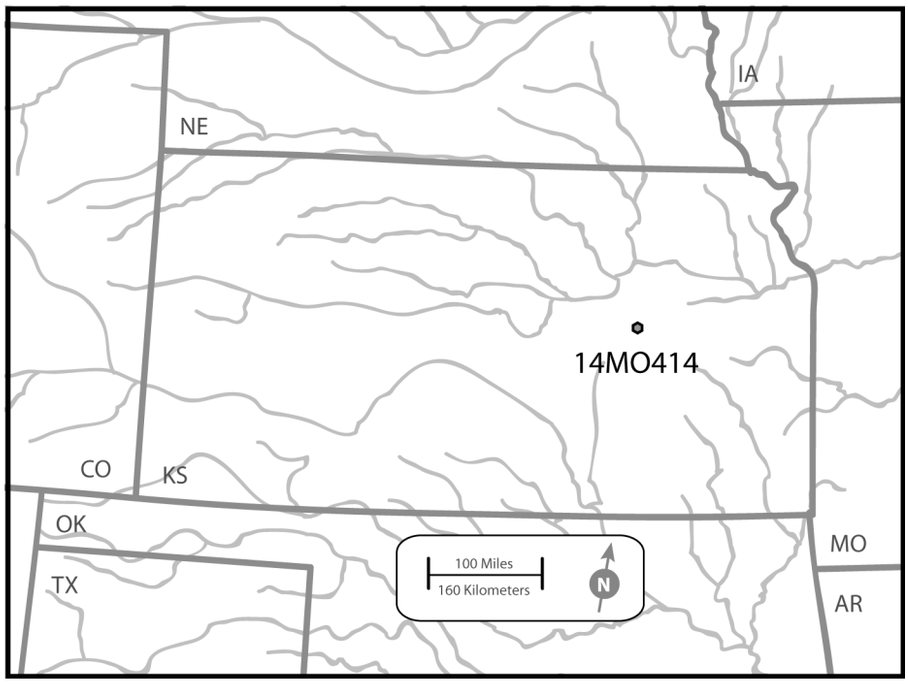


Figure 1. Approximate location of 14MO414. Map by Robert Hoard.

cipal chief of the tribe, known as "Hard Chief." He made the principal decisions, selected sub-chiefs, picked campsites, and made treaties. In 1987 the Kansas Historical Society (KSHS) and Kansas Anthropological Association (KAA) excavated at Hard Chief's Village (14SH301) near Topeka, which was occupied by the band before its move to present-day Morris County (Marshall 2000). The second village, that of "Fool Chief," was located along the Neosho River between Americus and Dunlap. This camp was presided over for many years by Speckled Eye, brother of Hard Chief. He was followed by his son with the same title. Fool Chief was the principal planner and strategist in battle. KSHS and KAA excavated at the previous Fool Chief's Village (14SH305) near Topeka in 2012 (Waggoner et al. 2019). The third village was near Big John Creek just southeast of Council Grove. This was presided over by *Pen-gah-hoshe*, a brother of Hard Chief and Fool Chief.

In 1859 the 20-mile-square reservation was reduced to a tract of 9 by 12 miles. This became known as the Diminished Reserve (Figure 2). By 1863 a combination of government ineptitude, frontier land hunger, railroad promotion, and intolerance was working against the Kaw. They tried to adapt to these conditions, but it was a losing battle (Unrau 1971:196). In 1873 the Kaw were once again forced to move. When their last forced migration began on June 4, 1873, their population had been reduced to 600 people. They reached their new home in Indian Territory, which is now Oklahoma, some 17 days later.

ARTIFACTS RECOVERED FROM 14MO414

Firearms and Ammunition

Lead Bullets

Ninety-six bullets were retrieved from the site. This includes 63 unfired round lead bullets (Table 1), 3 conical lead bullets, and 30 impacted round lead bullets.

Impacted round lead bullets include bullets that range from partially deformed to completely flattened, thus accurate caliber measurements are not possible. The majority appear to be in the .50 caliber range.

Three conical bullets include two complete and one impacted. One complete bullet measures .45 caliber and is encircled with one ring. The other

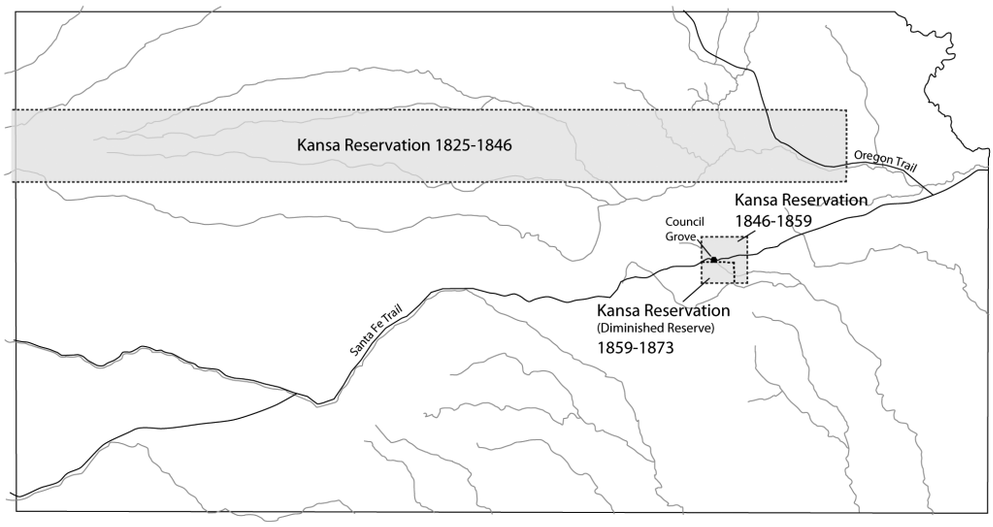


Figure 2. Map showing boundaries of Kansa Indian reservations from 1825 to 1873. Map by Tricia Waggoner.

Table 1. Bullets.

Measurable Round	Lead Bullets	Range (Caliber)	Mean (Caliber)	Sprue Attached
Small	12	.34–.40	.366	1
Medium	48	.45–.54	.496	13
Large	2 complete 1damaged	.64–65	.645	0

complete bullet measures .28 caliber and is encircled by a crimped marking. One impacted bullet exhibits three rings but is too deformed for accurate measurements. All three bullets were meant for use in black powder weapons.

Miscellaneous Lead

Two pieces of bar-shaped lead measure 18 mm in length by 9 mm in width and 12 mm in length by 11 mm in width. Two segments of flat lead are 29 mm long by 18 mm wide and 48 mm long by 37 mm wide.

Twenty-four lead spatters come in various shapes and sizes, ranging from 9 to 20 mm. Lead spatters indicate the use of molten lead, mostly likely in the production of bullets.

One small ring-shaped lead object has an outside diameter of 12 mm and an inside diameter of 7 mm. The band width is 5 mm, and thickness is 2 mm. A flat lead disk has a small hole in the center, similar to a washer. The outside diameter is 12 mm, the hole diameter is 3 mm, and thickness is 2 mm.

Bullet Mold

A portion of an iron bullet mold is for a bullet size of approximately .50 caliber (Figure 3). When the mold was complete, it would have cast a single round bullet.

Gun Parts

The gun components described below are from both flintlock and percussion-style weapons. All gun parts appear to be American made and non-military.

There are three hammers from percussion-style weapons (Figure 4). One is a box-lock and is probably from a pistol. The other two are from a small rifle or pistol (Stephen Allie, personal communication 2005).

A 12-inch section from a rifled .45-caliber octagon barrel has an outside diameter of 23.5 mm. Heavy battering and wear appear on one end. No manufacturer's marks are evident. As flintlocks wore out, many times the barrels would be converted to tent stakes, picket pins, or hide scrapers (Hanson 1992:33).

A firing pan plate fragment still contains the pan and most of the frizzen spring. Due to rust and corrosion, no manufacturer's marks are visible.

Three frizzens, two large and one small, were recovered (Figure 5). The small frizzen probably was used on a pistol and appears to be from the firing pan plate described above. One broken main spring also was collected.

Four brass ram pipes were found (Figure 6) Their dimensions are presented in Table 2. The fourth one



Figure 3. Bullet mold fragments.



Figure 4. Gun hammers from percussion-style weapons.



Figure 5. Gun frizzens.



Figure 6. Gun ram pipes.

Table 2. Dimensions of Ram Pipes.

Length	Outside diameter	Inside diameter	Attachment holes
33.8	13	11	2
38	13	11	2
42.5	12	10	1
Unknown	Unknown	Unknown	2

is too damaged for accurate measurements, but it has two attachment holes on top. This guide is slightly different from the other three in that both ends are shaped for attaching to a gun stock.

A brass tip for a wooden ramrod is 16 mm in length with an outside diameter at the top of 14.5 mm, tapering to an outside diameter at the bottom of 11 mm. Other than the tapering there is no indication of how it would have attached to the ramroad.

Sections of two plain brass trigger guards were retrieved. These types of trigger guards, known as scroll guards, were first manufactured in the 1830s. Modeled after an English pattern, they served to provide a better grip with additional fingers on the rifle. They were used on both flintlocks and percussion rifles in the 1830s and 1840s but later were more common on percussion rifles (Hanson 2011:363, 423).

The larger of the two guards is almost complete with portions of the rear and front tangs missing. The curved portion, which went around the trigger, is intact but bent, making accurate measurements difficult. Maximum width on the curved portion is 21 mm with a thickness of 5 mm. The smaller guard is broken with only the front half remaining. The front lug and tang are still intact. Maximum width on the curved portion is 15 mm, and maximum thickness is 3 mm. The front lug measures 11 mm in length, 8 mm in width, and 3 mm in thickness. It has a single drilled hole with a diameter of 2.5 mm.

Two iron bow-shaped trigger guard pieces were found. These are plain with no markings. Each piece was drilled for an attachment screw. This type is associated with the Northwest gun (Hanson 1992:2).

Four fragments of a serpent side plate represent a typical feature of the Northwest gun (Hanson 1992:16; Figure 7). Serpent side plates came in various styles that changed over the years. This particular style is from its final form in use from the late eighteenth century through the first three-quarters of the nineteenth century (Hamilton 1980:66–67).

A flat brass portion of a Northwest gun butt plate, missing the top tang, also was recovered. It has a

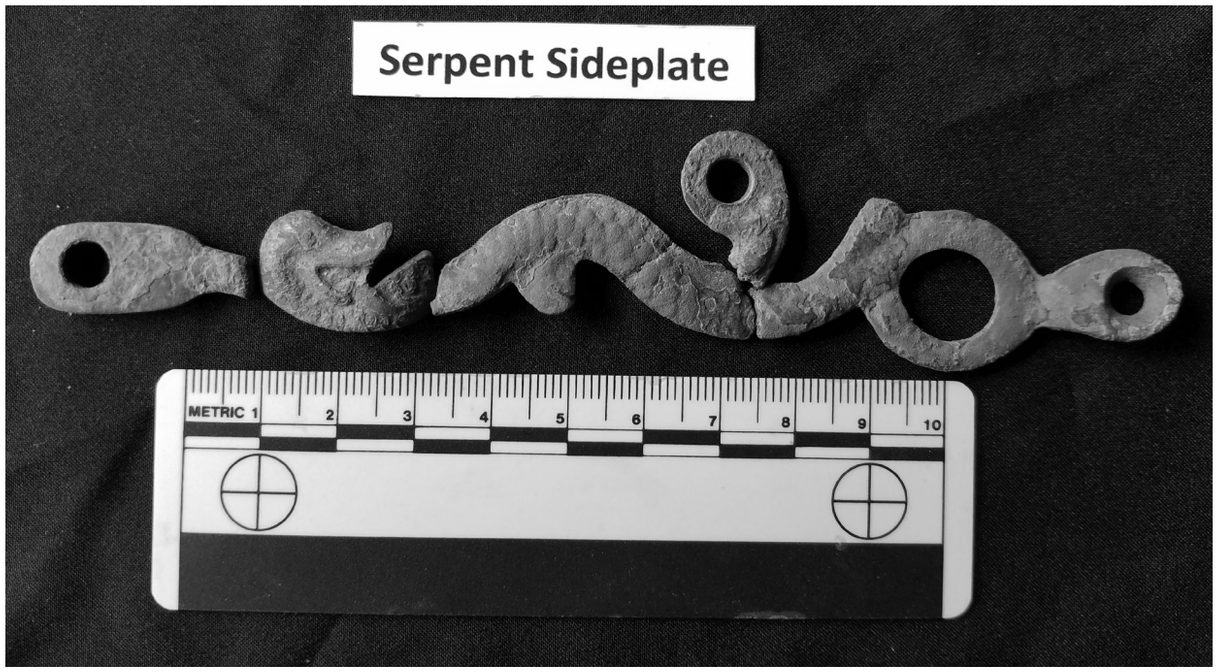


Figure 7. Serpent side plate from Northwest gun.

length of 106 mm, width of 44 mm, and thickness of 2 mm. It was attached to the stock using five square nails around the edge. All Northwest guns had flat butt plates of heavy sheet brass with a short flat top tang. As late as 1826 this plate was attached with small square iron spikes, six or seven set around the edge and one in the top tang (Hanson 1992:40).

Gunflints

Fifteen gunflints came from this site (Figure 8). Twelve are the author's personal finds, and three are from other collections. Those three were examined, but no measurements or photographs were taken.

All the gunflints appear to have been used and then discarded. Some could be refurbished, but due to ready availability that seems unlikely. It would have been much easier to simply replace the spent flint with a new one (Stephen Allie, personal communication 2005). The *Ordnance Manual for the Use of Officers of the United States Army* stated, "a good musket flint will last for more than fifty fires" and [flints were] "issued to troops in the proportion of 1 flint to 20 rounds" (United States Army Ordnance Department 1850:242).

Four of the personal finds were made from the translucent honey-colored flint, characteristic of the French type. Four are dark in color with a demi-cone of percussion visible on top, which would indicate English origin (Witthoft 1970). Two other dark gunflints and two light gray ones are probably English. None is local chert.

In his archeological site form for 14MO414, Richard Stauffer noted that he found two English gunflints in November 1985.

Metal Projectile Points

Seventeen stemmed iron points were measured as complete (Figure 9). These are preforms or unfinished points (Feagins 2008) and most likely native made rather than made specifically for trade with Native Americans. The points were chiseled from some type of flat iron and would have been finished using a file. Differentiating native from non-native points can be difficult, but three attributes can help determine the source of manufacture: the presence or absence of notched or serrated stems, the shape of longitudinal cross sections, and the overall symmetry (Brosowske 2006). Of the 17 none of the stems is notched or serrated, and all have a flat cross section. They have different shapes and do not appear to have been stamped out with a consistent pattern. All have excessive rust and are in various

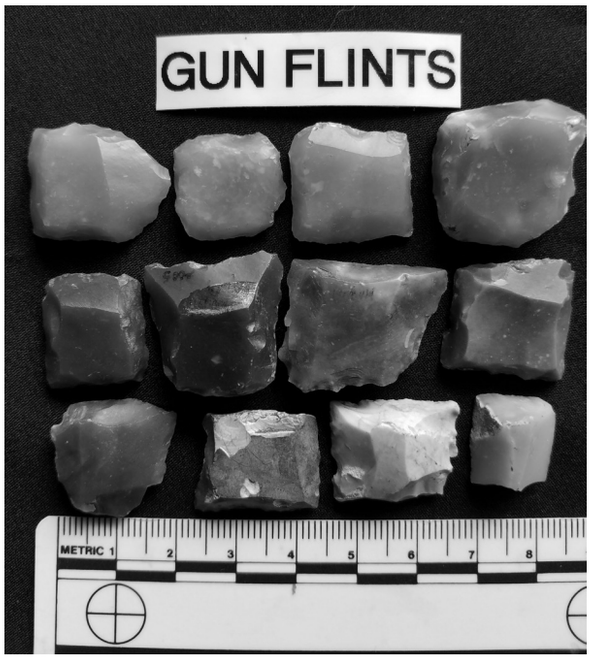


Figure 8. Gunflints. Specimens in top row are honey-colored flint.

Table 3. Metal Projectile Points.

Metal Projectile Points (stemmed)		Range	Mean
17 complete			
8 fragmentary	maximum length (mm)*	43.0–73.0	64.75
	maximum width (mm)	16.0–26.0	21.19
	thickness (mm)	1.0–3.0	1.96
	neck width (mm)	8.0–13.0	10.72
17 complete	weight (g)*	3.6–16.7	11.10

*Fragments are not included in maximum length or weight measurements.

stages of degradation. All are missing a portion of the tip with some deterioration along the edges, but enough remains to get fairly accurate measurements (Table 3). There are 25 partial points. Eight of these are the bottom (proximal) ends of stemmed points, allowing for accurate measurements of width, thickness, and stem dimensions. The rest consist of tips, mid-sections, and three triangular specimens.

The three triangles may be complete but are not included in the table because they lack stems. Even so, measurements were taken, yielding an average

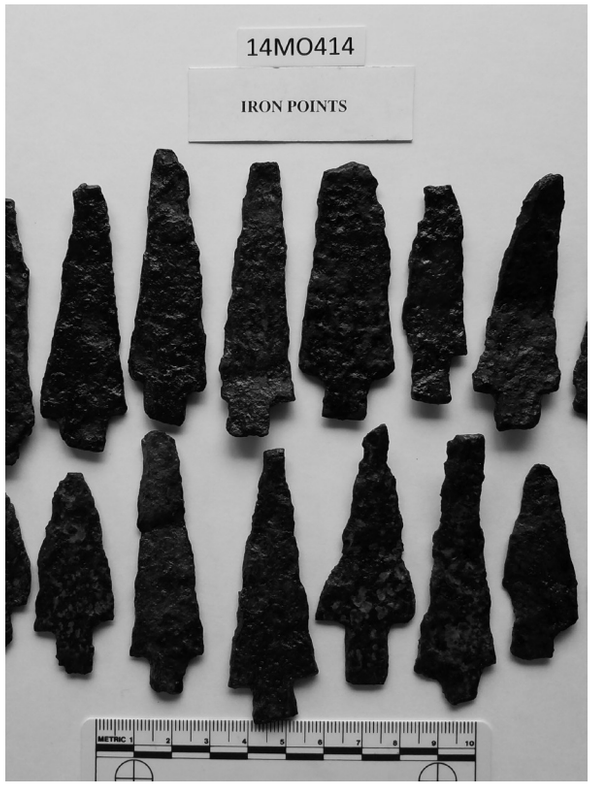


Figure 9. Iron arrow points.

length of 54.3 mm, width of 24.7 mm, and thickness of 2.16 mm.

Conical Rolled Brass

Two conical rolled brass objects were recovered. They appear to be cut from kettles. Both have base diameters of 12 mm, tapering to points at the tops. The lengths are 55 mm and 50 mm, respectively, with thicknesses of .5 mm. They are rolled tightly with no openings at the tops for attachment strings, so it is doubtful that they were tinklers. One possibility is that they were rolled brass arrow points.

Military Insignia

Dragoon Cap Plate

The eagle from an 1833 Dragoon cap plate was recovered (Figure 10). This insignia, worn on the soldier's dress uniform cap, was first issued in 1833 and was in use until 1851. The pattern, a Napoleonic-style eagle placed upon an eight-pointed star,



Figure 10. Eagle from 1833 Dragoon cap plate.

was identical for officers and enlisted men, the only difference being on the finish. Officers' cap plates had a gilt star with the eagle in silver, while the enlisted man's had a brass star and eagle made of a less valuable white metal (Steffen 1977:95–97).

The 14MO414 specimen is white metal. It measures 70 mm in length and 55 mm in width. The thickness varies from .5 to 1 mm. The attachment pin on the back is broken off, and there is a bend in the eagle, probably caused by impact from farm equipment.

Epaulet Scale

A brass epaulet scale, measuring 62 mm in width and 30 mm in length from base to top of rounded scallop, has a thickness of .5 mm. Two attachment

holes, each with a diameter of 4 mm, are approximately 30 mm apart. Due to damage, precise measurements were not possible.

Brass scale epaulets were used from 1833 through 1872. First specified for wear by Dragoons on their dress uniforms, in 1851 they were prescribed only for sergeants, chief musicians, and chief buglers of mounted regiments, light artillery, and Dragoons. Beginning in 1854, they were issued to enlisted personnel of all branches for field and dress wear (Brinckerhoff 1972:31, 33).

Silver Arrow Fletching

A fragment of silver with the appearance of the fletching portion of an arrow may be part of an insignia or some other decorative item (Figure 11). It measures 31 mm in length and 16 mm at its widest point, tapering to 7 mm. It is .5 mm thick. It has eight notches on each side with a 1-mm-diameter wire running down the center. One small hole at the narrow segment of the object appears to be the attachment location.



Figure 11. Silver arrow fletching.

Buttons

Military Buttons

Six buttons are from a Dragoon enlisted soldier's jacket. This type of jacket was produced from 1833 until 1854 (Stephen Allie, personal communication 2005). The buttons are convex in shape with a brass loop soldered to the flat back for attaching to the uniform. The front of the button is stamped with the image of an eagle. The bird faces to the right and holds an olive branch in its right claw, while the left claw clutches three arrows. Centered on the eagle's breast is a shield stamped with the letter "D."

Two styles of Dragoon buttons are present (Figure 12). Three are stamped with a small "D" on the shield, and three are stamped with a larger "D." On the back of each button is stamped the manufacturer's name, but due to wear and corrosion, the letters are difficult to read. The only legible markings are observed on two buttons manufactured by Scovill. Also common during this time were buttons manufactured by Horstmann (Brinckerhoff 1972:5). Five of the buttons are 13.5 mm in diameter; one is 15 mm in diameter.

A single U.S. button is a flat, one-piece button with a brazed-on brass loop attached to the back. It has a diameter of 14.5 mm and a thickness of 1.5 mm. The front of the button is badly deteriorated with only "U.S." clearly visible. There are indications of markings above and below the U.S. insignia. The back of the button is in very poor condition with only a portion of the manufacturer's mark visible: "ATES**UNITED STATES**." The markings identify this as a U.S. greatcoat button, first issued in the 1820s, although it may have been worn as late as the Civil War. This button was probably an early General Service button (Brinckerhoff 1972:2).

Two brass buttons that are missing the stamped convex segments are of an unknown type. They are 17 mm in diameter and 1 mm in thickness, with brazed-on loop shanks attached to the backs of the disks. Both have a manufacturer's mark that reads "Superior Quality."

Civilian Buttons

Three, one-piece pewter buttons are in the collection. These are four-hole buttons with diameters of 18 mm and thickness of 2 mm. This type was manufactured from 1800 to 1860 (Gillio et al. 1980:22).



Figure 12. Dragoon buttons.

Buttons of this type are commonly thought to be underwear buttons. One white four-hole porcelain button, convex on both sides, has a diameter of 10.8 mm and a thickness of 2 mm.

One two-piece flat brass button with a brass loop attached to the back has a diameter of 26 mm. The front is stamped with the image of some type of waterfowl taking flight from the water and what appears to be cattails on both sides of the bird. The back is stamped with a manufacture's mark, but corrosion makes it impossible to read.

A two-hole button of aluminum or possible alloy has a diameter of 14 mm. This is a two-piece pressed metal button with a flat back and a convex ring that goes around the two holes on the front. A small amount of blue pigment adheres to the top side. This is probably a more recent button.

Coins/Tokens

The 1847 Large Cent (Figure 13), also referred to as the Braided Hair Cent, was produced from 1839 to 1857 (Yeoman 2012:109). The coin from 14MO414 has a diameter of 27.5 mm and weight of 9.4 g.

An Old Oaken Bucket temperance pledge token is shown in Figure 14. This token is made of brass and still has some gold gilt on it. It has a diameter of 25 mm with a thickness of 1.5 mm and a weight of 4.8 g.This token likely was struck in the early 1840s by James Bale, a prominent die sinker of New York



Figure 13. 1847 Large Cent or Braided Hair Cent.



Figure 14. Old Oaken Bucket temperance pledge token.

City (Radnich 2004:121). On the reverse are the initials "AWR," which stands for Ashbel Wells Riley. Riley of Rochester, New York, was a general in the New York State Militia and issued these medals in 1841. Written on the obverse is "How Sweet From The Green Mossy Brim To Receive It. As Poised On The Cure. It Inclined To My Lips." On the reverse is "Temperance Leads To Health Wealth Happiness And Long Lives. Pledged To Use No Intoxicating Drink As A Beverage" (Radnich 2004:129).

Beads

Table 4 gives the measurements of 10 complete and 2 fragmentary beads (Figure 15). One bead is a crinoid fossil with a diameter of 7.5 mm and thickness of 3 mm. The author cannot be certain if this specimen functioned as a bead, but it has a hole in the center and could have been used as such.

Other Adornments

One small brass finger ring. It is plano-convex in cross section. The band is 3 mm wide with an inside diameter of 14 mm and 1 mm thick.

A brass brooch measures 86 by 6.5 mm. It is decorated with a leaf pattern and has at least two settings that are devoid of gems. The clasp is missing, and no sign of how it was attached is evident. One of the settings shows signs of possible gold plating.

A thimble appears to be made of a nickel alloy. It

Table 4. Glass Beads.

Number of Glass Beads	Type	Class	Color	Facets	Length (mm)	Diameter (mm)
7 complete						
1 fragment	IIf	III	blue	yes	5.0–7.0	4.5–8.0
1 complete	If		blue-green	yes	6.0	5.0
1 complete						
1 fragment	WIB	wire wound	blue	no	7.0	8.0
1 complete			clear	yes	6.0	6.5

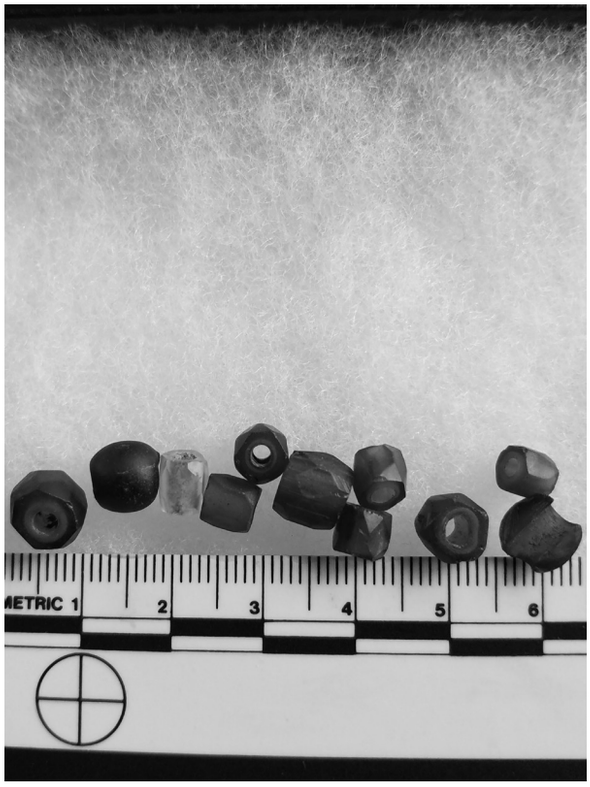


Figure 15. Glass beads.

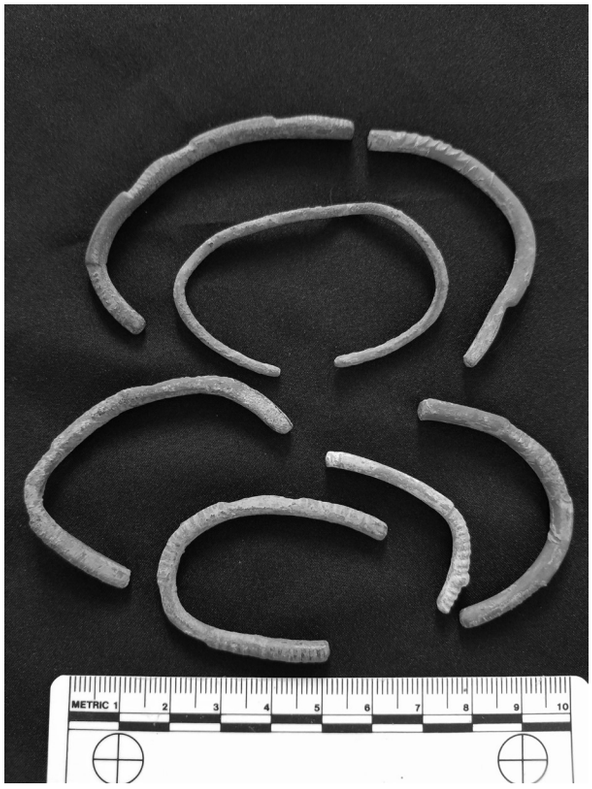


Figure 16. Brass or copper wire bracelets.

has a hole punched in the top, probably for hanging as a pendant. In a letter Mrs. Tom Price of Emporia, Kansas, described a Kaw Indian chief: "There was buckskin with fringes for the bridle to which were attached a string of thimbles and these jingled as the pony moved along" (Mosher 1965). Accurate measurements are not possible due to extensive damage, but the artifact's length is approximately 21 mm.

Fifteen pieces of brass or copper wire are of various shapes and sizes, most exhibiting either a partial or nearly oval shape (Figure 16). Eight have markings, probably created by files, hammers, or twisting of the wire. The items likely were used as some type of adornment, such as bracelets.

One copper band is damaged but forms a continuous round or ovate band with an outside circumference of 170 mm. It measures 73 mm in length, 20 mm in width, and 2 mm in thickness and appears to have been chiseled from a larger object. This band may have been a bracelet or other adornment.

Tobacco Pipes

No complete pipes were recovered. Twenty-one pipe fragments are made of white clay. One bowl bears the letters "T&D," encircled by stars. Another has some type of decoration. Three plain bowl and 14 stem elements are in the collection. Two stem segments have bowl fragments attached; one is ribbed, while the other is plain. Six incomplete stub-stemmed stoneware pipes are present. Other pieces are four decorated stems and two decorated bowls.

Tools

Three multi-blade pocket knives have extensive damage, and no manufacturer's marks are visible. One complete pocket knife blade measures 77.5 mm in length and 16.5 mm in width. The attachment stem is 8 mm long by 8 mm wide. It is similar in size to the most complete pocket knife retrieved. Of nine fragments from blades, eight have rivets and one does not. The eight riveted pieces contain

rivets that range in size from 3 to 3.5 mm. The average blade width at rivet is 25.6 mm. The segment without a rivet is 25 mm wide.

One large portion of an iron blade came from the site. It is 157 mm long, 39.4 mm wide, and 4.2 mm thick. No manufacturer's marks are evident.

One complete hoe was found. The blade portion is heavily rusted and pitted and has edge damage along the base and one side. Although accurate measuring is difficult, the blade remnant is 17 cm long, 21.5 cm wide, 1.5 mm thick at the bottom, and 2.5 mm thick at the top. The socket portion has an inside diameter of 47 mm at the largest opening, tapering to 40 mm. A manufacturers mark on the inside of the blade is illegible due to corrosion.

Five iron hoe or adze components were found. Two still have parts of the blades intact, and three are sockets only. The broken blade element of the first socket/blade measures 64 mm long and 82 mm wide. The inside diameter at the top of the socket is 50 mm, tapering to 47 mm toward the bottom. The second socket/blade has a broken blade that measures 46 mm long and 91 mm wide. The socket inside diameter at the top is 42 mm and tapers to 34 mm at the bottom. The three sockets have top inside diameters ranging from 44.5 to 52 mm and bottom inside diameters from 33 to 48 mm.

Twenty-five file fragments were recovered. Seventeen are segments of flat files, varying in width from 16 to 35 mm. Six broken triangular files are 9–10 mm wide. Two incomplete half-round files are 23 mm and 3 mm wide and 6.5 mm and 10 mm thick.

Of three pieces of axes, two are from a poll ax and might be from the same implement. Their dimensions are 72 mm across the poll and 75 mm across the bit. The third specimen is a bit end portion, measuring 115 mm wide and 11 mm thick.

Two punches are present, one with triangular cross section and the other with octagonal cross section. The triangular punch is 168 mm in length with a thickness of 12 mm, tapering to 7 mm. The octagonal punch is 147 mm in length, tapering from 15 to 6 mm in thickness.

A blacksmith hammer exhibits heavy battering at both extremes. It is 84 mm long, 26 mm wide, and 12 mm thick at the tapered end. The hammer head is 25 mm thick and has a mass of 278 g.

A complete 9/16-inch socket wrench is 172 mm in length. Due to heavy corrosion, no markings were observed. A pipe wrench segment also is heavily oxidized, but a few markings can be distinguished: "PAT'D ? UN ? 76"

Eight buckles are iron or copper/brass. Five iron buckles probably were harness buckles, while the three copper/brass buckles appear to be from clothing belts.

Three bridle bit fragments include two mouthpiece components and one part that holds a mouth piece.

Numerous nails have been collected from the site. The vast majority are square cut nails. None appear to be hand forged, but a few are wire nails. Of the 16 nails examined closely, 3 are wire nails and 13 are cut nails of various shapes and sizes.

Tablewares and Containers

Ceramics

Stoneware sherds consist of 22 body, 12 base, 1 handle, and 1 spout. Other ceramic sherds are eight spongeware (four blue and four red), eight transfer printed ware (three blue and five red), six plain whiteware (five body and one rim), two hand-painted polychrome or spongeware, six annular banded ware (five body and one rim), and two brown mocha ware.

Glass

Four blue and one white milk glass sherds were found. Of eight bottle glass fragments, two are dark olive green and are 6 and 8 mm thick. On six light green sherds, no mold seam marks are evident. One item may be the spout of a whiskey bottle with a diameter of 30 mm and thickness of 6 mm.

Two bases with pontil scars represent a small vial, measuring 18 mm square and 2 mm thick, and a small rectangular bottle, measuring 17 by 29 mm and 2 mm thick. Pontil scars indicate that bottles were blown free hand. The pontil is a solid metal rod that is tipped with a wad of hot glass, then applied to the base of a vessel to hold it steady during manufacture. The last step in making the bottle is to break off the pontil, leaving a rough circular scar on the bottle base. These are commonly seen on bottles made in America before 1850 (Ketchum 1975:34). Another light green piece appears to be from a similar bottle.

Miscellaneous

14MO414 yielded large numbers of iron fragments, including pieces of scrap metal, barbed wire, wire, nuts, bolts, two horseshoes, and many unidentifiable elements. All artifacts were kept in the hope that more knowledge can be gained from the assortment in the future.

CONCLUSION

What took place at 14MO414 may never be known, but there are several indicators that point to some type of reservation period activity. The majority of artifacts were either manufactured or used during the mid-nineteenth century. This would fit with the Kaws' stay on the Council Grove Reservation (1848–1873). Unfortunately, a lot of the items that one would find on a Kaw site also occur on homesteads of the same time period, such as glassware, crockery, buttons, tools, and clay pipe fragments. There are a few specimens, though, that are considered Native American. The most obvious are the iron projectile points and glass trade beads, but others include the altered thimble and brass wire adornments.

14MO414 is located within two miles of the place where the Kaw Indian Agency stood, putting it in an area where a lot of native activity would have taken place. Finally, Richard Stauffer's notes indicated that Dr. Mosher knew of this site. Mosher's interviews with the early settlers of the region may have led him to conclude that this was a Kaw site.

The presence of the military artifacts at the site is unexplained, although U.S. Dragoons patrolled the Santa Fe Trail and passed through the Council Grove area many times. They made contact with the Kaw Indians in the vicinity of 14MO414. Specifically, Percival G. Lowe (1965:111), a Dragoon from 1849 to 1854, stated that he made contact with a Kaw chief some 5 miles south of Council Grove and demanded the return of five stolen horses.

The author realizes that his archeological knowledge and literary skills are limited, but there can be no disputing the significance of the items that have been recovered, documented, and preserved. It is hoped that professional archeologists will be able to study these artifacts and site notes more thoroughly and produce a more detailed report.

2019 UPDATE

Since first writing this paper in 2005, the author's personal collection has grown to well over 2,000 artifacts. Most categories have increased in size; for example, round lead bullets now number more than 400; gunflints, 53; partial and complete metal arrow points, 80; Dragoon buttons, 23; Mounted Rifleman buttons, 6; and glass beads, 36.

Many more copper/brass adornments, such as finger rings and bracelets also have been added.

Many of the later discoveries are similar to those already inventoried, but some are different and should be listed. Thus, the military insignia, temperance token, coin, and rolled brass objects were added to the original report. Many others probably should have been included, but those are left for future researchers.

ACKNOWLEDGMENTS

Thanks to the late Richard Stauffer, who first pointed out 14MO414 to me. Years later he helped catalog the finds, and in 2004 he set up a meeting with the KSHS to view the artifacts.

Thanks to James Marshall, who attended the KSHS meeting and took an interest in the collection. He helped identify many of the early finds and instructed me on how to write a site report.

A special thanks to Jim Feagins, who studied the collection, sorting and tagging many of the specimens. In 2008 he wrote a detailed paper on the iron points from the site. He has been a huge help in compiling this paper.

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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

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The Last Chance Store was built in 1857 to trade with Santa Fe Trail travelers and Kaw Indians, who lived just south of Council Grove. Apparently it served in that capacity for only brief periods between 1857 and 1859. In the early 1860s the building became a temporary residence for three families at different times. It also served as a barracks and headquarters for a cavalry unit, temporarily stationed in Council Grove during the Civil War. The building was used as a grocery store in the latter half of the 1870s, a corn crib, the permanent residence of the William Tolbert family for 50 years, and then a historic site. During its 160-year lifetime the structure remained relatively intact and unchanged. The last private owners from 1955 until 2015 were dedicated to preserving the site and its history. Once in state ownership, an archeological investigation was undertaken by the 2016 Kansas Archeology Training Program field school. The large number of artifacts found during the project represent very nearly the entire span of its historic occupation.

In October 2015 the Kansas Historical Society obtained title to the Last Chance Store in Council Grove, Kansas, through the generosity of the previous owner, Mrs. Connie Essington. Prior to repairs and landscaping necessary to prepare the property for public interpretation, scientific investigations were necessary to avoid damaging potential archeological features, as well as to identify additional information about the structure and its history. To achieve these goals the Kansas Archeology Training Program (KATP) field school conducted an excavation at the Last Chance Store site (14MO367) in June 2016 with the author as principal investigator. The research was sponsored by the Kansas Historical Society and the Kansas Anthropological Association. One hundred thirty-four volunteers and six professional staff took part in the project with much support from the local community. The resulting excavations produced a large artifact collection, with more than 7,200 catalog numbers assigned. As many items were cataloged in large lots, this translates to well over 28,000 individual objects.

HISTORICAL BACKGROUND

The little stone store on the west side of Council Grove is commonly known as the "Last Chance Store." Quite possibly this was not the name of the store when Thomas Huffaker first operated it in 1857 for the firm of Northrup and Chick. The first clearly dated reference known to the author that uses the name is *The Story of Council Grove on the Santa Fe Trail* by Lola Brigham (1921). When referring to Tom Hill operating the store, she (Brigham 1921:15) stated, "This store was called the 'Last Chance.'" There is a clear inference that this moniker was previously in use, and the store has been referred to almost exclusively as the Last Chance Store for the lifetime of all long-time residents of Council Grove. Therefore, that is the name used in this report.

The Last Chance Store was built by the Westport, Missouri, firm of Northrup and Chick, intended to facilitate trade, primarily with Santa Fe Trail travelers and the nearby Kaw Indians. Construction likely was completed in early 1857. It is uncertain if either Joseph Chick or Hiram Northrup ever lived in Council Grove, but Northrup is listed as one of the town's founders. In 1858 the Kansas Territorial Legislature passed a special act by which the Town Company of Council Grove was incorporated, with incorporators listed as T. S. Huffaker, Christopher Columbia, S. M. Hays, and Hiram Northrup (Cutler 1883a). Local historian Kenneth McClintock

obtained a newspaper clipping from the estate of Helen Prater. The clipping, titled "Our First Settlers - Sketches and Anecdotes of Some of Them by Kiowa Jim," stated,

> In the fall of 1857, Northrup and Chick built a stone trading house, which stands on Main Street near the M.E. church south, the land mark that is now left of the old trading post on Main Street. Phil Roberts and Ben Toole had the contract for furnishing the stone and A. S. Pollard laid them up. One day an Indian came to Ben where he was loading rock and wanted to work. Ben agreed to give him 5 cts per day and board. The Indian threw off his blanket and assisted to load one wagon, when all hands went to dinner (*Weekly Guard [WG]*1888:8).

After coming to Council Grove in 1857, George Biglin's first job was to mix mortar for the building (*Council Grove Republican [CGR]* 1994b:1). Most of the stone used in construction was procured locally and probably came from a block or so east on Belfry Hill.

The June 1, 1894, issue of the *Council Grove Republican* (*CGR* 1894:1) contained an article that mentioned the stone house, then occupied as a residence by William R. Tolbert, "built by Northrup & Chick in 1857 and used for a trading house under the management of T. S. Huffaker." Thomas Huffaker was an employee of Northrup and Chick from 1854 to 1857, and manager of their Kansas Indian trading house (Cutler 1883a). A letter from Indian Agent John Montgomery to Colonel A. Cummings, dated March 30, 1857, confirmed this, referring to "T. S. Huffaker, now a clerk with the trading house of Northrup & Chick." A June 12, 1857, letter from Montgomery (1857) to the Superintendent of Indian Affairs referred to the settlers on the Kaw Reservation meeting in a "stone building built by Messrs. Northrup and Chick, for a store house, but now un-occupied." This implies that Huffaker was employed by Northrup and Chick and licensed to trade with the Kaw during and immediately following the Last Chance Store construction. However, Montgomery revoked Huffaker's license to operate as a Northrup and Chick agent in July 1857 (Unrau 1971:180); therefore, Huffaker's management was very brief. The fact that the store was closed when the license was withdrawn implies that trade with the Indians was more important to Northrup and Chick than was trade with travelers on the Santa Fe Trail. Despite the claim by Brigham (1921:15), "For a while it was a Government trading house," the Last Chance Store was never owned or operated by the government. In 1854 the firm, then known as Walker, Northrup, and Chick, obtained a government license to trade with the Kaw Indians. According to information acquired by McClintock, before the stone building was constructed, the business occupied a log trading post, the location of which has not been determined. Northrup and Chick and their employee Huffaker had a government license to trade with the Kaw Indians before and during the construction period, but the store was not a government trading house.

In March 1857 Chris Strieby came to Council Grove from Savanah, Missouri. An article by his daughter, Alice Strieby Smith (1928), described her father's stay at the Last Chance Store after his arrival.

> A few more log cabins straggled up the trail to the west … further on, on the north side of the road, stood a low, one-storied stone trading store which served as a sort of last-chance outfitting place for westbound travelers. For a time my father slept at night at this stone trading store as a guard. He was only twenty years old at that time, and I have heard him say that on stormy nights when the wind and rain raged down the valley, and on moonlight nights when the coyotes howled, the little cluster of houses down by the river seemed uncomfortably far away. One hot summer night, after he had locked the store and gone to bed on the counter, he was awakened by a band of some fifty Indians clamoring for admittance. As he stepped out to speak to them the Indians slipped from their ponies and clustered about him, a gesticulating, gutterral-voiced mob. . . . It seems that the chief heading this badly scared band had that day killed another chief. Then, fearing the vengeance of the dead chief's family upon his own, he had hurried with all his relatives to the post for protection. After further parley, my father told them to tether their ponies and camp close to the store, that no one would harm them, and that they would be safe until morning. He then reentered the store and returned to his pallet of blankets. But he had very little sleep that night. . . . Finally,

> imagining their enemies to be upon them, they became frenzied with fear, and beat upon the door for admittance. My father at length agreeing, the Indians crowded in,spreading their blankets on the floor. My father again returned to his counter, but it was a warm night and the stench of the unwashed savages about him soon became intolerable. Taking his blankets he spent the remainder of the night in the open.
>
> The Indians renewed their courage with the dawn. They loitered about the post for a time and then set out on a hunting trip to the north.

How much commerce was transacted at the store in the years 1857–1859 or exactly who was involved is uncertain. Brigham (1921:15) stated, "In 1857 the building occupied by Mrs. Wm. Tolbert as a residence, was built by Tom Hill and used as a store." However, there is no evidence that Hill helped build the Last Chance Store, and he definitely was never the owner. He might have operated it as an employee of Northrup and Chick or through some sort of lease agreement, but even that possibility has a short window of opportunity. From the Montgomery letter cited above, the structure was empty for at least a brief interval in 1857, when Northrup and Chick ended their relationship with Huffaker. It is unclear whether the business was active when Strieby slept there as a guard. If Hill did run a store there, it would have been sometime between Montgomery's June 1857 letter and June 1859. During that period in 1858, Hill was in partnership with Malcolm Conn and James C. Munkres, building a stone store at 131 West Main Street, about three blocks east. This other stone store sometimes was referred to as the Conn or Pioneer store. Later, in the town of Americus, Hill was engaged in multiple businesses, so perhaps he did the same in Council Grove. While unlikely that he would have operated a competing store, it is conceivable that he took some part of the other store's business, such as trading with the Kaw Indians or livestock operations, to the Last Chance Store. The latter location might have been better suited for those purposes, as it was farther from the downtown and less congested.

The height of the Pike's Peak Gold Rush occurred in 1859, causing a major increase in Santa Fe Trail travel, which undoubtedly influenced the activity and ownership changes of the Conn and Last Chance stores during that year. On March 19, 1859, the *Emporia Weekly News [EWN]* 1859a:2) stated,

> Mr. M. Conn has become the sole proprietor of the popular and well known dry goods house known as Conn, Hill & Co … having bought out the interest of T. C. Hill and J. C. Munkres. Mr. T. C. Hill and F. G. Goddard will open a new house, well filled with dry goods, groceries, etc. about the first of May. The name of the new firm will be T. C. Hill & Co.

However, on April 23 a short notice in the *EWN* (1859b:3) said,

> T. C. Hill & Co. have purchased the store of Mr. M. Conn at Council Grove, and have added several thousand dollars' worth of new goods to the old stock, making it one of the largest in the interior.

On the next page of that same paper was an advertisement for T. C. Hill and Company (*EWN* 1859c:4). If T. C. Hill and Company very briefly did open a "new house" in 1859, as the first article indicated, it is possible that they operated at the Last Chance Store. T. C. Hill and Company advertised continuously from May 30 through August 15 of that year (for instance, *EWN* 1859d:4; *Kansas Press [KP]* 1859a:3), but things had changed by June.

It is highly unlikely that Hill could have run a business at the Last Chance Store after June 1859 for two reasons. First, on June 7, 1859, Hiram M. Northrup and Joseph S. Chick conveyed all their interests in "the stone store situated in Council Grove" by quitclaim deed to S. M. Hays, T. S. Huffaker, G. M. Simcock, and C. Columbia (Morris County Courthouse, Council Grove, Kansas 7 June 1859: Deed Book B:7). This group of local merchants paid $2,000 for the property, which was a very good price in 1859. This purchase might have been intended to eliminate competition. Whatever the reason, even if Hill at some point had a lease or employment deal with Northrup and Chick to operate in the Last Chance Store, that arrangement could not have continued beyond June. The second reason involves an incident in which two Kaw Indians were hanged in Council Grove on June 17, 1859 (Brigham 1921:19). Local historian Shirley McClintock, who has researched the life of Hill's wife Lucy, reported,

> Tom Hill had written a very controversial article in the newspaper (*KP* 1859b:2) about the incident, taking the Indian side against the Council Grove citizens involved in the incident. Because of this, he was not popular in Council Grove. It looked like he and his wife Lucy almost immediately began preparations to move to the town of Americus, where Tom had land holdings from his being part of the original men who started the town.

Whatever the exact circumstances, the Hills moved to Americus rather quickly. The June 27, 1859, issue of *Kansas Press* under the heading "Americus" noted that measures to establish a newspaper were underway in Americus and that Hill had bound himself to have a press in operation within two months and continue it for one year (*KP* 1859b:2). By August 30, 1859, the *Americus Sentinel* was being published by Hill (Cutler 1912). Hill had become the proprietor of the Americus Hotel by October 1859 (*EWN* 1859e:1). In the November 21, 1859, *Kansas Press* he ran an advertisement for corn-grinding service at his mill in Americus (*KP* 1859g:3). Plainly, he was far too busy with his new enterprises in Americus to be running a store in Council Grove.

On August 8, 1859, the *Kansas Press* (1859d) announced that the firm of T. C. Hill and Company, successors of Conn, Hill and Company, dissolved by mutual consent; that the business would be continued by F. G. Goddard and Calvin Simpson; and that claims against Conn, Hill and Company and T. C. Hill and Company had to be settled by October 1, 1859 (*KP* 1859c:6). An article on September 26 showed the firm of Goddard and Simpson being dissolved by mutual consent and Conn having purchased the business (*KP* 1859e:3). An advertisement for the Conn Store in the same paper (*KP* 1859e:3) and another article on October 10 (*KP* 1859f:3), showed that Conn had resumed the mercantile business in the Pioneer or Conn Stone Store, formerly occupied by Conn, Hill and Company.

Brigham (1921:15) reported that the Last Chance Store was once a post office. The store was never officially designated as a post office. The belief that it was apparently stems from Maloy's (1981:7) statement in1876: "The people had been getting their mail at the Mail Station here up to 1855. On February 26, 1855, the Council Grove post office was established." G. M. Simcock was appointed postmaster but refused the position, so Huffaker was appointed. "He paid no rent, had no fixed Place called a Post Office, but when a mail arrived he would go to the mail station and get the mail sack and take it, followed by the crowd, to some house or store where it would be poured out on the floor and distributed." At least part of the time, the store referred to above may have been the Last Chance, and the post office reference originated because of mail deposited there. In notes provided by Helen Prater (*CGR* 1994b:1), Mrs. Minnie (Biglin) Jacobs stated that the mail was dumped at the Last Chance Store, and she remembered going there to get mail. However, there are problems with the timeline of Prater's article. Jacobs passed away in 1971 at age 100, so she was born about 1871. Huffaker was postmaster only through 1858, and he sold his interest in the store in 1873. Possibly Jacobs recalled stories about mail distribution told by family members.

Northrup and Chick were reported to have a postal contract at their trading house in Westport in 1857, but no evidence exists that the contract extended to the Last Chance Store in Council Grove (Cutler 1883b). In fact, Waldo, Hall, and Company had the postal contract from July 1, 1850, to 1858 for the first regular mail service between Independence and Santa Fe. McClintock's research determined that, on his first trip to Council Grove, Jacob Hall arranged to purchase the log blacksmith shop at 201 West Main Street, built in 1848 by William Mitchell, the blacksmith for the Kaw Tribe. After that mail contract expired, Hall continued the mail contract from 1858 to 1862 (Barry 1972:950).

According to an undated plaque set by the Philomathian Club and to the 1971 National Register of Historic Places nomination, the Last Chance Store was used as a polling place when the election to approve the Lecompton Constitution was held on August 2, 1858. If true, this still does not confirm that the business was operating then.

When the Morris County Frontier Rifle Guards formed in 1859, Huffaker was listed as quartermaster (Maloy 1981:14). As he was part owner of the building from June 1859 on and since it was not being used as a store during that period, at some point the militia unit equipment might have been kept in the structure.

On March 9, 1860, the J. P. Mather family moved

to Council Grove to operate a mill on the Neosho River, just south of the Kaw Mission. They had five girls and two boys and stayed in the town's only hotel for about a week until they could move into the Last Chance Store building, "which was then vacant" (Mather-Watson n.d.:1). Using curtains of a heavy material, they divided the interior into three rooms: one for cooking and dining, one for living, and one for sleeping. They had to haul water from either the town well or Elm Creek, so the well at 14MO367 had not been dug yet. Josephine Mather-Watson (n.d.:2) gave a brief description of the family's sojourn.

> It was a very hot summer; wind and dust seemed terrible, for the long wagon trains were passing close to our house on the through Santa Fe Trail from east to west most of the time. The old "Prairie Schooners" with either mules or oxen—from three to five or six yoke of oxen, or two to five span of mules to each wagon—it was quite a sight to see one of those trains. There was always one man, riding back and forth to see there was no shirking from either men or teams, called the "Wagon Boss"; he had many other major duties such as selecting camping ground, and his word was law with the other men.

The Mathers resided in the building until the new mill was complete enough to move there in the fall 1860 (Mather-Watson n.d.:2).

By a deed dated September 8, 1860, Columbia sold his share of the store to Henry W. Jones, who on December 19, 1860, deeded that share to Seth Hays, giving Hays a half interest.

Robert M. Wright was a partner in the mill with Mather and a man named Akin. Wright and his wife Eliza came to Council Grove from Chicago at the same time as the Mather family. Several years ago McClintock communicated with Wright's great granddaughter in Smithville, Missouri. She told him that the Wright family also lived in the structure while the mill was being built. When the 1860 census was taken, the Wrights had five children, ranging in age from 2 to 15: Frank (age 15), Caroline (age 11), Robert (age 9), Alice (age 7), Charles (age 2). It seems improbable that the Mather and Wright families with a total of 12 children would have lived in the building simultaneously, but it is possible if no other lodging was available. More likely the Wrights moved in after the Mathers moved out.

Maloy (1981:34) stated that in 1861 Council Grove had only two businesses: Hays and Company (G. M. Simcock being the "and Company") and Conn. In 1862 the only houses doing business were Simcock, who had bought out Hays, and Conn (Maloy 1981:41). Simcock, Hays, and Huffaker owned the Last Chance Store then. If no one was living there, they could have used it briefly for merchandise storage or as a second outlet. In 1863 Simcock, Conn, and Ledrick and Robbins were the general merchants in Council Grove; there is no mention of the Last Chance Store (Maloy 1981:46).

According to Brigham (1921:16), "In 1863 Mr. Foster, with Company F, 2nd Colorado was stationed in Council Grove. The soldiers ate and slept in the little stone store, now the Tolbert house." Foster is singled out because he returned to the area after the Civil War. R. M. Armstrong (Sharp 1925:555) also spoke of Foster with Company F staying in Council Grove. The Second Colorado Infantry Regiment was organized in St. Louis and moved to Fort Wise in Colorado along the Santa Fe Trail in 1863, then to Fort Riley that fall. Prior to their stay in Council Grove, they were converted into a cavalry unit. Maloy (1981:45) explained their presence in town. In May 1863 Dick Yeager's band of Missouri guerrillas camped on the Custer Farm near Council Grove, threatened local citizens, and later killed a store keeper and wounded his wife near Diamond Springs. Captain Lyman D. Rowell (also spelled Rouell on some documents) and his men of Company F were stationed in Council Grove to protect the people of the county, guard the mail and merchants, and protect the Santa Fe trains. Rowell was cashiered out of service on May 30, 1864, for drunkenness and conduct unbecoming an officer (American Civil War Research Database 2017).

The soldiers participated in the 1863 Fourth of July celebrations (Maloy 1981:46). Genevieve Mather-Munson (n.d.:2) further described the Second Colorado helping with Fourth of July celebrations.

> The first time the Fourth of July was celebrated in Council Grove, the rain made it impossible to go to the Grove. So the soldiers built an arbor by setting posts in the ground and making a roof of green

boughs, the table stretching the full length of the arbor.

Mather-Munson mentioned General McMillen, Major Stover, Captain Smith, Captain Gaylord, and Sergeant Tibbets, who later returned to Council Grove and became her brother-in-law. Apparently the Captain Smith was Major James Nelson Smith, an officer in the Second Colorado Cavalry, who was killed at the Battle of Blue River near Kansas City on October 21, 1864, and for whom Smith County, Kansas, was named, in honor of his bravery on that occasion (Smiley 1913). The Colorado unit's stay was probably brief. Interestingly, Private Merritt C. Foster, Sergeant Henry J. Tibbets, and Captain J. Nelson Smith were all listed on the Second Colorado roster in 1863, but only Sergeant Tibbets was listed as being in Company F then (American Civil War Research Database 2017). Records for General McMillen, Major Stover, and Captain Gaylord could not be located for the Second Colorado.

In 1864 the Charles and Jennie Harness family escaped from slavery in West Virginia and, after traveling with help from the Underground Railroad through Pennsylvania, eventually made their way to Council Grove. They stayed in the cellar of the Last Chance Store before hiding on the Kaw reservation until the war was over. The first Black family to settle in Council Grove, they attended school and church along with white children (Harness Family Genealogy n.d.). Jennie's maiden name was Singleton, and she was a sister of Benjamin (Pap) Singleton (Sharp 2008:30). The A. B. Whiting Subdivision in Morris County, located southwest of Dunlap, housed many Exodusters and was nicknamed the Singleton Colony, though Pap Singleton's personal habitation was in north-central Dunlap. Many Exodusters resided in the northern part of Dunlap and in an addition on the north side of town (Kenneth McClintock, personal communication). Speculation has it that Pap Singleton chose to settle near Dunlap, based upon the reception of his Harness relatives in Council Grove (Harness Family Genealogy n.d.:1–2). The fact that the Harness family was staying in the building in 1864 suggests that it probably was not functioning as a store for at least a portion of that year. The structure was owned by Simcock, Hays, and Huffaker. Although these town fathers have been described as pro-slavery, they must have known that the Harness family was hiding there.

While very unlikely that a business was active in the Last Chance Store from 1860 through the summer of 1864, according to Houck family oral history, Peter P. Houck (Figure 1) operated a family grocery in that building for about five years during the late 1860s. Houck's great great granddaughter Joanne Devin (personal communication 2018) remembers her father DeWitt Houck driving her family by the Last Chance Store and telling them about their ancestor running a grocery there. He told them a story about Peter Houck sending his young son Phillip (Devin's great grandfather) on a perilous wagon journey to Topeka to get sugar, whiskey, and flour to sell in the store.

The 1860 census showed Peter and Lucinda Houck with three children and Harmon Houck (Peter's father) living in Marion County, with Peter's occupation listed as a wagon maker. The 1865 census enumerated the Houck family with three children living in Council Grove, with Peter's occupation identified as clerk. The Houck grocery was started about then, as proclaimed by an advertisement in the *Council Grove Democrat* of November 17, 1866 (Figure 2) for "Old Pete Houck's New Family Grocery, on Main Street at the west end" (*CGD* 1866:3). This location appears to support the assertion that the structure held his business. Houck apparently was leasing, as he was never an owner of the property. Traffic on the Santa Fe Trail greatly diminished after 1866 with the advance of the railroads (Maloy 1981:54), so Houck's enterprise probably was not focused on trail trade. By the 1870 census Peter Houck was shown as a farmer living on 400 acres in Lyon County with his wife and three children.

Reportedly white settlers sought refuge from Indian attacks at the site (*CGR* 1994b:1). If true, this likely referred to the Cheyenne Raid on June 3, 1868, when several hundred Cheyenne and some Arapaho came to Council Grove to attack the Kaw Tribe. Brigham (1921:30) said that most of the citizens east of the Neosho River took refuge in the brewery, but quite possibly some west of the river went to the Last Chance Store. The "brewery" was the Francis X. Hebrank family residence at 22 East Main Street (now the Post Office Oak Museum), which had a brewery in the basement.

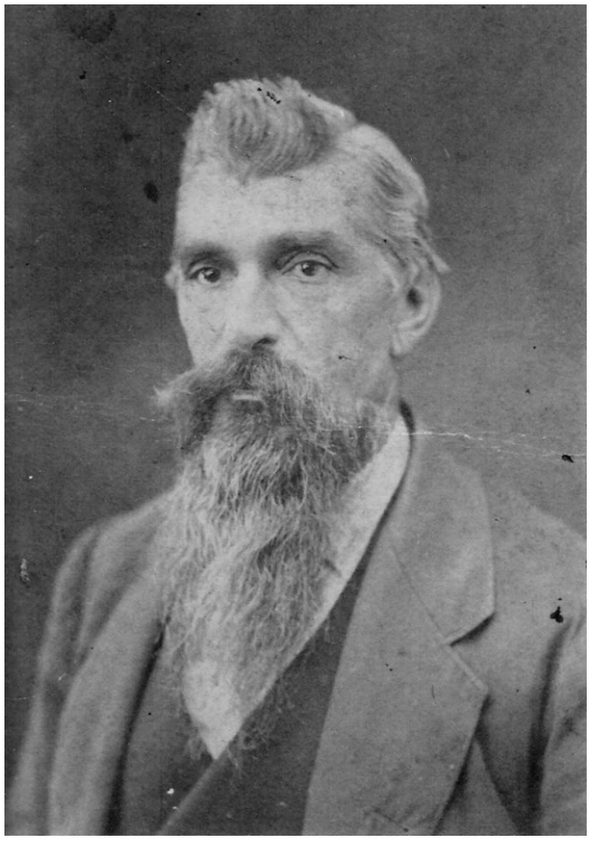
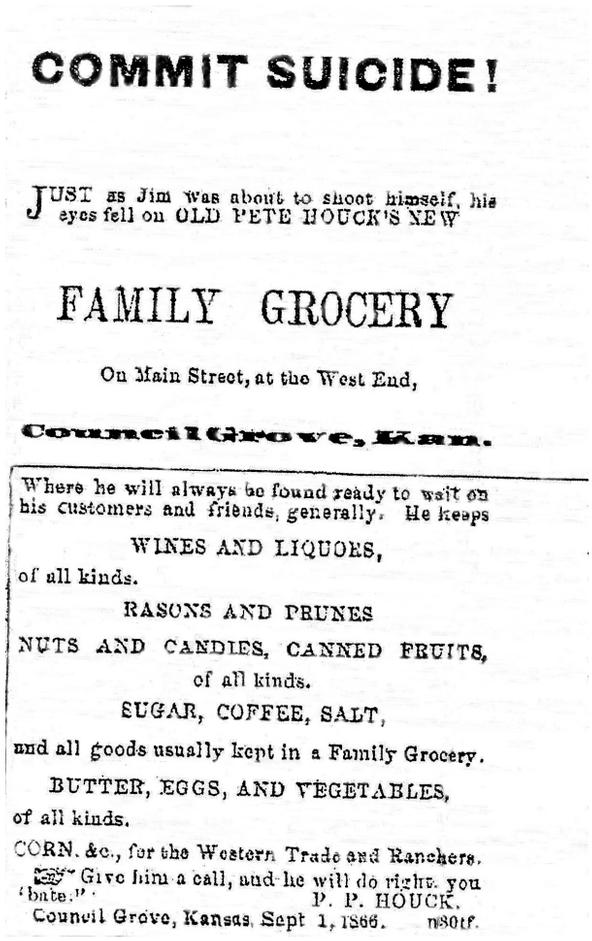


Figure 1. Peter Houck. (Photograph courtesy of Joanne Devin.)



COMMIT SUICIDE!

JUST as Jim was about to shoot himself, his eyes fell on OLD PETE HOUCK'S NEW

FAMILY GROCERY

On Main Street, at the West End,

Council Grove, Kan.

Where he will always be found ready to wait on his customers and friends, generally. He keeps

WINES AND LIQUORS,

of all kinds.

RASONS AND PRUNES

NUTS AND CANDIES, CANNED FRUITS,

of all kinds.

SUGAR, COFFEE, SALT,

and all goods usually kept in a Family Grocery.

BUTTER, EGGS, AND VEGETABLES,

of all kinds.

CORN, &c., for the Western Trade and Ranchers.

☞ Give him a call, and he will do right. you 'bate.'' P. P. HOUCK.

Council Grove, Kansas, Sept 1, 1866. n80tf.

Figure 2. Advertisement for Houck's Grocery Store from the Council Grove Democrat, November 17, 1866.

In 1870 Hays sold his half share in the Last Chance Store to Simcock, who then held a three-fourths interest. Simcock became the sole owner in 1873, when Huffaker transferred his remaining one-fourth interest. This included Lots 9 to 16, or the entire south half of Block 47. McClintock compared plat maps in the Morris County Court House and determined that Block 47 previously was known as Block 40 in the unrecorded plat of 1857. The building sits on Lot 16 in both plats.

Morris County tax records document that taxes on the lots were paid from 1865 to 1871, but then the property was lost for non-payment of taxes, and Lots 12 to 16 were bought by Gus O. Sauer at a sheriff's sale in May 1875. The structure was being used as a corn crib in 1878 and 1879 before it was sold to Tolbert. The first known illustrations were a postcard photo (Figure 3) and an elevated perspective of the city (Figure 4), both dated 1873.

Tolbert acquired the tract in April 1879. At this point Lots 12 and 13 were separated, apparently due to a bankruptcy. Tolbert sold Lots 14 through 16 to the Council Grove Chapter of the Independent Order of Odd Fellows (IOOF) that same month. Though this sale was by warranty deed, Tolbert was a lodge member (*Daily Guard [DG]* 1914:1), and the organization might have purchased the parcel as some sort of loan to him. County land records show at least one other case in the 1870s when the IOOF provided a mortgage for a member's land. However, the building might have been used for some IOOF functions during this brief period. According to Brigham (1921:88), IOOF Lodge Number 43 was first established in Council Grove in 1869 but did not construct a temple until 1902. McClintock reported that the IOOF meeting hall was located in a succession of second floors of downtown buildings in the



Figure 3. Detail from an 1873 postcard, showing the Last Chance Store on the left behind the former Methodist Church. (Photograph courtesy of Kenneth McClintock.)

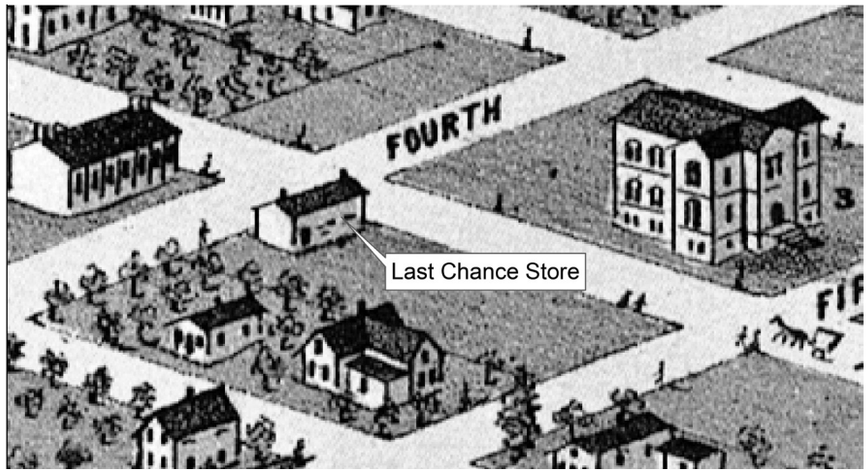


Figure 4. Detail from an 1873 bird's-eye view lithograph, made by Eli S. Glover (1873), showing the Last Chance Store near the center.

1870s and 1880s. Whatever its role, the IOOF sold the property back to Tolbert in September 1880.

According to the March 1880 census, William was 40, his wife Elizabeth was 37, his son I. S. (Irwin) was 13, his daughter Ella V. was 10, and his son Frank was 4. Tolbert was listed as a laborer, although his occupation was constable in the 1875 census. His obituary referred to that position as Deputy Sheriff. In 1878 Tolbert was a founding member and Past Master Workman of the Ancient Order of United Workmen. A company of the Kansas Militia was organized in Council Grove in 1878 (Maloy 1981:94), and Tolbert was a corporal in that unit. Later he was employed by the Missouri Pacific Railroad (*DG*1914:1).

When the Tolbert family moved into the Last Chance Store, the second flooring layer and two interior walls, dividing the interior into three rooms, were added (*CGR* 1994b:1). The well in the west yard probably was hand dug then, as it had not been there during the Mathers' occupancy. The Tolberts lived in the edifice after 1879, except for 1884–1886, when they moved to Emporia. The August 30, 1884, issue of the *Daily Guard* reported that

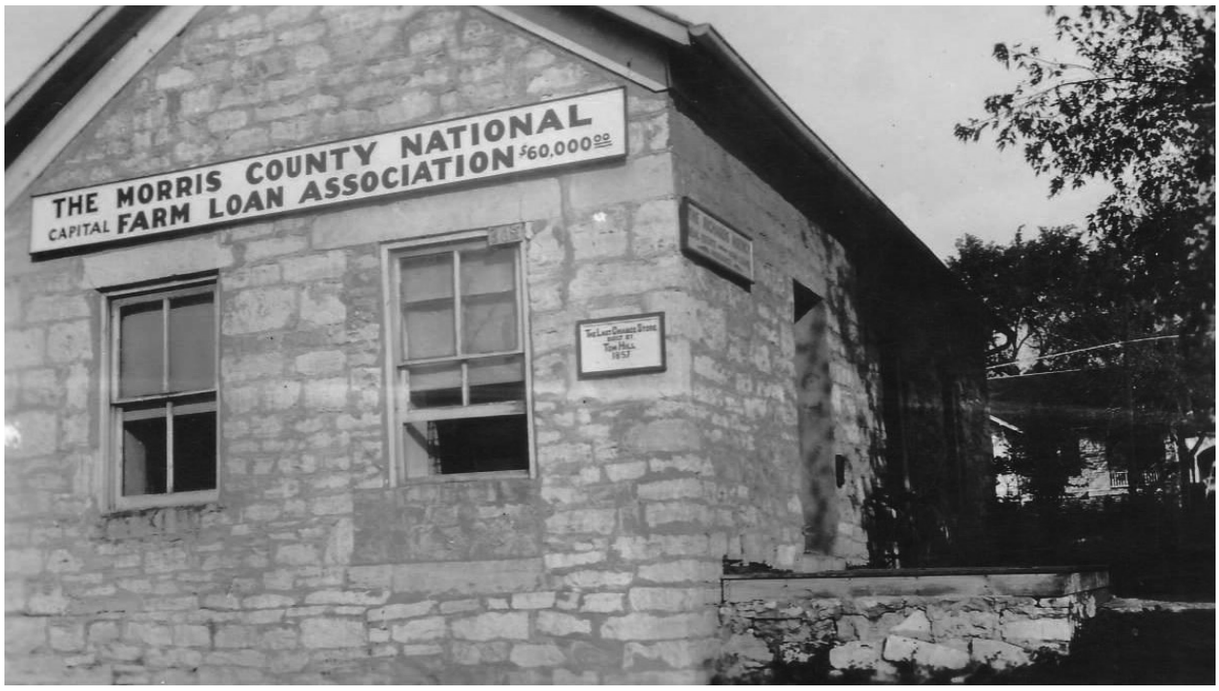


Figure 5. The building during the time it was the Morris County National Farm Loan Association. (Photograph courtesy of Kaw Mission State Historical Site.)

the Tolberts had left that day for Emporia, where Tolbert was employed as a janitor at the Normal school (*DG* 1884:3). The Tolberts were in residence in June 1894, when daughter Ella married A. H. Prater there (*CGR* 1894:5). Prater was a longtime employee and later president of the Council Grove National Bank. In 1900 the title to Lots 13 to 16 was passed to Prater, who sold Lots 13 and 14 in 1901 and then sold 15 and 16 back to Tolbert in 1909. Tolbert died on December 22, 1913, and the funeral was held at the home (*DG*1914:1).

When indoor plumbing became available, a frame addition was constructed on the northern portion of the west side of the stone structure (*CGR* 1994b:1). This added a bedroom, bathroom, and back porch. The north-south addition was 27 feet long, measured on the outside wall. The east-west dimension was 12 feet wide, and the roof peak ran east-west or perpendicular to the main building. Two doors to access the new rooms were cut through the west stone wall, and a window was cut at the west side of the north wall. The 1873 perspective drawing (Figure 4) showed only one door at the north end of the west side and no window on the north end. A water meter, manufactured shortly after 1910, and ceiling electric light fixtures, purchased after 1908, indicate the approximate date that water and power were brought to the building. Elizabeth Tolbert's obituary stated that in the early days the house was known "for the flowers grown there, and in the days before florists had established here she fashioned bouquets and gave flowers for funerals and occasions that demanded them." It further expounded, "She was a central figure because from her window near the sidewalk she could visit with passers-by and school children every day" (*CGR* 1937:1). In her upper 80s Elizabeth moved to live with her son, I. S., in Strong City (*CGR*1937:1).

The rental period began in September or October 1934, when the Morris County Farm Loan Association moved to Council Grove and into the Last Chance Store (Figure 5), remaining there for three or four years. The property entered rental home status about the time of Elizabeth Tolbert's death in 1937. Linus and Nadine Burnett and their newborn son Edward resided in the building for less than a year in 1943. Local citizen Sandy Hartman remembered her aunt Nadine Burnett and

her grandmother Grace Meyer (later Grace Jones) living there at separate intervals. Specifically she recalled visiting her grandmother there during the 1951 flood.

The deed remained in William R. Tolbert's name for decades. It was not officially transferred when William died in 1913, when his wife Elizabeth died in 1937, or when their oldest son I. S. died in 1943. In August 1950 it was transferred from Mary Tolbert, the widow of I. S., to Ella Tolbert Prater, daughter of William and Elizabeth.

After 1955 the structure was no longer used as a dwelling. The deed was transferred from Ella Prater to her daughter Helen Prater in August 1955, and Helen built a new home on the north half of the parcel, where she lived until her death in 1994. A natural gas line that ran between the alley to the north and the store was disconnected when the north house was constructed. The wooden addition was torn down in 1956 (*CGR* 1994b:1). No one inhabited the site after this, but during her ownership Prater made significant efforts to restore its historic character. She removed the interior walls and replaced the roof with an emphasis on maintaining its historic appearance. In 1958 she had the building listed in the Historic American Buildings Survey (Noffsinger 1958) and in 1975 on the National Register of Historic Places. She pursued the opportunity to share the history of the Last Chance Store with visitors, and guestbooks indicate that thousands of people visited between 1955 and 2015. She furnished the interior with period antiques, such as a large seed cabinet and other mercantile-type objects, donated by her friends Shirley and Bernard Baker. A unique ribbon cabinet, pickle barrel, and wood stove were displayed, as well as a side saddle and a skirt, which had belonged to Minnie Biglin Jacobs and were left in the store when it was turned over to the Kansas Historical Society. A large slice from the Council Oak that had note cards pinned to its rings, indicating significant historic dates, such as the signing of the Declaration of Independence and the Louisiana Purchase, helped school children and visitors understand changes over the 250-year lifespan of the tree. Prater sold a few antiques (Figure 6) that were displayed on the shelves, which hearkened back to the Santa Fe Trail era and to early pioneer days. Prater was treasurer of the City of Council Grove for many years, served as director



Figure 6. Business card from Helen Prater's antique store. (Photograph courtesy of Connie Essington.)

and vice president of Council Grove National Bank, and was a charter member of the Morris County Historical Society. She had expressed a desire for the Last Chance Store to become a state historic site (*CGR*1994a:1).

Prater died in January 1994 (*CGR* 1994a:1). In May 1994 the north half of the tract, along with the 1955 house, was split from the property and sold to Janice Montgomery. In her will Prater left the Last Chance Store to her longtime friend Connie Essington with the hope that she could get the historic building into public ownership. In September 1994 title to the south half of the lot passed to Essington, who continued to open the store to visitors by appointment. While the structure was owned by the Essington family, many additional repairs were made. The electricity was restored, minor repairs were made to the floor, the exterior stone work was re-pointed, and the interior plaster was repaired. In 2000 the rotting wooden cellar door was replaced with a metal door, covered with wood to retain the period appearance. In April 2012 a fire at a residence a couple of doors north dropped sparks on the roof, which caught and partially burned, but the fire was extinguished before it spread beyond the roof. It was repaired using new walnut logs, cut with bark on to replicate the original rafters. Fulfilling Prater's wishes, Essington gifted the property to the Kansas Historical Society in October 2015.

RESEARCH METHODS

Preliminary work on this project involved research into historical documentation of 14MO367. This depended heavily on previous work by local

historians Kenneth and Shirley McClintock and Site Administrator Mark Brooks. Once a basic occupation timeline was determined, five research questions were developed.

The next step was to lay out a grid, establishing exterior boundaries and key datum points (Figure 7). Using this grid (Figure 8), geophysical surveys were directed by George Crothers, assisted by Philip B. Mink II and Rebecca L. Hummel, all of the Archaeology Geophysics Laboratory at the William S. Webb Museum of Anthropology, University of Kentucky. The geophysical investigation employed gradiometer, ground penetrating radar, and electrical resistance. Results and interpretation identified several areas or anomalies that were probably cultural features. Applying GIS technology, these anomalies were overlaid on the grid. Crothers' (2016) report, showing maps and interpretations, is on file at the Kansas Historical Society.

Features identified by the geophysical surveys were verified and evaluated by soil coring (Figure 9). A metal detector team, working under the direction of crew chief Morris Floyd, carried out surveys of all interior and exterior exposed areas (Figure 10). The initial plan was to mark all metal detector hits and thus identify concentrations of metal artifacts, which would help place excavation units. Hits were marked with plastic flags in some instances and with spray paint in others. However, the restricted size of the research locality and the large number of participants caused problems with both methods. The profusion of flags made navigating the site difficult, and paint marks were soon obliterated. Metal detector hits were so densely spread over the lot that

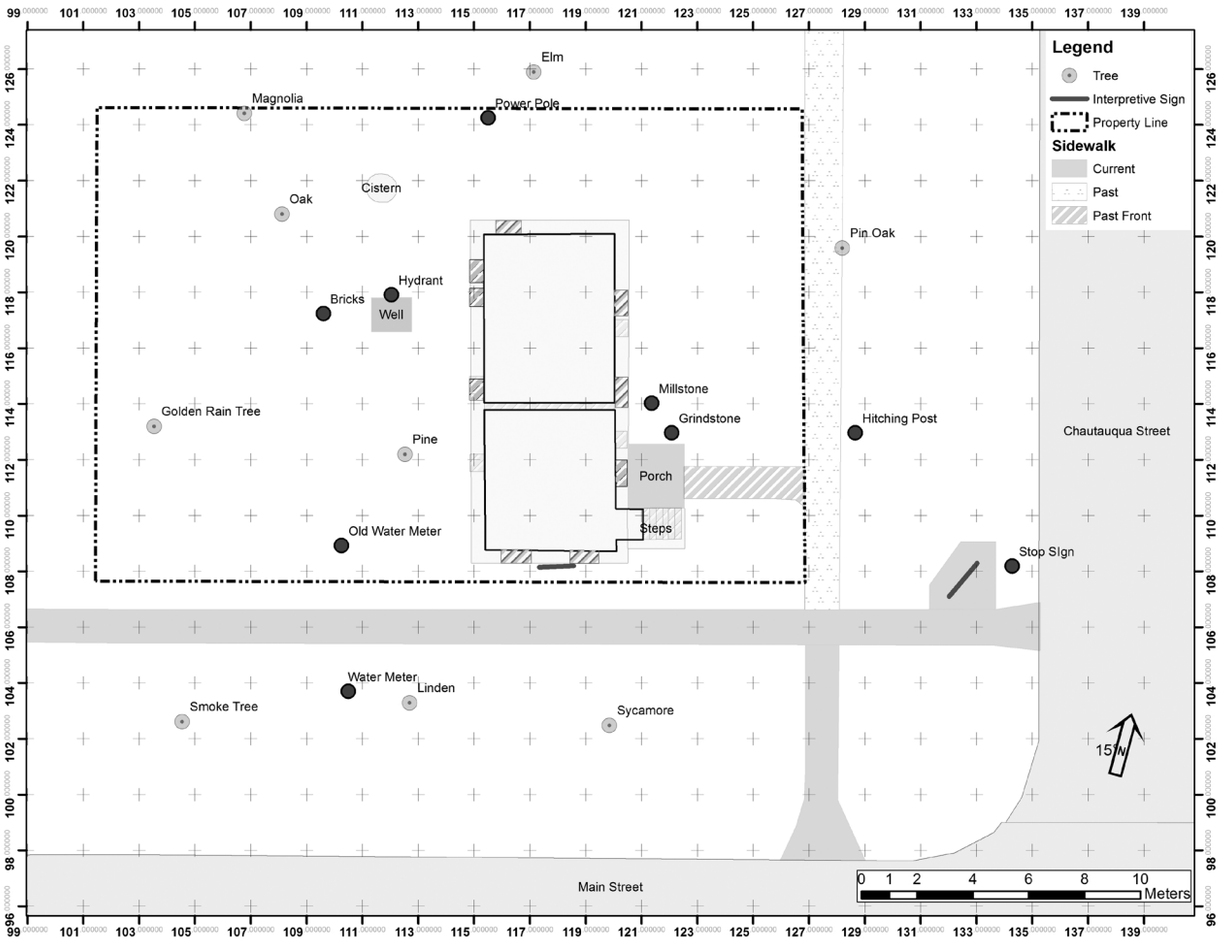


Figure 7. Map of the basic 2-meter grid and layout of 14MO367 prior to excavation.

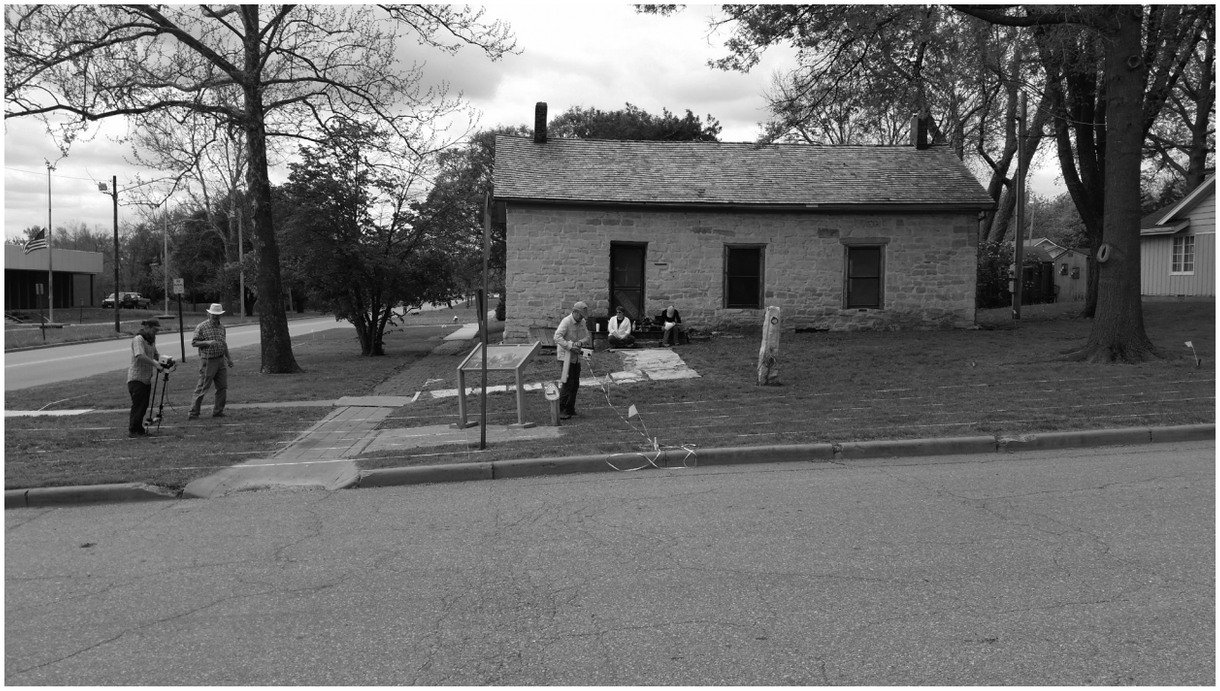


Figure 8. Crew from the University of Kentucky and Kansas State Archeologist Bob Hoard conducting electrical resistance and gradiometer surveys.



Figure 9. Tod Bevitt and Tricia Waggoner coring geophysical anomalies.



Figure 10. Michael Life participating in systematic metal detection survey conducted at exposed site areas.

isolating specific concentrations was very difficult. Therefore, after the first day, the metal detector crew recorded the locations of marked hits on units that were likely to be excavated; elsewhere, finds were excavated, mapped, and collected.

To manage investigations in the yard, 14MO367 was divided into two areas, based on ownership. Area 161 included land owned by the Kansas Historical Society and adjacent city right-of-way. The City of Council Grove granted permission to excavate in the strip between the lot boundaries and the street. Area 162 encompassed property owned by the neighboring private landowners, who gave permission to explore their lot, and adjacent city right-of-way. In the yard excavations were initiated southeast of the building, based on the likelihood that this was the main store entrance and would have had the highest traffic. Also, several geophysical anomalies were located there. Excavation in the yard was done in arbitrary10-cm levels within 2 by 2-m units (Figure 11). Smaller units were used in a few places, where specific goals and conditions warranted. Significant finds were mapped with the total station.

Initial features designated inside the structure included the cellar, which exists under approximately the southern 40 percent (Feature 501); the attic (Feature 505); the floor (Feature 504); and the subfloor or crawl space (Feature 507). The cellar excavation involved a different strategy. During initial site visits the clay floor was very hard with pronounced mud cracks. However, a 3-inch rain prior to the KATP field school left a few inches of water on the cellar floor. Due to mud cracking when the floor was dry and deep footprints made when the floor was wet, good potential for buried cultural material was anticipated. A sump pump drew out the surface water, and fans and a dehumidifier partially dried the floor. The upper 10 cm were still quite sloppy (Figure 12), so the muck was shovel skimmed out in four quadrants (SW, NW, NE, SE) and put through ¼-inch hardware cloth. After the top 10 cm were removed, the floor was solid enough to place a grid and begin excavating with trowels. A grid of two 2 by 2-m and two 1 by 2-m units was established, covering most of the cellar floor. The floor was metal detected, with hits marked by pin flags (Figure 13).

The wet clay from the cellar was very difficult to push through screens, and runoff from standard water screening was not feasible in the city setting. Therefore, a modified technique was used. Excavated clay was agitated in buckets of water until mixed, then dumped on screens and washed with limited amounts of water under pressure (Figure 14). The restricted runoff evaporated or soaked in without running into the street. Later, small amounts of lime or baking soda were added to the wet clay to loosen its bonds and allow it to pass through the mesh more easily.

The interior of the building's main floor also required different methods. Tied into the outside grid, a datum was established with the total station in the southwest corner of the main floor in an area where flooring was not disturbed during KATP explorations. All measurements for mapping

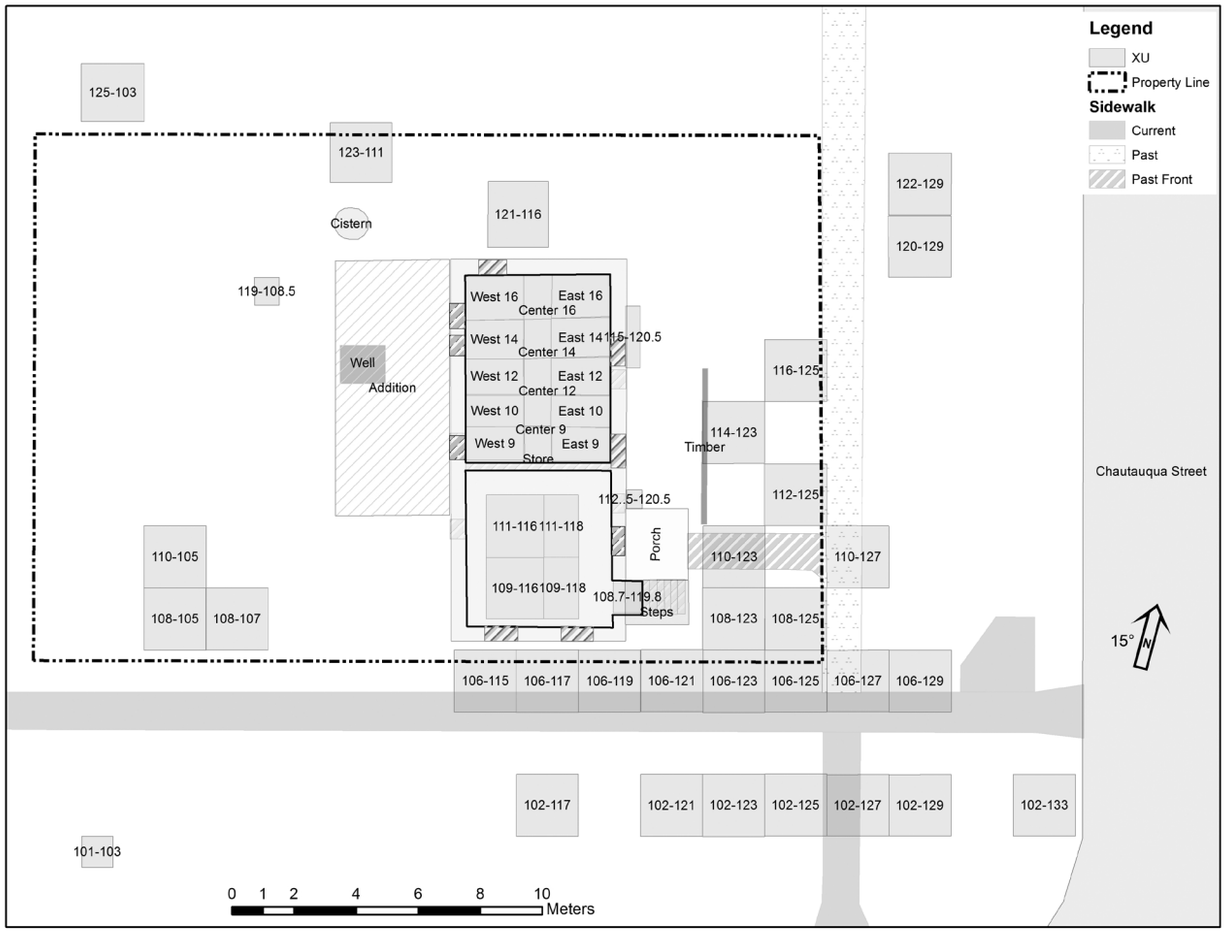


Figure 11. Map of excavated units.

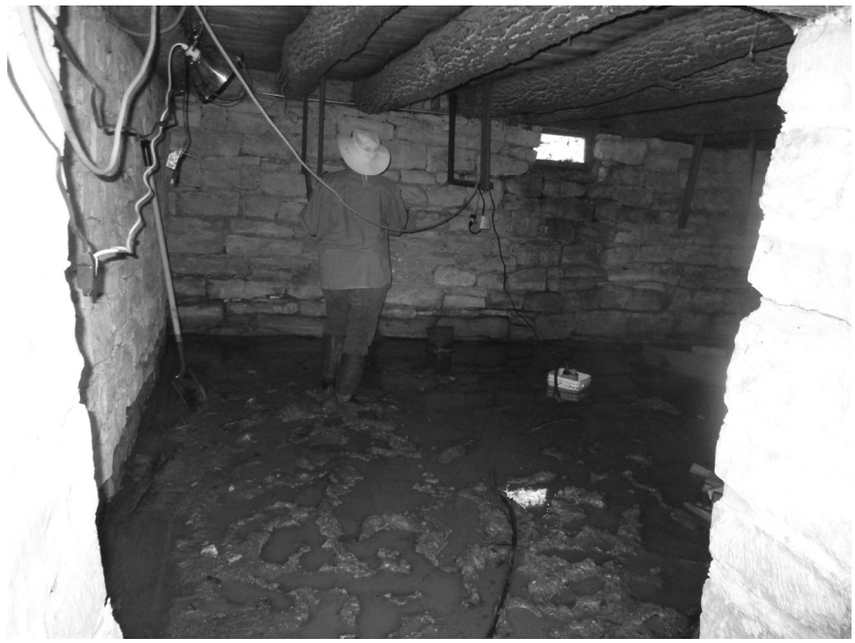


Figure 12. Deb Aaron inspecting the cellar after rain water was pumped out.

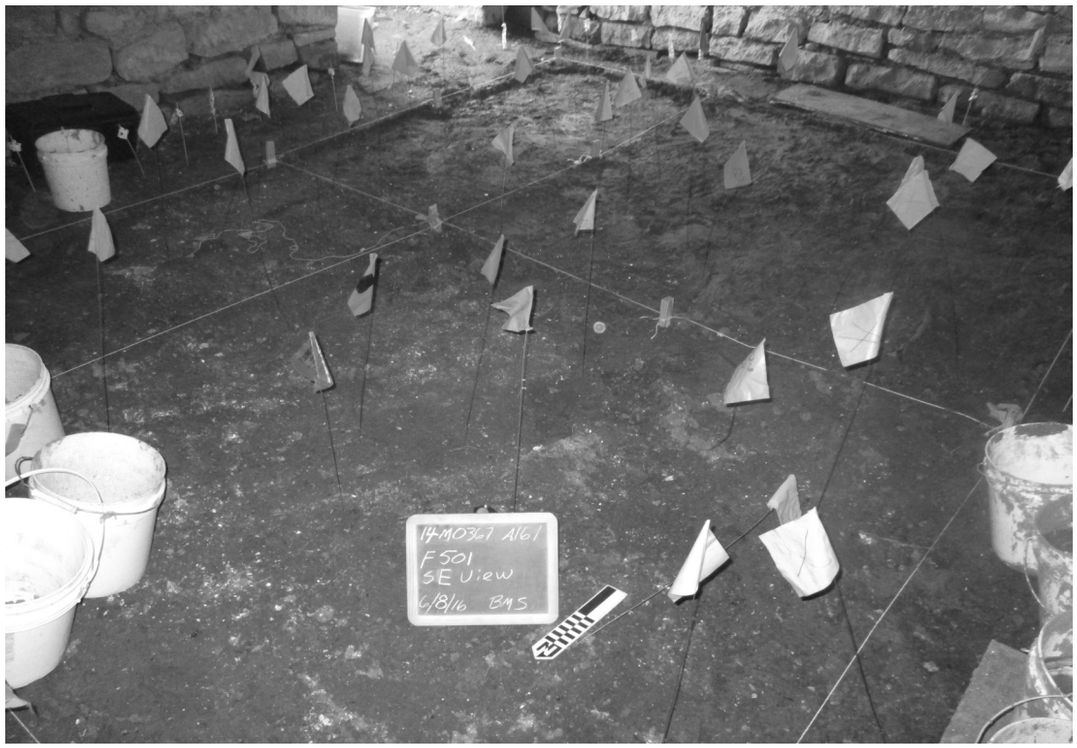


Figure 13. Cellar grid with pin flags marking metal detector hits.



Figure 14. Screening clay from the cellar.

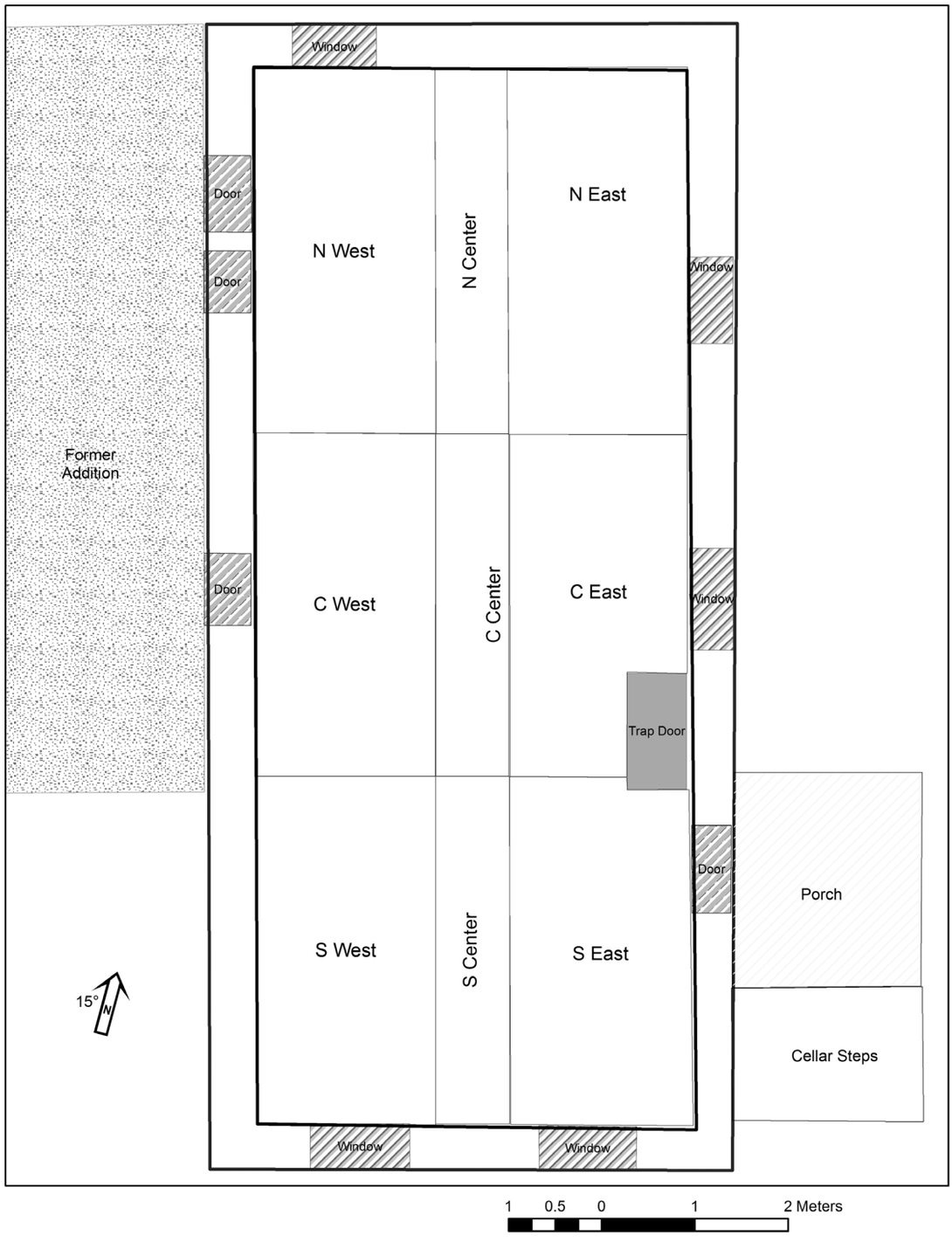


Figure 15. Map of interior floor sectors.

artifacts, the main floor, and the crawl space were based on this datum. Floor boards run north-south with the long axis of the structure and constitute three flooring sections of near equal length. North, center, and south divisions of the floor were designated N sector, C sector, and S sector; each had east, center, and west subdivisions (Figure 15).

The three remaining counters were moved to

S sector, and shelving along the wall was removed. Baseboards and quarter round along the N sector edges were detached.

Brooms and a 16-gallon wet/dry vacuum were used to collect all loose dust and debris from the exposed floor surface, including from the cracks between the surface floor boards. All material from the vacuum was screened, initially through ¼-inch hardware cloth. As removal of the floor boards commenced, in-situ artifacts much smaller than would be recovered in ¼-inch mesh were noted. These included trade beads and bird shot smaller than 3 mm across. From that point forward, material from the floor layers was sifted through fiberglass window screen with openings of approximately 1/16 inch.

The floor was divided into six levels: L0, the stone ledge that extends approximately 20 cm inward from the foundation into the crawl space and supports the floor joists; L1, the floor joists; L2, the nailers, which are thin, narrow, hand-split wood shims, nailed to the tops of the floor joists to create a level surface for attaching the sub-flooring; L3, the subfloor, which was nailed with square nails to the joists; L4, the original floor boards, which were nailed to the joists with square nails; and L5, the second layer of floor boards, which were added later and mostly nailed with square nails. All material that had become packed between the floor boards over the years was excavated using trowels (Figure 16) and then vacuumed up for sifting (Figure 17).

Five floor boards in the center of N sector were left in place (Figure 18), as they support the north chimney cabinet and hence the chimney above. The remaining boards east and west of this were pulled and marked on the bottom with a sequential number, as well as arrows showing the north and south ends (Figure 19). These were saved for later floor replacement. Four boards from C sector along the east wall were assigned unique identifiers and removed down to the joists. This allowed access to at least a portion of every log joist in the building. Floor joists beneath S sector and those in a part of C sector around the trap door and southward are fully visible from the cellar and could be mapped from below. They were numbered from south to north, and this numbering system was later used to record provenience.

Once Level L5 was gone, the surface of L4 was cleaned and photographed. The same soil collection and screening processes were followed as L4 was removed from N sector on both sides of the center



Figure 16. Neil Briggs excavating soil between floor boards.



Figure 17. Lou Madden vacuuming up fill from between floorboards for screening.



Figure 18. Boards in the N Center sector that were left in place.



Figure 19. Chris Hord marking boards for later replacement.

boards. As the L3 subfloor boards were lifted, they were marked on the underside with north-south orientation only. Some were saved for possible reuse and to serve as representative samples of original subflooring. However, some L4 and many L3 boards were heavily termite damaged and were discarded. Some L2 nailers were taken up and saved but not mapped or marked. The L1 joists were vacuumed and photographed in place, and the recovered sediment was screened. The L0 ledges were vacuumed and collected. The dirt was screened, and photographs were taken of several representative sections. Most in-situ artifacts were recorded only to provenience of the layer in which they were found.

Crawl space grid zones were derived from a combination of joist numbers and directions: west, center, and east. This grid zone approach was used as provenience for excavating the crawl space (see Figure 11). In the east grid zone significant items on the surface in the crawl space were initially mapped, followed by careful excavation and screening of the sediment through window screen. In the west and central grid zones a more expeditious collection method was used because time was running out. Here, beneath the floor layers, artifacts on the surface in the crawl space were identified in the notes only as to unit and level, and loose dirt was sifted through ¼-inch mesh.

After the KATP excavation, the remaining S and C sector floorboards were removed. Chris Hord acted as archeological monitor during that work. He recovered and screened additional sediment from between the floorboards and from the crawl space beneath. He also collected soil from behind the north cellar wall when it was disassembled and rebuilt. The author and Hord checked the well for metal objects, using a 150-pound lift magnet. The magnet on a rope was dragged across the bottom of the well multiple times. Only a piece of scrap iron, possibly from a pump housing, and a finish nail were recovered, perhaps because the lower sides of the well had fallen in and covered anything that might have been on the original bottom.

Artifacts were accessioned into the Kansas Historical Society catalog system when they arrived at the field lab and their provenience information was recorded in an Access database. They were assessed as to the appropriate cleaning levels and methods and were cleaned, cataloged, and boxed. The KSHS catalog system is a function-based classification in which objects are sorted into functional groups (Hardware or Tableware, for example) and then further divided by material, type, subtype, portion, color, decoration, and other distinguishing features. Many items were cleaned and cataloged by KSHS staff and KAA volunteers while field investigations were underway. After fieldwork was completed, KSHS staff and KAA volunteers continued to work at the Archeology Lab in Topeka until the entire collection was ready for analysis.

INFORMATION RECOVERED PERTAINING TO RESEARCH QUESTIONS

The primary goal of the 14MO367 excavation was the search for patterned behavior, as viewed through the physical remains preserved at the site. While a certain amount of information, such as age, construction, and identifying marks, can be garnered by analyzing individual artifacts, much more can be learned by studying the patterns of related items and the human behavior inferred from their

relative locations. Behavior patterns are interpreted by looking at the locations of individual objects relative to each other and to the major structures. A prime example of this approach is the whiskey bottle and metal cup stash found in the cellar wall, as described below. While the bottle and cup are interesting in their own right, their interrelationship as part of a hidden stash is a far more interesting story. Using this basic philosophy, five research questions were pursued. The following discussion is limited to significant artifacts and features, which relate primarily to the pre-1900 period. Many more artifacts and features were recovered or recorded, and they are described fully in a comprehensive technical report, submitted to the Kansas Historical Society (Blasing 2019).

Research Question 1. Can the Locations of Outbuildings, Other Structures, or Specific Activities Be Identified? If So, When and for What Range of Purposes Did These Locations Exist?

Descriptions of the more significant features recorded at 14MO367 follow. They are not necessarily contemporaneous. Some have retained their initial characteristics, while others have not. However, all show changes made to the building and its lot through time. Some features, such as interior rooms, outbuildings, and the wooden fence were not defined until after the field work was completed and were not assigned feature numbers.

Hand Dug Well (Feature 524)

The well is lined with unmortared limestone (Figure 20). The interior is about 91 cm or 36 inches in diameter and is protected by a 4-foot-square wooden cover. The old cover was rotted and was replaced with a new one prior to the KATP field school. The well likely was completed when the Tolbert family moved in around 1880, as the Mathers reported carrying water from the town well in 1860. In 2016 the well still held water at a depth of 19 feet from the rim when first measured and at a depth of 17 feet below the rim after a 3-inch rain a few nights before excavation began. The depth from the rim to the bottom is about 26 feet, but the well is noticeably wider at the bottom, indicating that the lower sides have caved or sloughed off to some extent. This sloughing undoubtedly has decreased the original depth.



Figure 20. Interior of the hand dug well (Feature 524).

Cistern (Feature 519)

The cistern is made of poured concrete and has two inlets that are about 4 inches in diameter (Figure 21). One opening on the east side handled runoff from the rain gutters on the main building. The other on the south side received water from the addition's gutters. Given the cistern's position near the northwest corner of the addition and the inlet that was intended to receive its runoff, the cistern very likely was constructed contemporaneously. At the time of the KATP field school, the cistern was full of sediment and construction debris. Much of the rubble appeared to be from repairs made after Helen Prater took possession. The cistern was excavated to a depth of 70 cm from the soil surface with an auger hole 60 cm more. (Figure 22). The bottom of the cistern was not reached.



Figure 21. Cistern (Feature 519), showing two inlet holes.

Limestone Hitching Post

A limestone hitching post east of the structure (Figure 23) apparently was added during Helen Prater's ownership, as it does not appear in a 1958 picture. This post was not given a feature number because it is comparatively recent, but it has an interesting history of its own. An article in the *Emporia Gazette [EG]* 2009:5), stated that these posts were first made by the descendants of ex-slaves, who settled in the Dunlap community. This one probably was made by Harrison Fulghum in the 1940s or early 1950s and purchased in the mid-1940s. Fulghum's granddaughter was interviewed for the 2009 newspaper article.

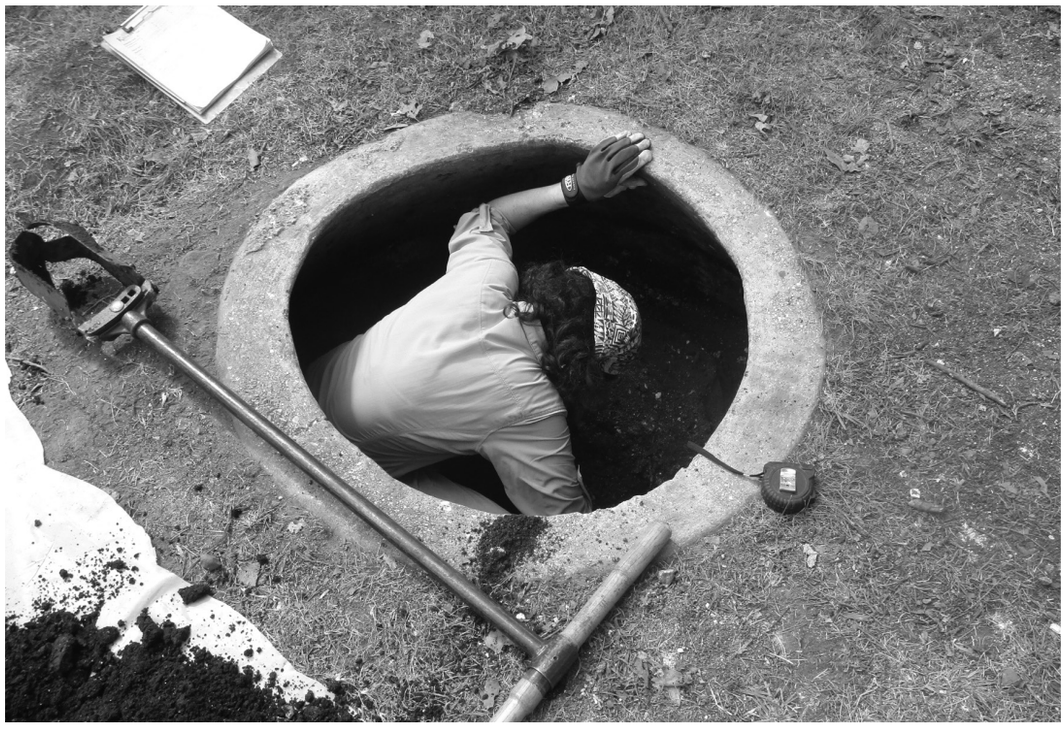


Figure 22. Tricia Waggoner excavating cistern.



Figure 23. Limestone hitching post east of the building.

Carving on Cellar Wall (Feature 511)

Faint initials carved on the south wall of the cellar entrance were discovered and recorded by KAA volunteer Shelby Beltz during excavations in the cellar (Figure 24). The carving is very faint and difficult to make out (Figure 25). It is entirely on a single 34 by 24-cm limestone block, the bottom of which is about 74 cm above the floor at the base of the stairs. The carving appears to read "I. S. TOLB", although the "S" is backward and the "L" appears to be upside down. When the Tolbert family moved into the dwelling about 1880, their oldest son Irwin was 13 years old. He often was called "I. S." and was apt to be the author of the unfinished carving of his name.

Stash (Feature 508)

A whiskey bottle with cork stopper still in place, a metal cup, and a broken glass were found just north of the interior trap door leading to the cellar. In the southeast corner of the crawl space at the northeast corner of the cellar, two stones in the top tier of the north cellar wall are not mortared. These lie directly behind where the top rung of a ladder once extended up to the trap door. Two spikes that once held a ladder are still present (Figure 26). One of the loose stones had been pushed to the interior of the crawl space, while the other was still in position. When the floor boards above this location were removed, the intact whiskey bottle was exposed directly behind (north of) the unmortared stones. A metal cup and a broken drinking glass were associated. A tapered wooden peg, which could have been used to secure a door hasp, possibly on the trap door, was nearby. This feature appears to be a hidden stash where an occupant kept his/her bottle of booze (Figure 27). The feature extends for approximately an arm's reach from the small opening in the stone wall.

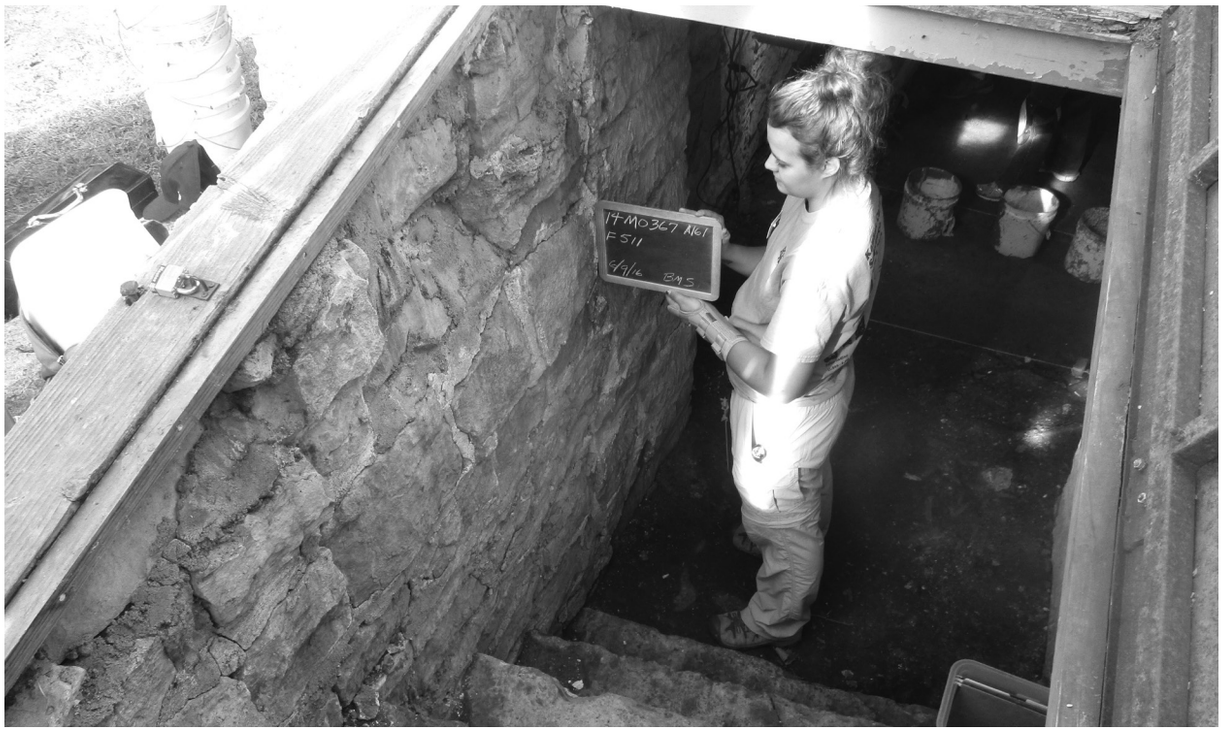


Figure 24. Shelby Beltz showing the location of the wall carving at the bottom of the cellar steps.

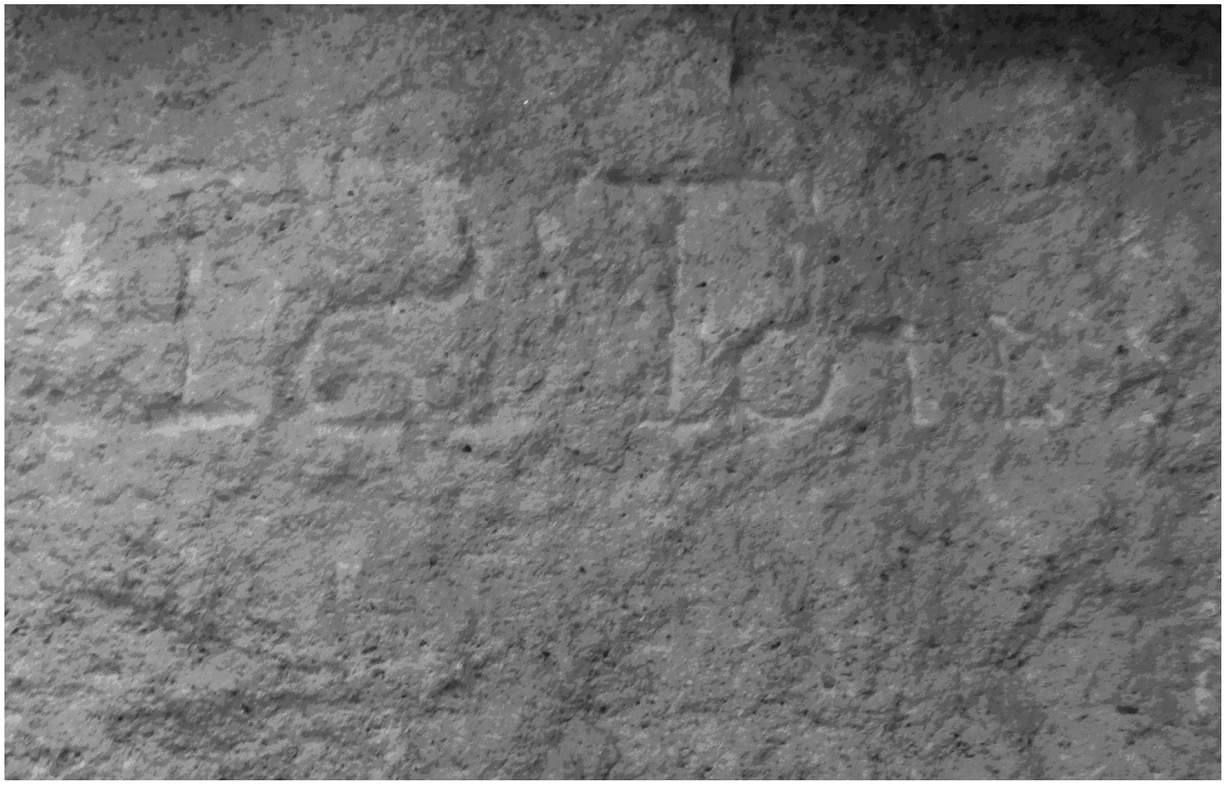


Figure 25. Close up of wall carving (Feature 511): "I.S. TOLB."



Figure 26. Location of the stash (Feature 508) opening below the floor in the northeastern corner of the cellar.



Figure 27. Contents of the stash as they were first seen, when floor boards were removed.

Kitchen

According to McClintock's interview with the Burnett family, the kitchen was located at the north end of the original stone structure when it was used as a residence. The room was 14 feet wide (north-south) and was above about 70 percent of the crawl space. The three visible crawl space access holes were in the kitchen, and most of the abundant animal and vegetable food remains came from beneath it.

After the floor was vacuumed, several "ghost" patterns were identified, where appliances, interior walls, and interior doorways had once been (Figure 28), as well as lines of small nails/brads where carpet or linoleum-type floor coverings had been tacked to the floor. Several circular holes had been bored into the floor for water and gas pipes to pass through. Feature numbers were not assigned to any of these, but individual photos of each pattern were taken.

The probable oldest sink was in the middle of the south kitchen wall. This outline had drilled holes for two entering waterlines but no evidence of an exiting drain. Some water damage had occurred to the underlying boards. A likely explanation is that no drain or sewer existed at that time, so water was poured into a basin and then thrown outside after use. Two waterlines entering might indicate some sort of outside water heater or separate lines from the cistern and the well. A second sink outline can be seen in front of and just south of the later door to the bathroom in the addition. Directly in front of that door are two water pipe holes drilled through

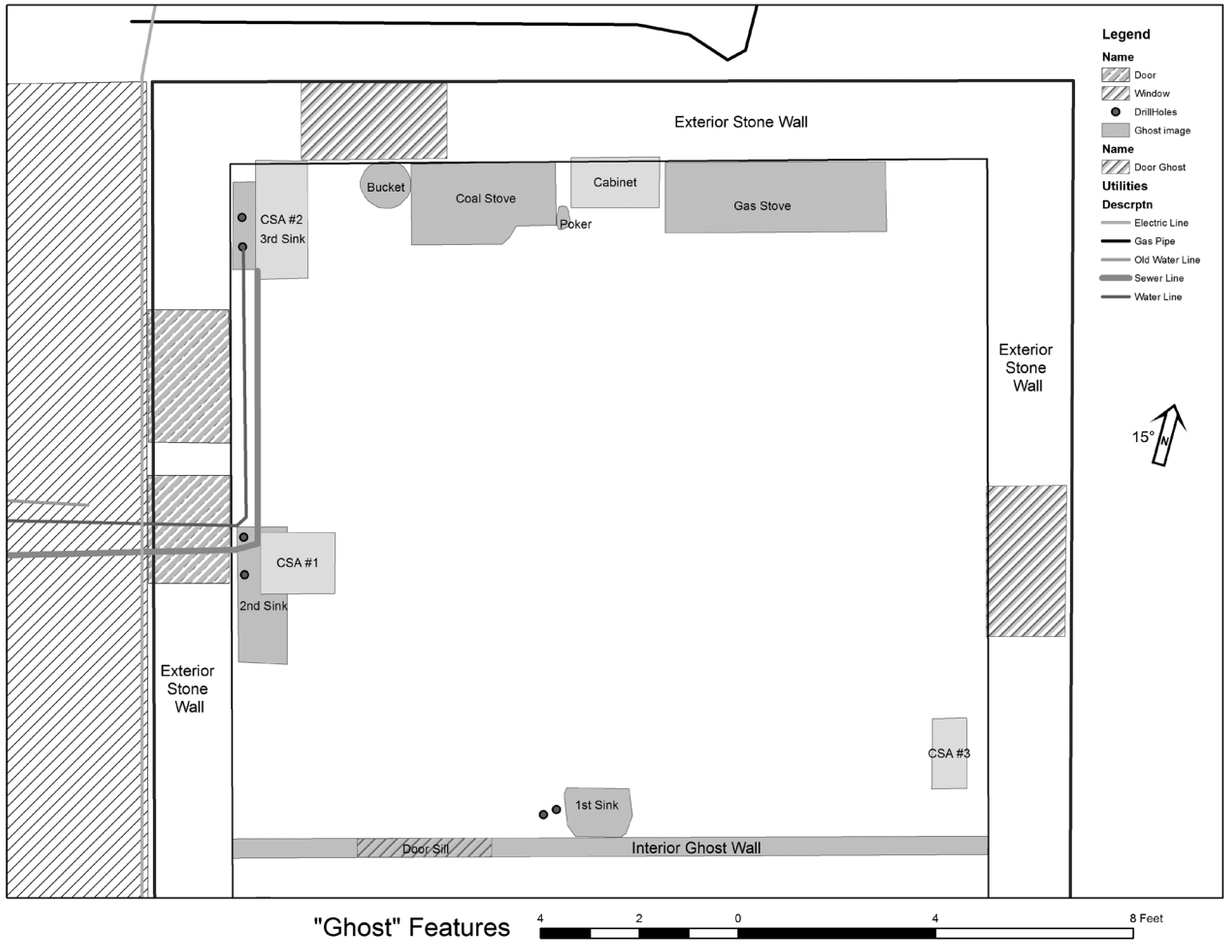


Figure 28. Plan view of the kitchen in the northern portion of the building. Ghost outlines on the floor indicate the positions of three successive sinks and two successive stoves. CSA = crawl space access.

the floor. The board where the drain would have exited had been replaced; however, a drainpipe still exits directly under this door. The sink probably was moved to this location when the septic tank or drain pit was added to access the drain without having to run the drain pipe half way across the room through the narrow crawl space. Because pipes for this second sink blocked the bathroom door, the north interior wall and the first two sinks were installed prior to the west side addition. The third sink was in the northwest corner of the room, moved there when the addition was built and the bathroom door added. Otherwise, the second sink would have blocked this door.

The first stove location is a square ghost imprint along the north kitchen wall west of the chimney cabinet (Figure 29) and a stovepipe entry above this on the west side of the chimney. These undoubtedly represent a wood- or coal-burning stove. A round outline immediately west of the stove imprint could be from a coal or water bucket. Water damage to the floor boards in this location favor the latter, but possibly melt from ice and snow adhering to a coal bucket could be the source of the scar. Numerous indentations near the southeast corner of this stove ghost might represent the tip of a poker once kept there (Figure 30). A gas stove east of the chimney cabinet apparently replaced the kitchen cook stove after the addition was constructed. The gas line comes from the alley, south to the stone structure, and west along the exterior of the north wall to the addition. It returns from the addition along the interior of the north wall to the gas stove, which is visible as a rectangular ghost image east of the north chimney cabinet. Paint chips were taken from this cabinet to analyze the layers of paint used in the building.



Figure 29. Outlines of a cook stove with bucket on the left side and indentations indicating a poker on the lower right side.

Living Room

The ghost impressions signal the locations of two interior walls that divided the interior of the former store into three rooms. Door openings are evident in both walls, but only the northern door has a sill, which left a wider mark than the wall, perhaps indicating a door in the north interior wall and only an open entryway in the south interior wall. The south interior wall, separating the living room from the bedroom, originally was built just south of the trap door to the cellar, so that the trap door could still be used. Later it was moved a little less than 2 feet north on top of the trap door, sealing it shut.

The living room is defined by the imprints of these interior walls (Figure 31), which clearly show that there were three rooms during the Tolbert's ownership, when the edifice was used as a residence. Because the front door opens into the south room and that room has windows looking out on Main Street, this likely was the living room. Local resident Sandy Hartman visited the house when her grandmother lived there and confirmed that the living room was at the south end. A slightly rectangular heat-damaged area on the floor in front of the south chimney cabinet apparently indicates the location of a heating stove. A later round wood stove, added by Helen Prater, was still sitting slightly north of



Figure 30. Close-up of indentations, indicating a poker.



Figure 31. Ghost outline of former south interior wall.

the scorched patch in 2016. Two 1-inch holes were drilled in the floor near the center of the south wall, but one hole was drilled into a floor joist and never went entirely through the floor. The single remaining 1-inch hole supports the idea that a gas stove once occupied this spot. Ella Tolbert's obituary indicated that she liked to sit by the front window and talk with passersby. A concentration of 27 small pieces of thread and yarn were among the floorboards in the western portion of this south room. These threads suggest that a chair was situated by the southwest front windows, where Elizabeth sat while sewing and knitting.

Bedroom

The bedroom would have been in the center room of the main building, if indeed the north room was the kitchen and the south room was the living room. Two small square ghost impressions on the northwest corner of this central room are of unknown origin; however, they probably preceded the addition, as one is partially in front of the south door on the west wall. Based on the spacing, these could represent some sort of desktop with drawers underneath on both sides. Originally the trap door opened into this room, and the cellar may have served as a bedroom for one or more of the children when the Mather, Wright, or Tolbert families lived there.

Porches

Three porches were planned or present. A stone ledge across the front exterior just below floor level might have been intended to support a porch extending south toward the Santa Fe Trail. The outline of a larger door opening can be seen around the east window on the south side. The short drop from the sill of the former door to the stone ledge reinforces the idea that a south porch at least was planned. Explorations south of the building yielded no evidence that a porch ever existed or that increased activity had taken place at that location, which would be expected if that had served as the main entrance. On the other hand, this area might be covered with fill that obscured the remains. If ever there were a south porch, it was not there for long. An 1873 photograph, taken only 16 years after the store was erected, does not show a south porch. One scenario that explains why the porch was either not completed or was short lived is that the structure was built in 1857, the same year that the town was platted. Already under construction when the property line was surveyed, the south wall ended up being only about a foot from the south line. Therefore, any porch added to that side would have been on town right-of-way and over any planned sidewalk. When this inconvenient fact was discovered, the south

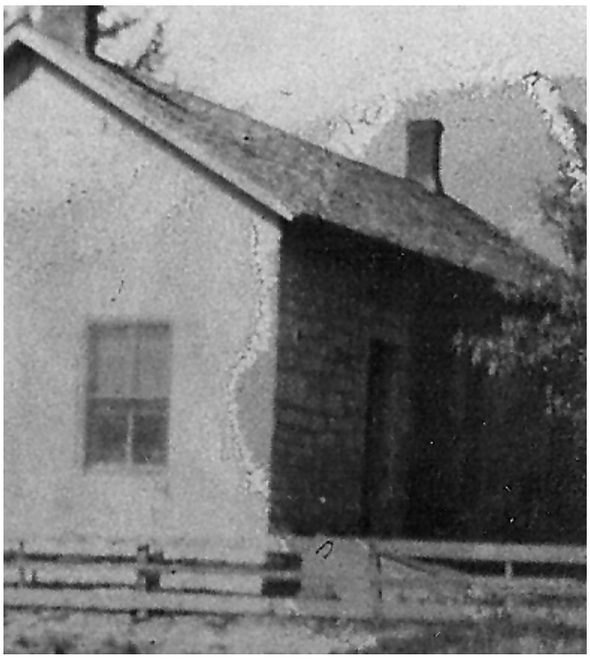


Figure 32. Detail showing the cellar door from a photograph taken prior to 1901.



Figure 34. Detail of the cellar door and front porch from a photograph taken after 1990.

door was replaced by one on the east side of the southeast corner, and a smaller porch was built there. That porch and the adjacent cellar door have been rebuilt several times. In a photograph taken prior to 1901 (Figure 32), which is the earliest known image where the cellar door is clearly visible, the door is slanted toward the east, and the rest of the porch is



Figure 33. Detail of the front porch from a postcard photograph from the 1940s.

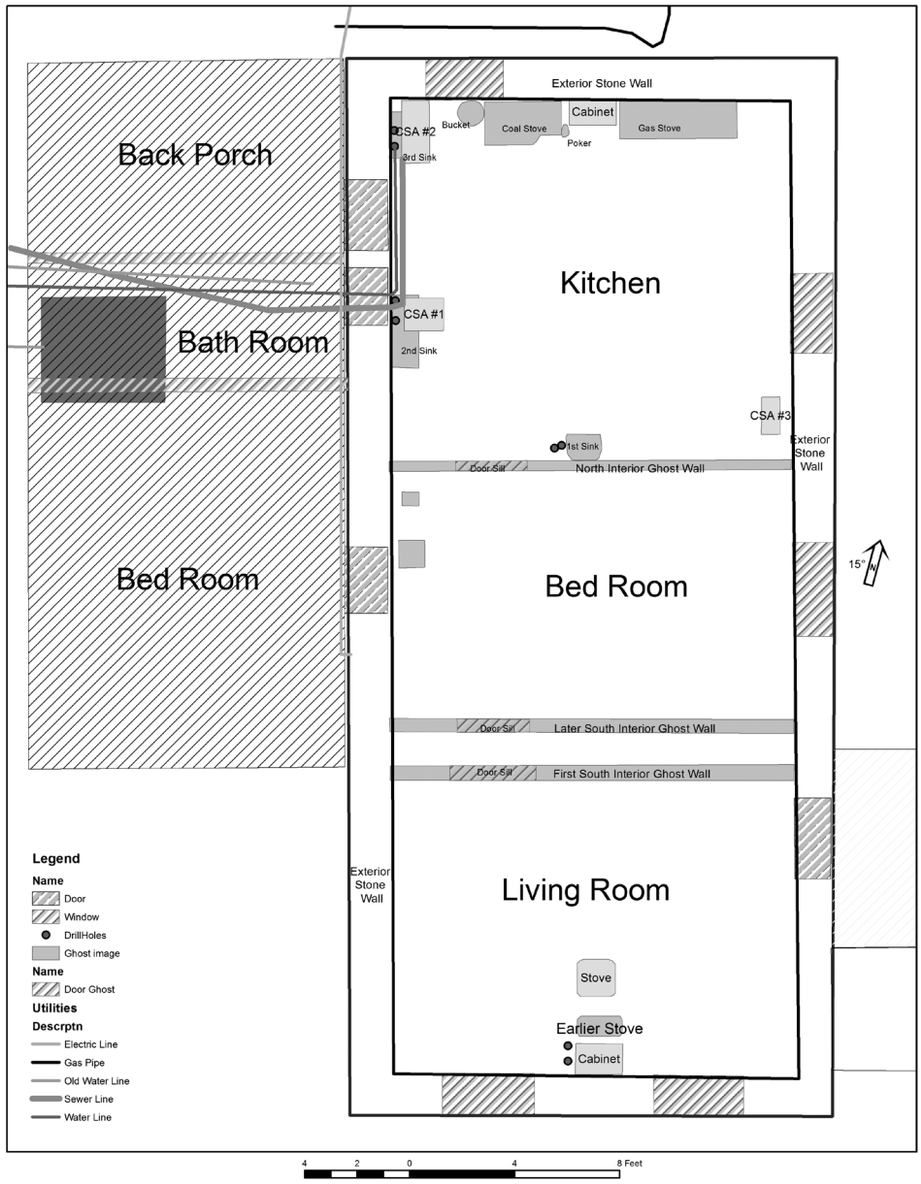


Figure 35. Plan of the building and addition interiors, showing rooms and ghost images.

out of view. In later photographs taken prior to 1921 and in the 1930s and on a 1958 postcard (Figure 33), a flat porch with a trap door to the cellar steps is pictured. In June 1958 the porch and cellar door were missing altogether. A post-1990 photograph (Figure 34) showed that a slanting cellar door with adjacent porch to the north had been reconstructed. The cellar door was rebuilt again in 2000 and 2017. The third porch is addressed in the discussion of the addition (Feature 520).

Building Addition (Feature 520)

An addition to the dwelling was described in a local newspaper account (*CGR* 1994b:1). Although no foundation remnants were uncovered, the 27-foot north-south dimension was determined by concrete residue where the addition walls had been attached to the west exterior limestone wall. The 12-foot east-west measurement was obtained from the 1922 Sanborn fire map. Estimates of the sizes and locations of rooms within the addition (Figure 35)

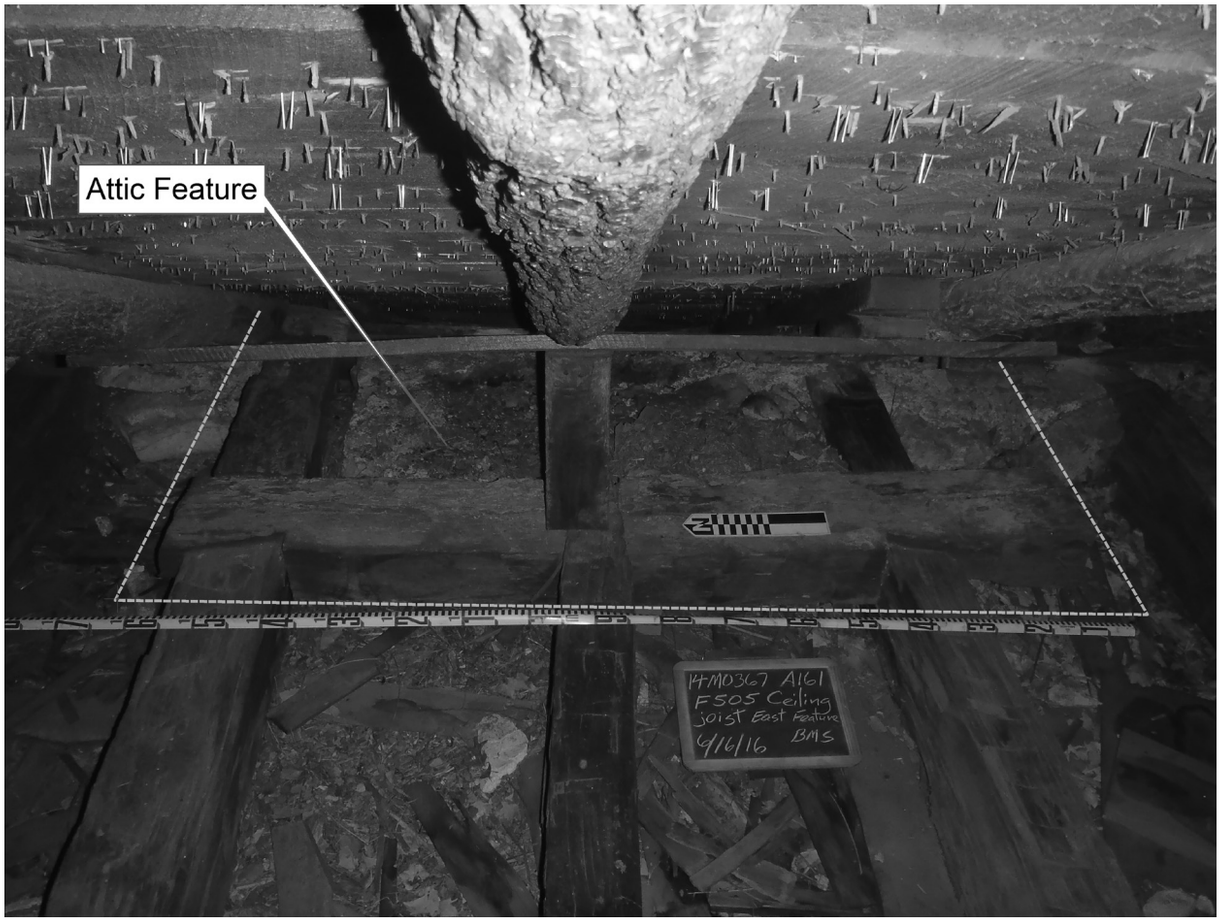


Figure 36. Feature 505 in east-central part of attic, outlined in white.

were made by comparing a crude floor plan, drawn for McClintock by the Burnett family, with the marks from two interior walls still evident on the remaining stone wall of the main structure. While an interior wall between the bathroom and the pump room over the well would have made sense, there was no way to determine exactly where that might have been. Exterior stepping stones along the west side must have been added after the addition was razed in 1956.

Attic Feature (Feature 530)

An unusual anomaly is present in the attic slightly south of the center on the east wall (Figure 36). A small section was framed in where the original roof apparently was open. The exterior stone wall does not extend as high here as it does on the rest of the perimeter. A wider strip of cement at the top of the wall provides a small platform that has a burned patch in the center (Figure 37). This small burned area included soot that likely resulted from burning coal. Feature 530 was hidden initially by a squirrel nest and was discovered only in the last few minutes of the KATP field school, so it could not be explored further. The function of this feature is presently unknown, but the burned spot in the middle might have been a hole where an early chimney passed through the roof. If so, the gap was filled in after that chimney was removed.

Fence

A wooden fence, consisting of three horizontal boards, surrounded the tract on the south, east, and north sides in a pre-1901 photograph (Figure 38). It extended west beyond the current property boundaries, but the western edge cannot be seen in



Figure 37. Close-up of Feature 505 in east-central part of attic.

the picture. The fence was not present in an 1873 photograph, so it probably was built after the Tolbert family moved in around 1880. Also absent in a pre-1921 image, it possibly was torn down when Lots 13 and 14 (to the west) were sold in 1901. No physical remains of the fence were found during the 2016 excavation.

Outbuildings

The store was flanked by at least three other structures. None was on land currently owned by the Kansas Historical Society. One was a small shed with sheet metal siding, visible in pre-1901 and pre-1921 photographs (Figure 39). Likely gone by 1922, its location may be under the house built in 1955 to the north. Those current residents report that bottles and debris are present in the crawl space under their home, suggesting that the modern foundation was built around the perimeter of the shed and that its central portion might still be intact.

In Figure 38 another small outbuilding is visible to the west, just above the fence and left of the iron fountain. This might have been the privy, used prior to construction of the addition. It would have been torn down around 1901, when the neighboring lot was sold and a house was built there.

The 1922 Sanborn fire map (Figure 40) showed a third small shed along the alley in the northwest corner of Lot 15. Ground penetrating radar transects run over this tract did not indicate any subsurface-disturbance. Therefore, it probably was not a privy. However, this and the one discussed above could have been used for storage, a coal shed, a chicken coop, or some other function. The Sanborn map further demonstrated that the sheet metal structure apparently was gone by1922.



Figure 38. Pre-1901 photograph, showing the store, fence, and two outbuildings.



Figure 39. Pre-1921 photograph, showing a corrugated metal-sided building (right edge) north of the store.

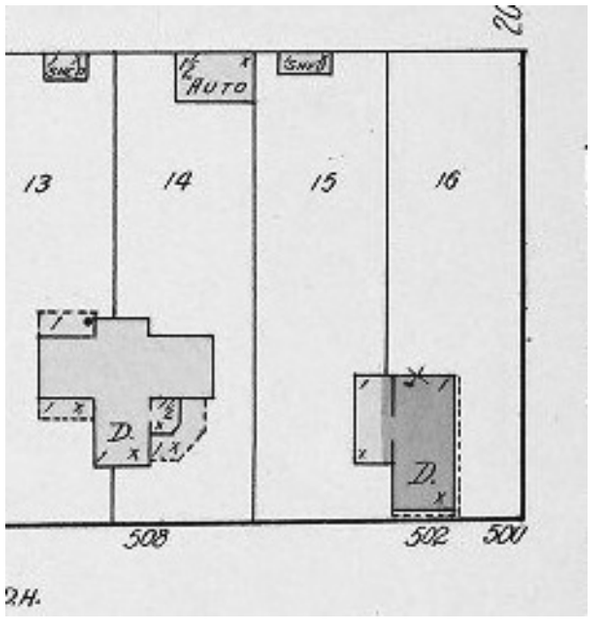


Figure 40. Detail of 1922 Sanborn Fire Map, showing shed at the northern edge of Lot 15.

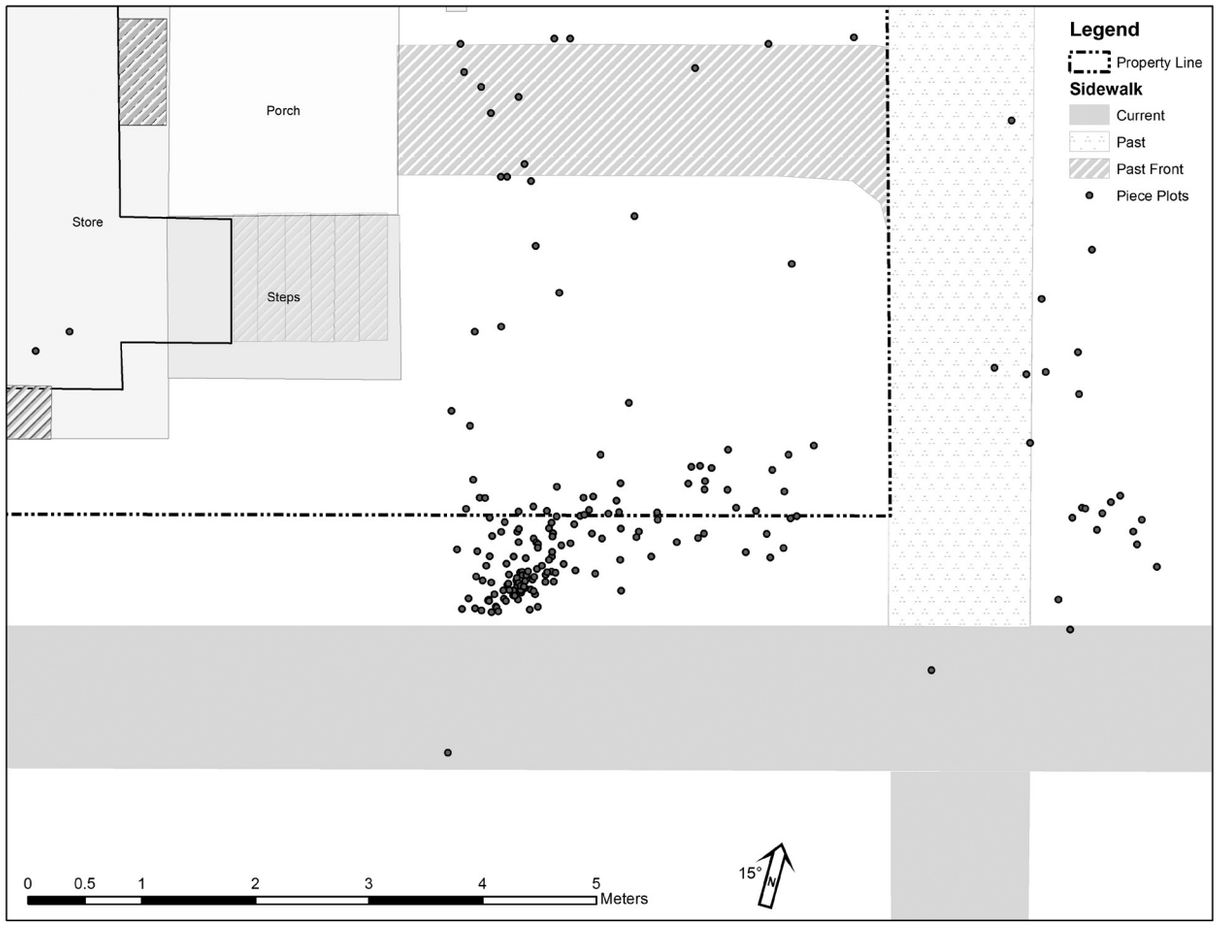


Figure 41. Distribution of piece plots, showing location of midden feature between the fence and sidewalk.

Midden

An artifact concentration was noted in N106 E123 during the KATP field school but was not recognized as a midden until mapping was completed. Therefore, it was not assigned a feature number. This trash accumulation, just outside the state property boundary and southeast of the cellar steps (Figure 41), was evident in the electrical resistance survey.

In Figure 38 a light-colored area adjacent to the sidewalk along the south edge of the lot appears to be limestone rubble, described below as Feature 516. It is situated south of the store and farther east but not in proximity to the midden immediately southeast of the cellar steps. Based on the high concentration of historic objects, one or more episodes of cellar cleaning might have formed the midden. Loose dirt and small trash that accumulated on the cellar floor might have been scooped up, brought up the cellar steps, and dumped over the fence. This would account for the limestone being covered in that vicinity and for the abrupt end to the feature right at the property line, marked by the fence.

Posthole (Feature 528)

The base of a posthole, defined by a small burned spot, was exposed near the center of N106 E123 at the southeast corner of the building (Figure 42). The identified portion was about 5 cm deep and about 13 cm or 5 inches in diameter. It contained small rocks and some charcoal in yellow, brown, and gold soil. Perhaps the fill from some burned area was dumped in the hole after the post was pulled. Given the location, it might represent a sign post or an early hitching post. It was covered by the midden and so predated it. It likely also preceded the fence, as there would have been little advantage to placing a



Figure 42. Outline of burned fill, defining half a posthole (Feature 528), near the southeastern corner of the building. The feature appears semicircular because it was cross sectioned.

sign directly in front of the fence rather than simply hanging one on it. Two charcoal samples collected from this feature were not analyzed.

Limestone Complex (Feature 516)

A limestone complex, consisting of large slabs (Figure 43) and smaller tabular cobbles, was found during core testing of a GPR anomaly. This feature was in N106 E127 and N106 E129 west of the southeast corner of the Last Chance Store lot and along the north side of the existing brick sidewalk along Main Street (Figure 44). Possibly this was a crude retaining wall. The light-colored area thought to coincide with this feature is visible in the pre-1901 image (Figure 38) but absent in a pre-1921 photograph. Following the 2016 excavation, Feature 516 was left in place and reburied.

Trash-filled Trench (Feature 512)

Feature 512 consisted of a shallow trench filled with cinders and slag from burning coal, as well as the remains from burning household trash. These were dumped where previously there had been a shallow drainage ditch along the east edge of the lot (the west edge of Chautauqua Street) to allow a former driveway to cross the ditch.

Research Question 2. Is There Evidence of the Kinds of Trade Items That Were Sold in the Store? Was It Simply "Bacon, Beans, and Whiskey" or Were More Unusual or Surprising Goods Sold?

Assuming that T. C. Hill and Company operated from the store for a time, a newspaper advertisement (Figure 45) listed items that they offered in 1859 (*EWN* 1859d:4 and *KP* 1859a). Generally these were identified as groceries and dry goods, including axes and knives, bacon, beans, blankets, boots and shoes, buffalo robes, caps and hats, clothing, coffee, corn and oats, flour, hardware, molasses, sugar, and tin ware. Hill and Company also were



Figure 43. Looking east at the limestone complex (Feature 516) along the northern side of the recently removed sidewalk.

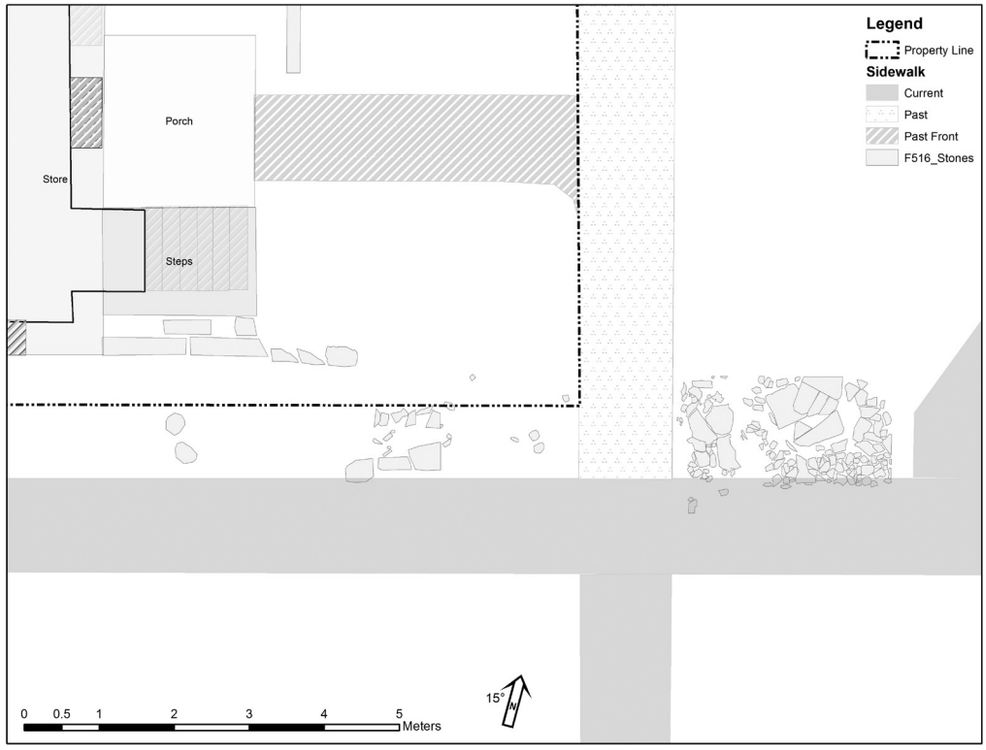
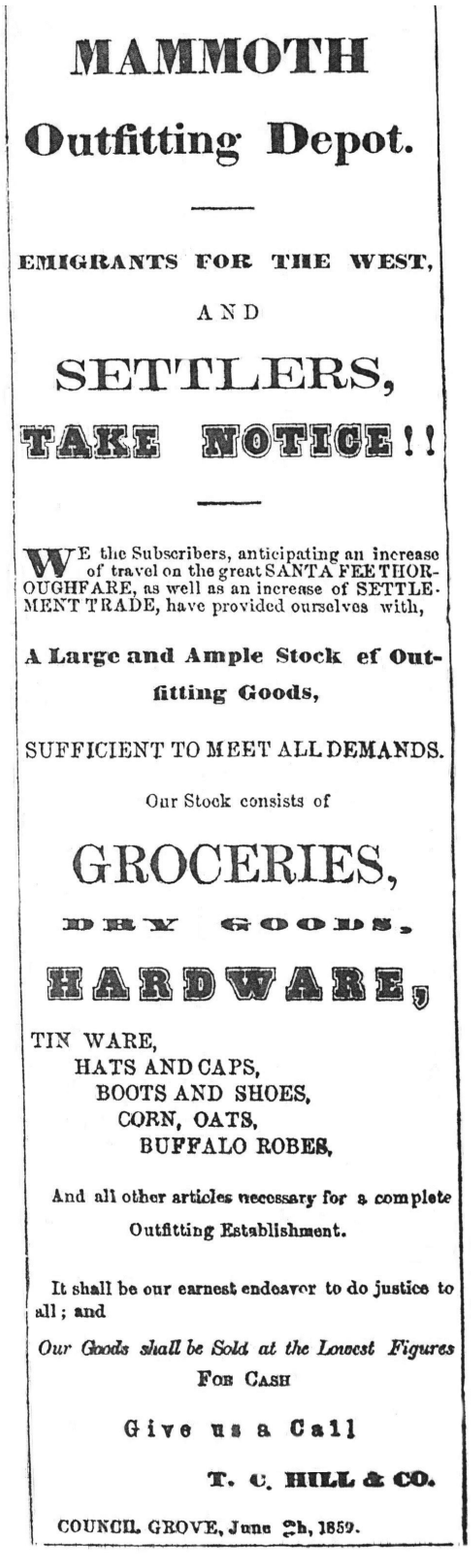


Figure 44. Map of the limestone complex along the northern side of the recently removed sidewalk.



MAMMOTH

Outfitting Depot.

EMIGRANTS FOR THE WEST,

AND

SETTLERS,

TAKE NOTICE!!

WE the Subscribers, anticipating an increase of travel on the great SANTA FEE THOROUGHFARE, as well as an increase of SETTLEMENT TRADE, have provided ourselves with,

A Large and Ample Stock of Outfitting Goods,

SUFFICIENT TO MEET ALL DEMANDS.

Our Stock consists of

GROCERIES,

DRY GOODS,

HARDWARE,

TIN WARE,
HATS AND CAPS,
BOOTS AND SHOES,
CORN, OATS,
BUFFALO ROBES,

And all other articles necessary for a complete Outfitting Establishment.

It shall be our earnest endeavor to do justice to all; and

Our Goods shall be Sold at the Lowest Figures

FOR CASH

Give us a Call

T. C. HILL & CO.

COUNCIL GROVE, June 2h, 1859.

Figure 45. T. C. Hill & Co. newspaper advertisement from 1859.

described as dealers in all types of livestock. Even if the business was not operating out of this location in 1859, it conceivably carried a line of merchandise similar to that sold at the Last Chance Store. Note that there is no mention of whiskey or alcohol in the ads. Alice Strieby-Smith's (1928) reference to her father sleeping on a pallet of blankets in the store affirms that at least this item from the above inventory was available there.

A pre-Civil War-era brass trade token from Foster and Parry Ironworks (Figure 46), Grand Rapids, Michigan, was recovered at 14MO367. It probably dates within the 1848-early 1860s time frame. Foster and Parry produced iron, hardware, and stoves, and some of these wares might have been stocked. Several early patent medicine bottles could have been merchandise, although this type of bottle was common in residential sites. The bottles that could be securely dated were patented after the original store period.

At least 260 tiny seed or trade beads were retrieved by fine screening dirt from between the floor boards. All are less than 2 mm in diameter (Figure 47). They occur in mostly blue, black, red, and white, but small numbers of clear, red and white, turquoise, green, gold, and yellow beads were found. This collection undoubtedly under-represents the number of trade beads, as much of the material was screened through ¼-inch mesh, and the beads are very small and hard to see. There were also nine short black tubular beads, 3–4 mm in diameter. All of these beads likely represent trade with the Kaw Indians rather than Santa Fe Trail travelers.

Research Question 3. Is There Evidence to Show That the Structure Served Functions Other Than Store, Residence, and Loan Association Office?

Several new one-time uses of the building were identified during historical documents research for this project. These include Kaw Reservation settlers' meetings, a refuge during the Cheyenne scare, a wedding, a funeral, and possible IOOF functions.

According to Brigham (1921:16), "In 1863 Mr. Foster, with Company F, 2nd Colorado was stationed in Council Grove. The soldiers ate and slept in the little stone store, now the Tolbert house." This



Figure 46. Pre-Civil War trade token from Foster & Parry Iron Works (catalog #2633-1).

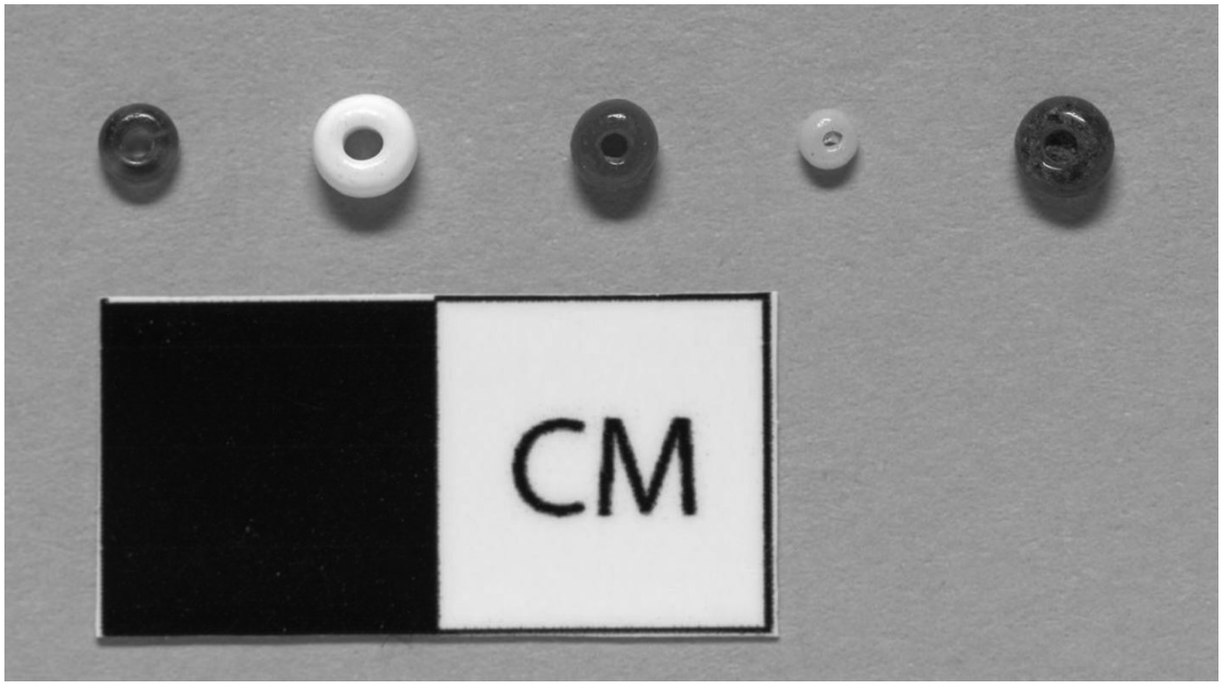


Figure 47. Sample of tiny trade beads, recovered from the floor boards.

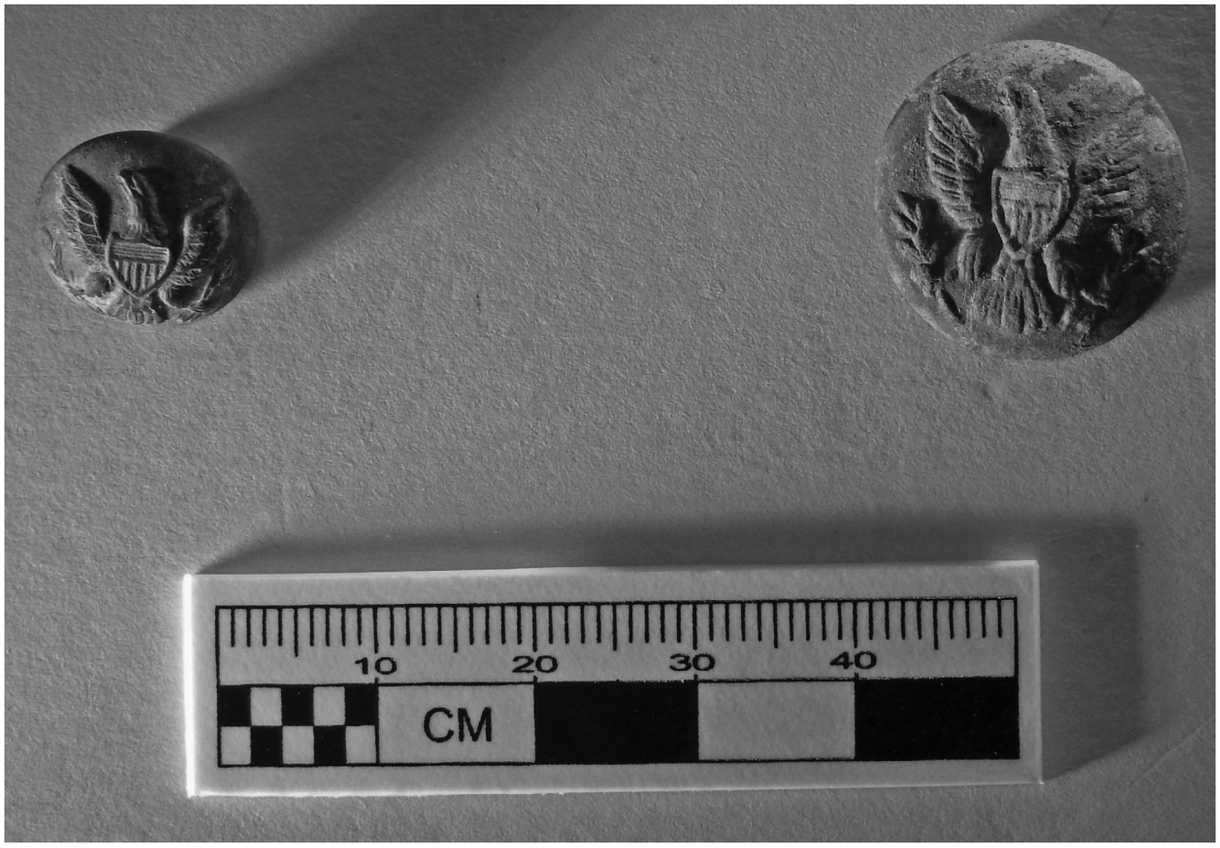


Figure 48. General Service buttons from the Union Army (catalog #1605-43 & 2602-114).

use as a military barracks in 1863 was the most significant addition to the history of 14MO367. Two Union Army General Service buttons, characteristic of the Civil War-era military, were recovered (Figure 48).

Eleven .58 caliber Minié balls were found, all with three lubrication rings. A large round lead ball that is probably .58 caliber had been fired and damaged, making its exact size difficult to determine. Two .54 caliber lead balls were discovered. Two large percussion cap tins with lids and 13 top hat percussion caps (Figure 49 left) may have been used in the same type of rifle as the Minié balls and large lead balls. The Army often issued these Minié balls with the Springfield Model 1861 rifle, but they were used with other arms as well.

Parts of three smaller percussion cap tins and four unfired percussion caps were recovered. Fifteen lead balls (Figure 49 right) that range from .25 to .38 caliber came from between and under the floor boards. These smaller artifacts could have been used in cap and ball pistols popular with the Army or in small game muskets or rifles. They most likely are from the military use of the store but could have been lost by other early residents. The fact that four of the lead balls and three of the percussion caps were between the floor boards of the L4 level attests that at least some of this ammunition was lost prior to about 1879 when the Tolbert family put down the L5 layer of flooring to cover the termite damage. Two of the smaller lead balls (one badly smashed) from between the boards in the L5 layer of flooring indicate a later origin. The metal tip of a reloading ramrod, also intended for the smaller caliber guns, was found near the entrance to the cellar steps.

The fact that large objects like the Minié balls made their way through the floor indicates that the second layer of flooring had not been added when the soldiers were camped there and that the floor

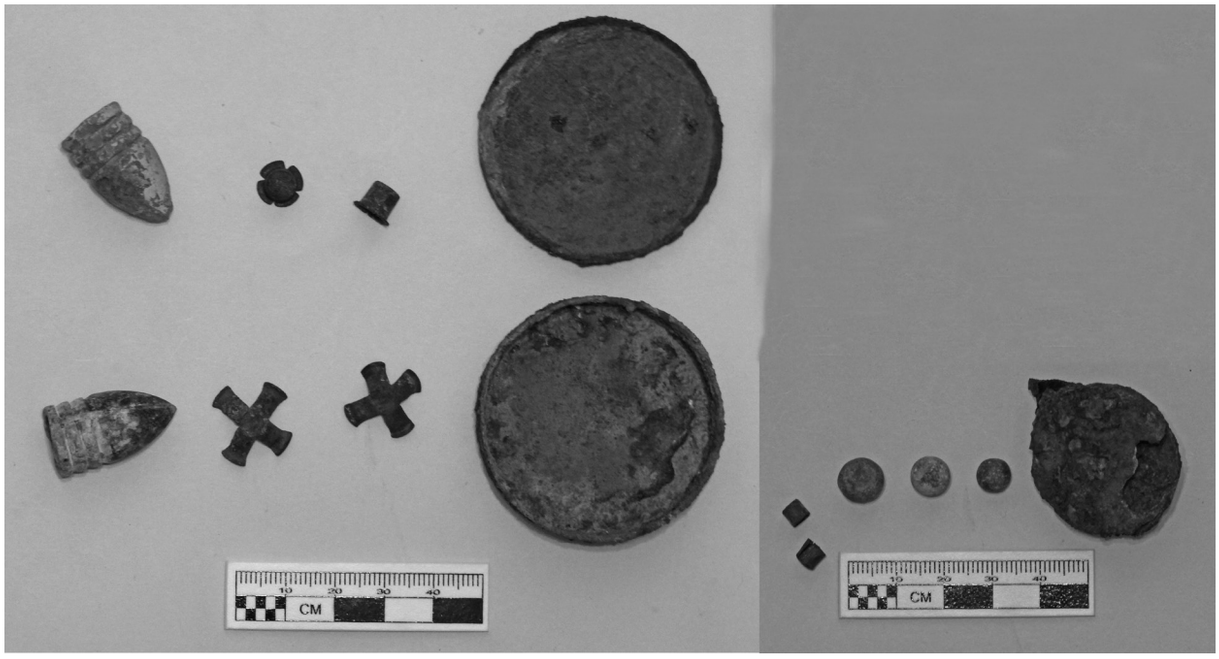


Figure 49. .58 caliber Minnie balls, top hat percussion caps, and a large percussion cap tin and lid (left); percussion caps, smaller caliber lead balls, and a small percussion cap tin with cap still in place (right).

was significantly damaged by termites. Many of the animal bones under the floor might date to the military stay. Food waste discarded through a hole in the floor would decay and attract vermin. Soldiers might toss away food remains in this way because they knew that their occupancy would be brief. A family planning to live in the building long term probably would not dispose of food in that manner.

Research Question 4. Is There Physical Evidence to Verify or Add to the History That Has Been Handed Down about the Site?

Items from Original Builders

The largest artifacts in the crawl space might have been left by the original builders. A ratchet from a large pulley (catalog number 2699-1) from beneath the floor might have been part of the apparatus that lifted the floor and ceiling beams into place during construction. A pair of iron-rimmed reading glasses and a lens from a different pair of glasses were found (Figure 50). The single lens was encased between a floor joist and the floor board above, firmly dating it to the original floor construction. The reading glasses from the crawl space are prescription +2.00, worn for close work. The frames have an eyelet at the end of each of the straight temples and were designed to be hung on a chain around the neck. One might speculate that they were hanging around a workman's neck and caught on a strip of lumber or something that broke them loose while the floor was being installed. A steel straight-sided bucket or pail with a steel wire handle was complete and undamaged in the crawl space. It is 6 inches in diameter and 6.5 inches deep and has a cloth and wood plug in bottom and solder repair at the bottom seam. The blade and shank from a hand-forged screw driver were in the attic.

Two complete and one nearly complete iron dinner plates (Figure 51) were in the crawl space. Other heavily rusted pieces indicate that at least one additional plate was present. One plate, although filled with dirt, still had several eggshell fragments in it, possibly indicating that a hard-boiled egg had been peeled on the plate. These plates accidentally might have been left below the floor by the builders when the floor was put down. Likewise, many of the cans and food bones under the floor might have been left by workmen who ate meals there during construction (Figure 52).



Figure 50. Eye glasses and a lens (left) from beneath the floor. The drilled lens (right) from Feature 512 was likely from a later time.



Figure 51. Iron dinner plate, still containing egg shells, from beneath the floor.



Figure 52. Hole-in-cap can, found beneath the floor, cut open with a knife.

Guns and Ammunition

The cap and ball ammunition likely related to the military stay were described previously. All cartridges recovered are post-Civil War. The .22 caliber cartridges and casings include 1 extra short casing for a CB or BB, 1 bullet, and casings or cartridges for 29 short, 3 standard, and 1 long rounds. Other cartridges are .32 caliber rim fires (1 complete cartridge and 3 casings), .32 caliber center fires (135 casings from the cistern), and a complete .38 caliber center fire cartridge. A.41 caliber derringer rim fire casing (Figure 53) near the exterior south building foundation was made by the Phoenix Metallic Cartridge Company between about 1878, when the raised P-head stamp was first used, and 1891, when the company's assets were taken over by the American Metallic Cartridge Company (Hildebrand 2017). These cartridges were made exclusively for use in a small derringer pistol. The casing from a .45–70 cartridge with outside primer was manufactured post-Civil War and perhaps related to William Tolbert's service in the Kansas Militia. Seven brass bases from 12-gauge shotgun shells were made after 1889–1908. Among four fragments of skeet targets for trap shooting was one on which the letters "LAY" and "16" are visible. These cartridges date from the Tolbert family residence or later. A brass swab holder tip from a cleaning rod was in the cistern and probably dates from after the Tolbert occupation.

Tobacco-related Items

Five tobacco tags, a Prince Albert tin, and another tobacco tin lid were found. These were produced too late to have been sold in the original store. The tobacco tags (Figure 54) were first produced in

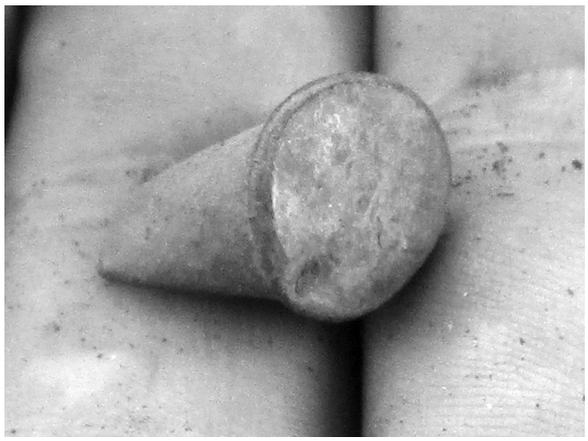


Figure 53. .41 caliber Derringer rim fire casing, found near the southwestern corner of the building.

the 1860s and could be from the military stay or Houck's Store. The ornate tag was from Peachey Plug tobacco, but the round tags and rectangular tag could be from any of a dozen brands. Tolbert was the likely user of the Prince Albert can (Figure 54), patented in 1907. The 133 wooden matchsticks in and under the floorboards might be related to smoking, but many undoubtedly were from lighting lamps and/or gas stoves. Long-time KATP field school participant Cleve Mulder pointed out that when people light a stove or lamp, they usually put the match out quickly. When lighting a pipe or cigar, people tend to keep the match burning until it is almost gone. Most of these matches were burned only at the tip.

Coins, Tokens, and Postage Stamp

Forty-five coins were recovered during the excavations. At least four date from the early period of the store (Figure 55): 1844-O (New Orleans Mint) Seated Liberty quarter on the cellar floor near the base of the trap door ladder; 1851-O three cent piece in the midden feature that possibly originated from the cellar floor; 1858 Flying Eagle penny from the crawl space under the floorboards; and 1866 Shield nickel in the yard near the northeast corner of the

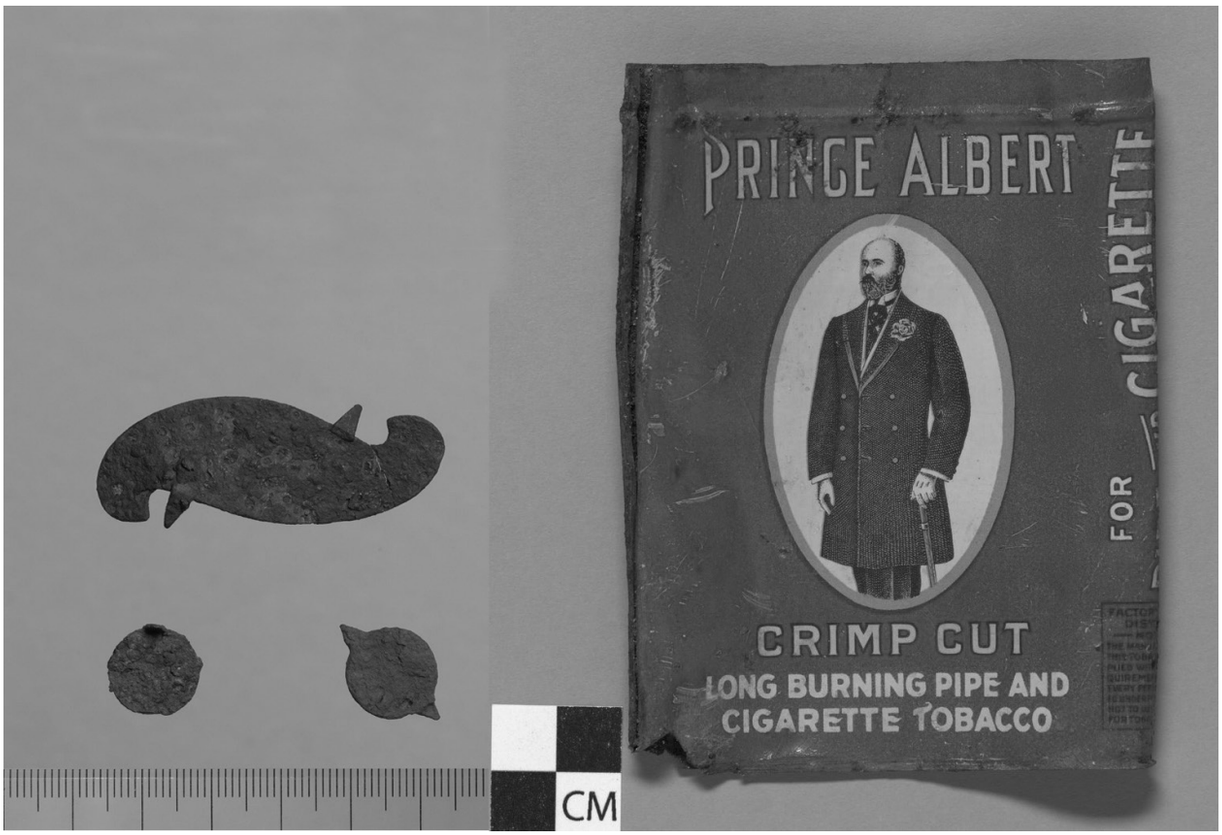


Figure 54. Tobacco tags, showing the simple round type and the more ornate "Peachey Plug" type (left); Prince Albert tobacco can from the ledge supporting the floor joists (right).



Figure 55. 1866 Shield nickle, 1903 Indian Head penny, 1844 Seated Liberty quarter, and 1851 three-cent piece.



Figure 56. Late 1930s-early 1940s-era tax tokens from the cellar.

building. Also found were 1898, 1901(?), 1903, and 1907-P (Philadelphia Mint) Indian Head pennies; 1920 Buffalo nickel; 1921-W (West Point Mint) Winged Liberty dime; and 1925-D (Denver Mint), 1942, 1944-D, and 1945-D Lincoln pennies. A 1950 Franklin half dollar was in the south city right-of-way. Most of the remaining 30 coins, minted between 1951 and 1998, were in the periphery of the yard and in the surrounding city right-of-way.

Two late 1930s-early 1940s tax tokens (Figure 56) were retrieved from the cellar. One was from Missouri and one from Oklahoma. The Oklahoma token has "Consumer Tax Token Oklahoma" on the obverse, "For Old Age Pensions" on the reverse,

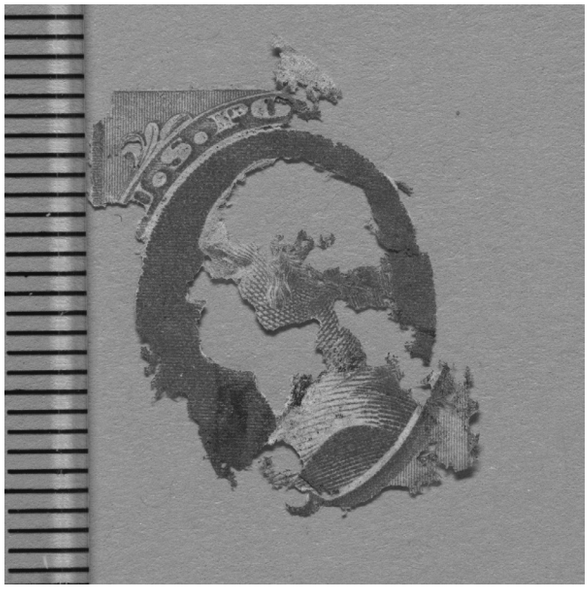


Figure 57. Fragment of a three-cent George Washington stamp from beneath the floor boards.

and "1" twice on both faces. The Missouri token is identical on both sides with "Missouri Sales Tax Receipt" and "5" twice.

A delicate fragment of a stamp (Figure 57) was discovered beneath the floor boards. It bears George Washington's profile and the lettering "U. S. PO." The stamp appears to be one of a series of green three-cent stamps modeled on a bust of George Washington by Jean Antoine Houdon.This stamp was engraved, printed in large quantities, and produced from 1870 to 1883 (dubinweb.com 2015; H. E. Harris and Company 2001:4).

Games and Children's Items

A number of games and objects likely used by children, include seven homemade dominoes, four of which are slightly larger (about 1 by 2 inches). Once painted black, they have spots in number combinations 3/2, 5/3, and 5/4. The fourth larger tile is unfinished with only one indentation and no paint. Three smaller dominoes measure about ¾ by 2 inches and bear spot counts of 5/3, 6/1 and 6/4. Two were once painted white on the front and black on the back, while the third is all white.

Two unmatched dice are smaller than standard and probably came from a game or were children's dice. One cube is 12.3 mm on a side and made of green plastic. The other is 10 mm on a side and

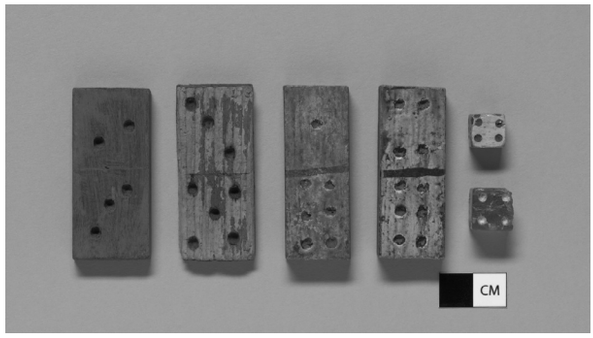


Figure 58. Dice and homemade dominoes.

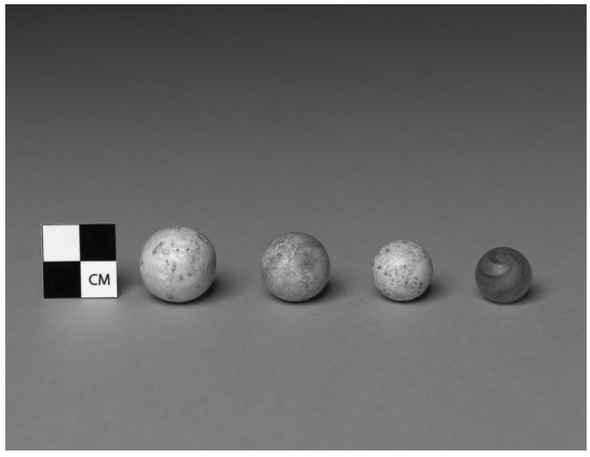


Figure 59. Three ceramic marbles, the second showing traces of red and blue hand-drawn lines. The fourth marble with the swirl pattern is glass.

appears to be made of ivory (Figure 58). In addition, 23 clay marbles and 11 glass marbles were recovered (Figure 59). The clay marbles were made from the mid-1800s through the early 1900s, while the glass were made after 1903 (Block 2017).

Other miscellaneous toys include a throwing dart tip, lip from a post-1920 latex balloon, broken billiard ball, ball and jack from a ball and jack game, and a 1½ -inch-diameter ball with a ribbed surface. A tiny metal axle and a 1 7/8 inch-diameter wheel are pieces of plastic toy cars, and a section of chain and a broken plastic tail light cover are from a bicycle.

Several porcelain doll parts (Figure 60), including a foot, two hands, a leg fragment, portions of a head, and an eye, were recovered. Research by KATP volunteer Rhonda Barnett concluded that one of the porcelain doll hands was made in Germany in the 1860s or 1870s. A tiny Frozen Charlotte was in



Figure 60. Tiny "Frozen Charlotte" doll, portion of the head of a porcelain doll, 1860s or 1870s porcelain doll hand, and porcelain doll foot, all from the crawl space beneath the floor.

the crawl space. These dolls, made from 1850 to the 1920s, take their name and form from an American folk ballad called "Fair Charlotte" and a poem by Seba Smith called "A Corpse Going to a Ball." In these stories a young Miss Charlotte's vanity about her dress caused her to refuse a warm cloak, which resulted in her freezing to death on the carriage ride to the party. Small doll accessories include a flat iron, a porcelain dish, and a tiny buckle for a doll's belt. Stamped on the bottom of the porcelain dish is "JAPAN," indicating that it was made sometime after 1891 (Kovel's 2019).

One or more young people who lived in the house might have accumulated a variety of natural specimens. Ten shells from a marine environment include a limpet, cone shell, horn shell, two moon shells, fragments of two cowries, and some varieties of marine mussels. Four of these came from the cellar, two from beneath the floor boards, one from the trash pit at Feature 512, and one from the front yard. The marine shells are small, beach worn, or not of particularly good quality. Unlikely to have been bought or sold, these perhaps were picked up during a visit to the ocean by one of the occupants



Figure 61. Slate tablet pieces and broken slate pencil segments from beneath the floor.

or by a friend or relative. Three nearly complete native mussel half shells and several complete half shells less than 15 mm across possibly were gathered from local streams. They are too small and thin for buttons.

Of 24 fossils 17 are pieces of crinoid columns or stems. Two are bryozoan fragments, and another is a small chert concretion with tiny fossils scattered on its surface. The remaining three are bivalve shells. Two brachiopods have only portions of their upper sides present, while the third has both symmetrical halves intact. All of these fossils are common in the local shales and limestones; however, several are of better quality than any that could be seen in the local construction limestone. As more than 60 percent of the fossils came from inside the structure and several are of fairly high quality, someone might have been collecting fossils.

One rather puzzling find was a complete horse metacarpal from the crawl space under the floor. It was the largest bone recovered and the only horse remain identified at the site. The bone is clean without any flesh adhering and has no cut marks or gnawing marks. It might have been kept by a resident.

Forty-seven fragments of slate tablets and 29 segments of slate pencils were found (Figure 61). While probably children's school supplies, they could have been used by builders during store construction. Two small pieces of chalk about ¼ inch in diameter were in the crawl space. The neck and lip from a glass ink bottle and two nibs or tips from an old-style fountain pen likely were used by adults in the household.

Musical Instruments

A few fragments of musical instruments were uncovered in the southern and eastern edges of the yard by metal detector crews: three reed plates and a few partial reeds from harmonicas. Two wooden



Figure 62. Sewing items, including spools, thimble, and scissors (above); fabric scraps (below).

piano keys and the ivory plate from a piano key were extracted from the crawl space under the floor.

Sewing, Knitting, and Quilting Notions

Artifacts used in sewing and quilting are numerous (Figure 62): more than 290 straight pins, a ball-head pin, 6 safety pins, 8 sewing needles (1 with thread still attached), 2 smashed thimbles, 2 rusted crochet hooks, portions of 3 small pairs of scissors, 88 segments of thread, and 8 thread spools (1 bearing the "Belding Bros & Co" brand, dating 1866–1925). Sixty-seven textile scraps represent sewing fabric or clothing. Two strips of bias tape, two pieces of flour sack material, and half a quilt square are included in this count. A small brass tube, recovered just east of the front porch, has been identified tentatively as a sewing needle case.

Clothing-related Items

A total of 246 buttons were made from diverse materials, such as metal, wood, shell, porcelain, glass, and rubber (Figures 63). Seventy-eight buttons were attached with loops or shanks. One black jet loop button has either an "S" or "5" on its face (see Figure 63, second from right). Four buttons have cut-out shanks, meaning a hole in the back that allowed thread to be tied around a bar without being visible on the button front. One brass button fragment has a representation of a snipe or similar shorebird in flight (Figure 64).

One brass loop button has an imprint of a lyre and the name Dodworth (Figure 65).The lyre has been a symbol of music and musicians for centuries and is often used on band uniform buttons. The original Dodworth band was the premier brass band

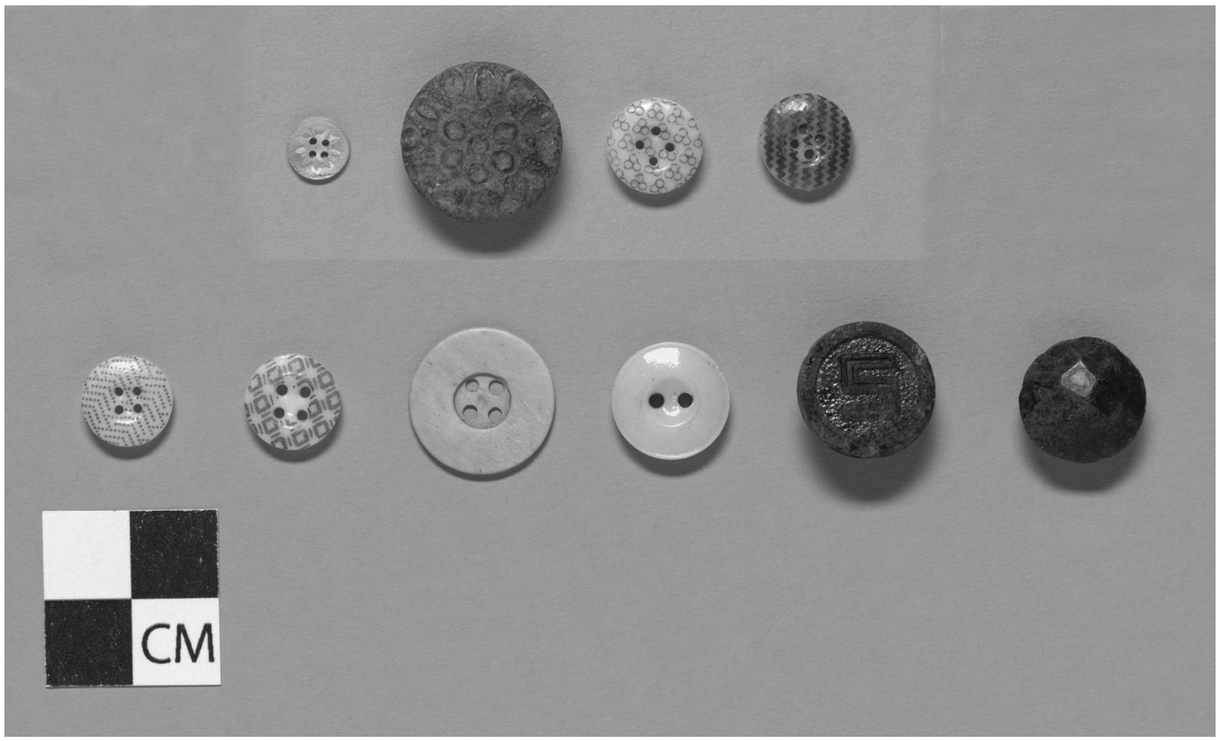


Figure 63. Variety of buttons.



Figure 64. Fragment of ornate button with snipe or shorebird on the face (right), compared to complete identical button (left), recently sold by antiques dealer.



Figure 65. Dodworth button (catalog #94-6) with lyre symbol.

in the United States from the 1840s through 1880s and often played under contract with a military regiment (Great Lakes Performing Artist Associates 2016). However, the current research could not definitively link the button to that band.

Of 30 two-hole buttons, 19 are shell, 1 is bone or ivory, 4 are glass, 4 are hard rubber, 2 are plastic, and 1 is metal. One of the hard rubber buttons is marked "NR CO GOODYEAR'S P=T 1851" and "NR CO" (Figure 66), indicating the Novelty Rubber Company, which was in business from 1851 to 1886. One white glass three-hole button is present.

Four-hole buttons are the most common type (n = 118). White glass is the most common material (n = 47), but 19 are shell, 19 are metal, 13 are bone or ivory, 7 are white with a decorative pattern, 5 are white with a brown or black rim, and 5 are plastic. Only one each are made of black glass, pink glass, and hard rubber.

Evidently some buttons were being made in the home. A wooden button blank had been used to make at least four buttons (Figure 67). In addition, a few of the two-hole shell buttons (Figure 68) appear to be fashioned from locally gathered mussel shell.

Because as many as 14 of the two-hole buttons are made of similar material, quite possibly some or all of the remainder may be homemade. A five-hole button has irregularly spaced holes that appear to be individually drilled. Therefore, this and two other five-hole buttons of similar size and composition also may be homemade.



Figure 66. Hard rubber two-hole Goodyear button.

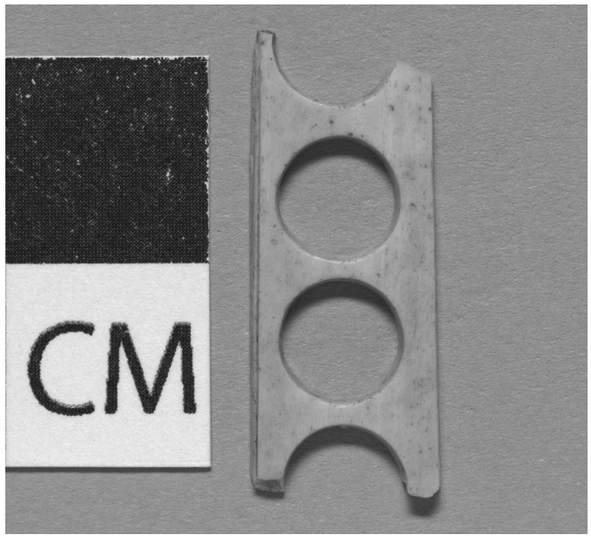


Figure 67. Wooden button blank used to fashion at least four buttons.



Figure 68. Homemade shell buttons (catalog #s 96-8, 22-2, 520-101; above) and five-hole button (catalog # 2601-58; below) with irregularly drilled holes.



Figure 69. Shoe sole, infant's size 5, from beneath floor.

Several shoe parts were recovered, including one complete and seven fragments of shoe soles, two non-matching shoe heels, portions of two heels, a decorative leather fringe, two leather pieces, one cloth shoe lace, seven lace eyelets, two metal grommets, and a buckle from a pair of galoshes. The one complete shoe sole (Figure 69) is an infant's size 5. Other shoe-related items include three complete and one partial button hooks (Figure 70).

A leather belt segment about 4 inches long and a leather belt loop were probably from a man's belt. Ten metal buckles and fasteners were from men's overalls or suspenders (Figure 71).

Seven fragments of buckles and clips from smaller thinner belts suggest women's accessories. Six garter fasteners, five eyes and one hook from hook and eye fasteners, and a chain and clip sweater guard represent women's clothing, as do parts of four snaps, two zipper pulls, and three large clothing rivets. A scrap of thin leather was most likely from a glove.

Jewelry and Jewelry Boxes

Men's jewelry include two similar but unmatched shell and metal cuff links, a cuff link stud, and a shell head pin that is probably a tie tack. Two chains, two knobs, and a back plate from pocket watches were found, as well as the cuprous bezel from a small wrist watch. A small Masonic lapel pin came from the crawl space near the center of the building. Tom Hill (*EWN* 1858:3) and Thomas Huffaker (Blackmar 1912) were Masons, but perhaps other later occupants also were. A Navy pin was in the floorboards in the southwest portion of the structure, and another pin fragment was in the

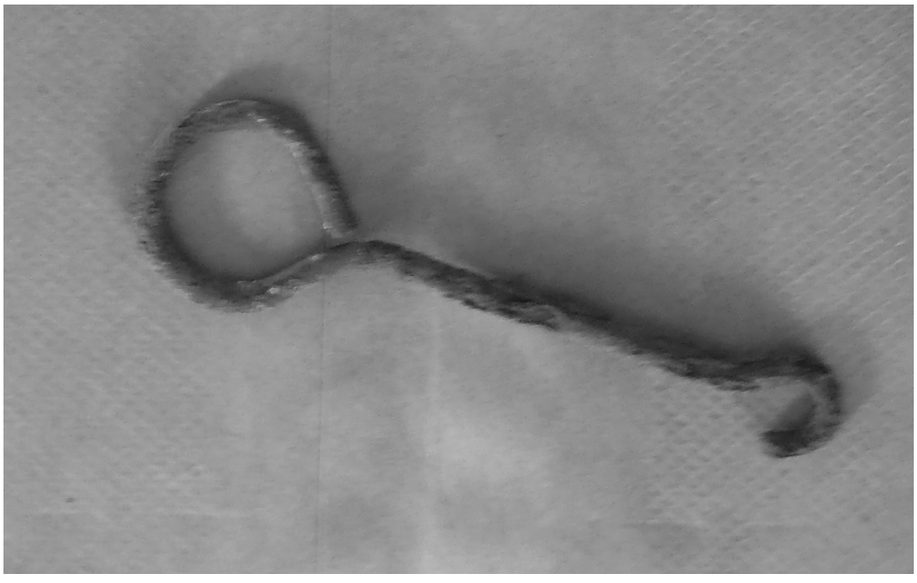


Figure 70. Button hook used to button shoes.

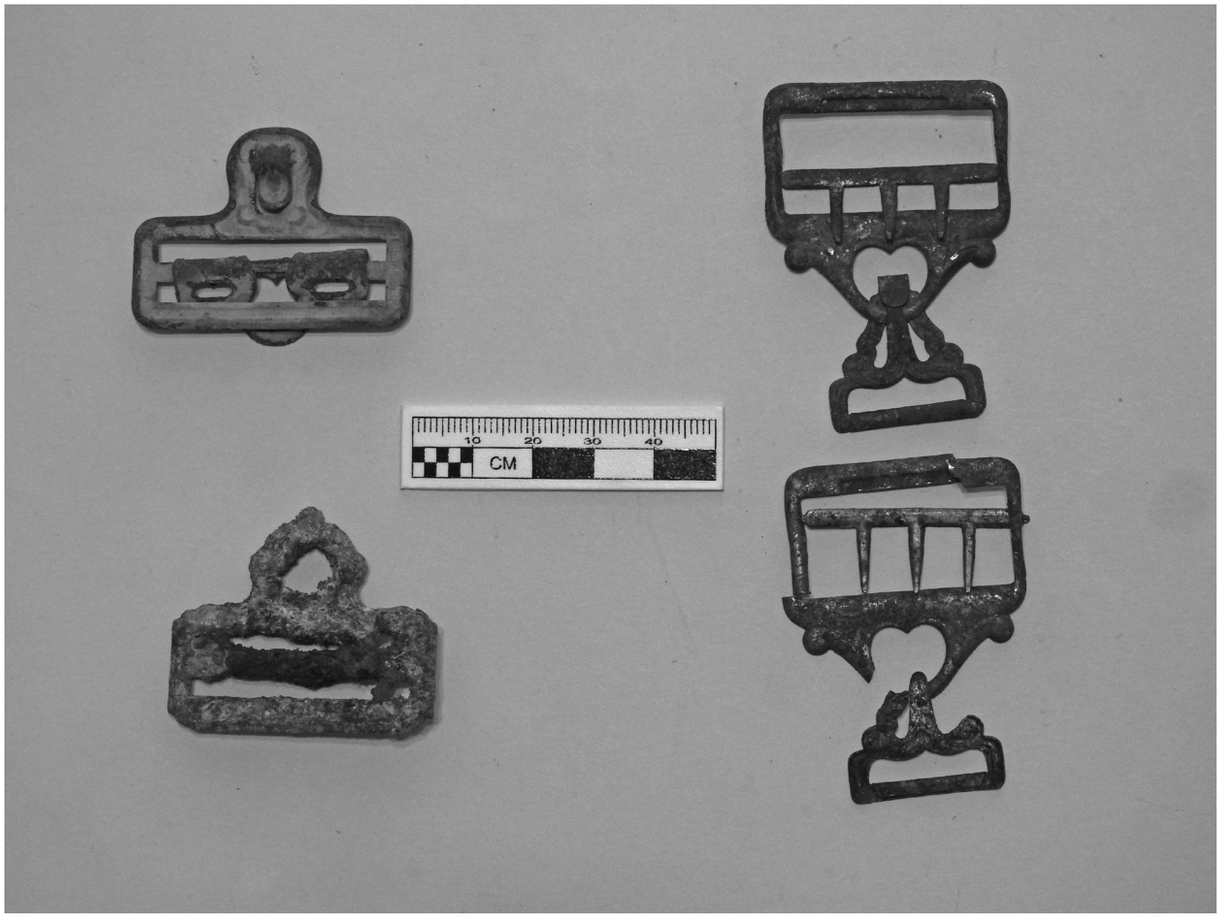


Figure 71. Examples of buckles from men's overall straps.

cellar (Figure 72). Women's jewelry is limited to an amber-colored glass dangle from an earring (Figure 73) and a three monkeys pendant (Figure 74).

Four scraps of decorated thin copper or brass were likely the decorative trim from a trunk or jewelry box. All came from trash areas in the yard. An iron escutcheon or key plate from a piece of luggage or a decorative box was found just above the cellar steps. Trunk or chest keys consist of one complete trunk key (catalog number 99-35) at the base of the stone cellar stairs; a chest key, missing its proximal end, in the southeast part of the crawl space; a complete brass trunk key (catalog number 2626-1) on the ledge that the floor joists rest on in the northeast corner.

Medicine

The older stopper or cork top medicine bottles were well represented among the broken glass sherds. Remnants of these medicine bottles were at least 14 aqua, 13 clear, 1 cobalt blue, 2 brown, and 1 pale green. Two nearly complete medicine bottles lacked maker's marks on the bottoms that could aid in identifying their manufacturers or dating them: an aqua bottle (Figure 75) on which oxidation created a white swirling surface pattern and a clear glass bottle (Figure 76).

Only four medicine bottles were complete enough to identify and date. The most complete is for Davis Vegetable Pain Killer (Figure 77), which was made from 1866 to 1870 in Providence, Rhode Island. The ingredients were mainly opiates and ethyl alcohol (Levey 2017). Another is a portion of a Dr. S. B. Hartman & Co bottle (Figure 78), patented in 1866. The product, called MISHLER'S HERB BITTERS, was made in Lancaster, Pennsylvania, and contained 28 percent alcohol (Meyer 2015).

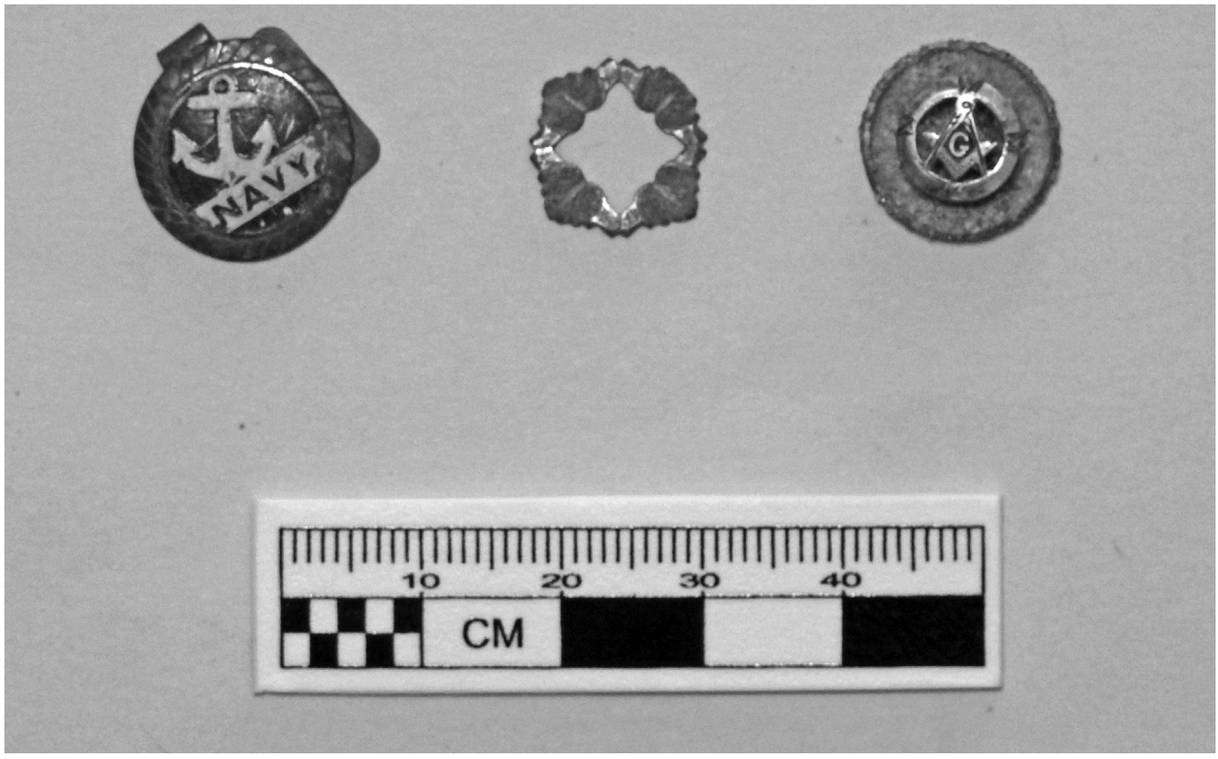


Figure 72. Navy pin, portion of another pin, and small Masonic lapel pin.



Figure 73. Amber glass dangle from an earring.

A partial round cobalt blue glass bottle was made for Bromo-Seltzer (Figure 79) by The Maryland Glass Company, incorporated in 1907 at Mount Winans, Maryland. This bottle was made from ca. 1907 to 1922 (Lockhart, Schulz, Lindsey, Schriever and Serr 2014). Bromo-Seltzer was an extremely popular drug, sold in powder form. It received its name from sodium bromide, a tranquilizer. A main ingredient was acetanilid, now known to be poisonous. In the early twentieth century several articles on medicine fraud exposed Bromo-Seltzer and other patent medicines as dangerous to the public (i.e., Lemere 1938).

Two pieces of a pale aqua bottle were refitted in the lab, revealing "LTINE & CO" (Figure 80), apparently a partial inscription of Hazeltine and Company. Ezra T. Hazeltine arrived in the northwest Pennsylvania town of Warren on the Allegheny River in 1860. He began selling homemade medications in 1864 and, with the help of a local doctor, created Piso's Cure for Consumption (tuberculosis).



Figure 74. Three monkeys pendant.



Figure 75. Complete aqua glass bottle with white swirling pattern, created by oxidation.



Figure 76. Unidentified nearly complete clear glass bottle.



Figure 77. Davis Vegetable Pain Killer bottle, 1866–1870.



Figure 78. Fragment of bottle, inscribed "Dr. S.B. Hartman & Co," patented in 1866.



Figure 79. Portion of round cobalt blue glass bottle, made for Bromo-Seltzer.



Figure 80. Two portions of aqua bottle refitted in the lab to reveal the partial inscription: "LTINE & CO." The full inscription was determined to be "Hazeltine & Co."

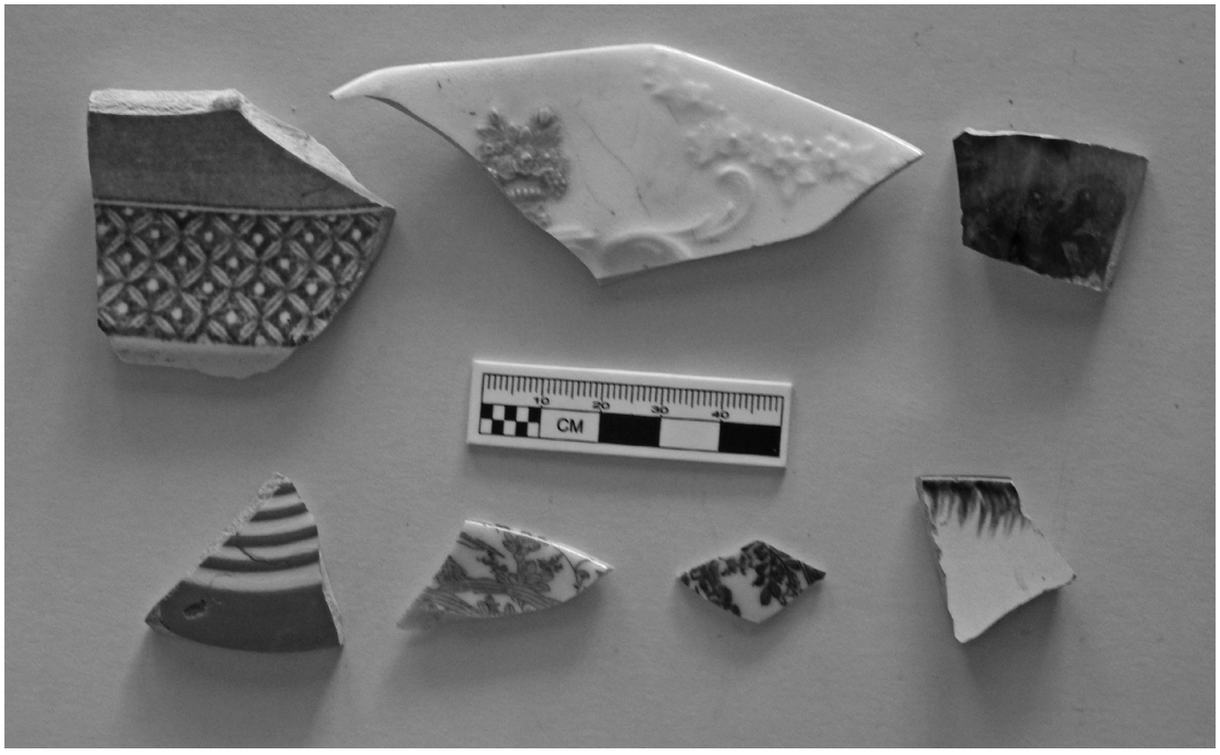


Figure 81. Variety of ceramic sherds with blue glaze designs.

In 1869 he founded the Piso Company to market his concoction on a national level. At various times Piso's Cure contained opium, morphine, hashish, marijuana, chloroform, and alcohol, and it was one of America's best selling patent drugs (Potomac Bottle Collectors 2007:4).

A few fragments of more recent medicine bottles have screw tops. Two additional fragments are from a "Perkins American Herbs -- National Herb Company" Medicine Dose Glass with dosage amount marks on the side, recovered in the yard. A manufacture date was not established for this glass, but it probably was produced in the twentieth century. Several small portions of medical-related glassware include an ampule, pipette, thermometers, and a stirrer. One fabric scrap appears to be from a bandage or dressing.

Collected from the building interior were 195 castor bean seeds. Most came from the crawl space, but a few were between the floor boards. Castor beans are not native but often were planted in gardens for their attractive foliage. It was widely believed that they repelled moles and gophers, and perhaps they were introduced into the crawl space for this reason. Castor oil, a laxative, is made by pressing the beans, but the oil usually was purchased rather than made at home.

Table and Kitchen Items

Ceramic sherds comprise one of the most abundant artifact classes at 14MO367. Whiteware is the most numerous, with more than 720 pieces weighing in excess of 3 kg. Plain white finish is by far the most common, but several fragments have a blue glaze design. At least eight distinct patterns have been recognized, and seven are shown in Figure 81. Minimally, the recovered sherds represent cups, bowls, plates, and saucers.

Seven sherds came from the trash-filled pit at Feature 512; five of these could be refitted into a saucer with a gold rim. At least one type of transferware with a floral pattern incorporates green, brown, and tan elements. Transferware fragments, possibly from a serving platter, have a detailed gray-on-white scenic pattern with swans and two distant human figures (Figure 82). Sherds with a thin red-brown line may be from a tea cup, and pieces embossed with fine gold lines are likely from

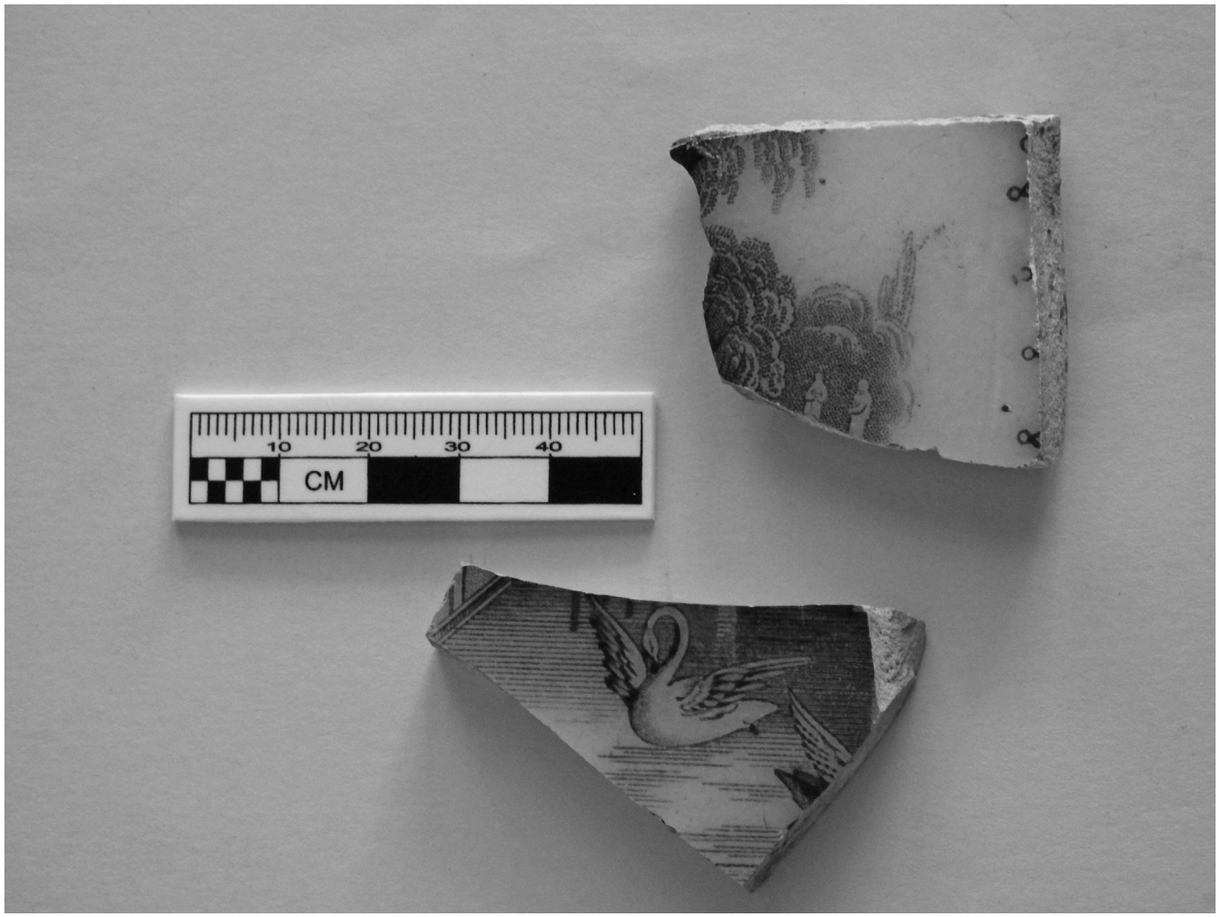


Figure 82. Possible serving platter sherds with a gray-on-white scenic pattern, including swans and two distant human figures.

a saucer. One plain white sherd appears to be from a custard cup.

Several fragments of annular ware were produced between 1790 and 1840, well before store construction. Most of the ceramics date from the period when the building was used as a residence. A John Alcock plate (Figure 83) was made in England from 1853 to 1861 (Birks 2017a) and could have been store merchandise. A Meakin Brothers and Company serving bowl (Figure 84), refitted from three pieces, was manufactured in Cobridge, England, between 1865 and 1873 (Birks 2017b). Three sherds have the "J. & G. Meakin Hanley England" maker's mark (Figure 85): two from a bowl were refitted, and the other from a teapot has points where a handle once attached. This mark was used from 1890 into the first few years of the twentieth century (Birks 2017c). Two small portions of maker's marks, one bearing the letters "KIN," show the same unicorn as Meakin ceramics but are not complete enough for further identification. A maker's mark, impressed into the base of the vessel with an image of an anchor, reads "Goodfellow" and "IRON" (Figure 86). This appears to be from Thomas Goodfellow, Phoenix Works, Tunstall, England, 1828–1854 (Birks 2017d; California State Parks 2010). A sherd from a green majolica vase (Figure 87), displaying a horse's legs, has strong similarities to green glazed, horse-themed vases made by the Wade Group of Potteries near Burslem, England, which was started in 1810 and continues to modern day.

In addition to whiteware, wares with red, tan, brown, and black pastes are present.

Twelve sherds appear to be from a plate or platter. They have a gray paste with a gray/brown exte-



Figure 83. "John Alcock" plate, made in England, 1850–1861.



Figure 84. "Meakin Bros & Co." serving bowl base, made in Cobridge, England, 1865–1882, refitted from three pieces.



Figure 85. Three sherds with "J. & G. Meakin Hanley England" maker's mark.

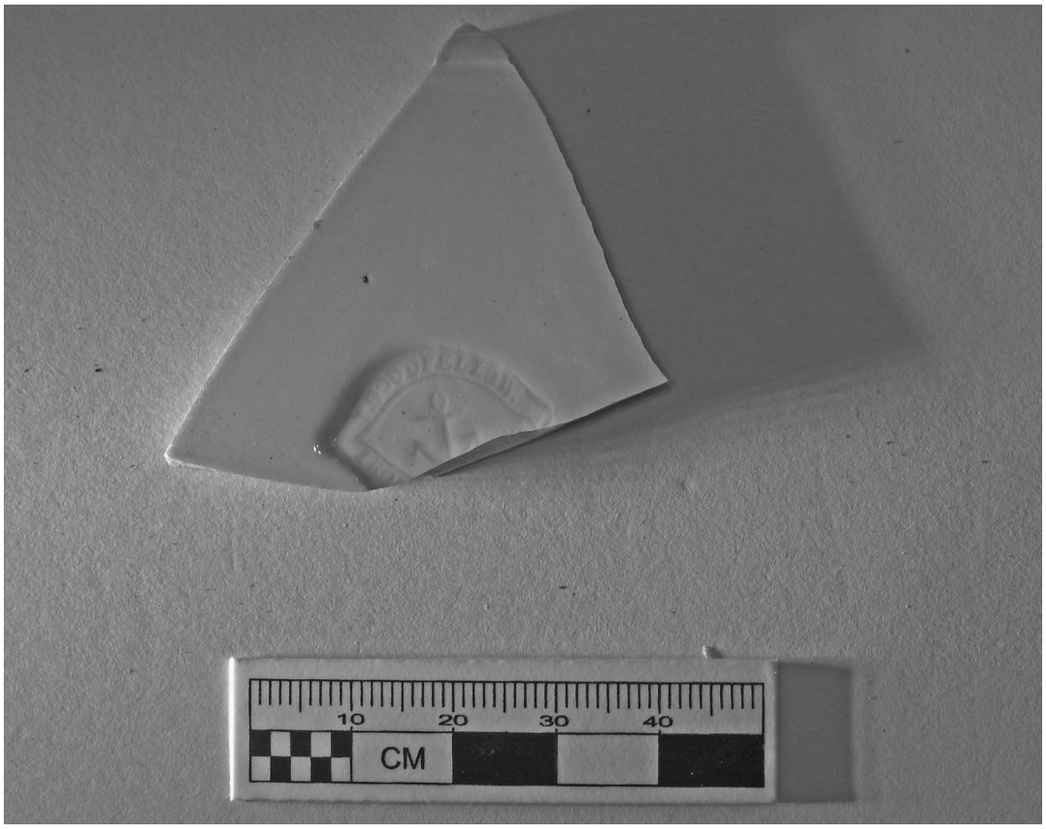


Figure 86. "Goodfellow" "IRON" maker's mark with an anchor image, impressed into the base of a vessel.



Figure 87. Sherd from a green majolica vase, bearing legs of a horse.

rior and a red interior with concentric brown circles. About 31 other pieces have only one or a few examples of any similar ware. These constitute one or more mugs, mixing bowls, dishes, a salt or pepper shaker, and an ashtray.

A significant number of earthenware and stoneware sherds were recovered. More than 230 of these weighed 6.3 kg. Most of these are from crockery bowls that are variations of brown, tan, and gray coloring. Distinct rim styles attest that at least nine bowls are represented (Figure 88). The form of some base fragments are evidence of typical crocks. Based on a single portion of an earthenware handle, at least one crockery jug is present. Both Albany and salt glazes are plentiful. Fifty-nine sherds of broken flower pots are primarily a light tan-pink color (n = 39, 118 g), although some are a darker orange-red color (n =20, 182 g). Insufficient pieces prevented reconstruction of any one pot. From their find locations along the front sidewalk, some of the earthenware bowls mentioned earlier undoubtedly were used as flower pots.

A half circle of wood (Figure 89) from the crawl space may be half of a lid for some type of round wooden container or a ceramic crock. A thin groove along the flat edge of the vessel was conceivably where a metal lip rested to function as a sort of hinge, so that the other (missing) half of the lid could be lifted to access the contents. Nearly identical lids are seen on vintage cheese boxes.

Glass Ware

Eighty-four pieces of broken glass, weighing more than 1 kg in total, most likely represent beverage glasses. These are predominantly clear glass, but five are pale amethyst, two are white, and one is multicolored. At least seven distinct base types are distinguishable, and a few display a fluted pattern around the sides. One partial base of fluted glass has the number “767” on the bottom.



Figure 88. Sample of earthenware bowls.



Figure 89. Half circle of wood, apparently from a lid that likely fitted on a round container, most likely a cheese box.

About 120 sherds of highly fragmented glass from other forms of tableware, weighing more than 375 g, were recovered. Most is clear glass, with only a dozen with a pale amethyst tint and a few pieces of aqua-green, blue, and frosted white. There is not enough of any of this material to refit a substantial portion of a vessel. Dishes, cups, bowls, a pitcher, and a candy dish are represented. Only a serving bowl base of plain clear glass retains any identifying marks: "_HRIDGE & CO. " and"_PITTS."

A faceted glass knob (Figure 90) about 33 mm in diameter was found in the yard at the northeast edge of the house. A smaller smooth teardrop-shaped knob (Figure 91) came from the crawl space under the kitchen. Both probably were stoppers or tops for cruets or dispensers.

The neck of an aqua-green bottle (Figure 92) with a collared rim finish was in the crawl space. Several condiment bottles have a similar type of top, but this one is comparable to a Lea and Perrins Worcestershire Sauce bottle. Made in England, Lea and Perrins began being advertised and sold in the United States after 1839 (Lea and Perrins 2015).

One of the project's more interesting finds was the whiskey bottle from Feature 508, the stash (Figure 93). Although other brands may have used this bottle, it is comparable to the one used by the Green Mountain Distilling Company of Kansas City, Missouri, which operated from 1884 to 1916 (Green Mountain Distilling Co. 2017). Several identical bottles with labels still intact were located for sale online. The labels (for example, Pinterest 2017; eBay 2017) indicate that these bottles contained "Pure Rye Whiskey" or "Smokey Hollow Whiskey."

Two complete soft drink bottles from the cistern were produced well into the twentieth century. Many additional glass fragments of beverage bottles represent soft drink brands, such as Coca Cola, Pepsi, and 7-Up. Brown glass sherds from beer bottles were common, and several have portions of the Anheuser-Busch logo. Remains of 16



Figure 90. Faceted glass knob from the yard northeast of the building.



Figure 91. Smooth tear drop-shaped knob from the crawl space beneath the kitchen.



Figure 92. Neck of a dark aqua-green bottle with collared rim finish from the crawl space beneath the floor.



Figure 93. Whiskey bottle from the stash (catalog #614-1).

metal crown caps for beverage bottles were recovered, one from the cistern, one from the cellar, and the others from around the yard. The crown cork or cap was invented by William Painter in 1892 in Baltimore, Maryland (Crown Holdings, Inc. 2017). Preserved features, like applied color labels and various "No Refill" notices, demonstrate that many bottles postdate the Tolbert family's residence. A few pieces from clear glass milk bottles were found.

Evidence of stopper or cork top bottles include a clear glass top with a blob finish from the yard near the cellar door, two fragments of clear glass tops with a wine finish from the crawl space under the kitchen, and one brown glass top with a wine finish from the cellar. Several sherds of olive green and dark green glass, similar to what is seen in wine bottles (Lindsey 2017), were found primarily in the cellar. While these are most likely from early bottles,

the pieces are too small to identify reliably. Six cork stoppers or parts thereof were recovered from the crawl space beneath the kitchen. These were probably from beverage bottles except for one, which has a much smaller diameter and may be from a medicine bottle.

Fragments of a number of glass canning jars, including some with portions of Ball, Mason, and Duraglas logos, mostly came from the cellar. Mason jars were named after John Landis Mason, who invented and patented them in 1858 (Hinton 1996). Ball canning jars, some labeled Ball Mason jars, were manufactured from 1886 to 1993 after the Mason patent ran out. Duraglas was the proprietary name for a process used by the Owens-Illinois Glass Company in which the surfaces of bottles were sprayed to make them scratch resistant and more durable. The embossed script notation of this process began in 1940 and continued up until at least the mid-1950s (Lindsey 2017). Clearly several of these canning jars were post-1940. One zinc and porcelain lid had "Grape 43" handwritten on it, indicating that it was filled in 1943, although canning jars and lids often were kept and reused for many years. Earlier canning activity is indicated by the bottom half of a Franklin Dexter Fruit Jar (Figure 94) and four smaller sherds of the same type of jar that date to 1868 or later. A porcelain lid for the Hero Fruit Jar Company (Figure 95) dates to around 1884 or later (Lockhart, Schiever, Lindsey, and Serr 2014:465). Another canning lid has the inscription, "Genuine Boyd's Cap for Mason Jar" (Figure 96), and two others have partial inscriptions, "'S GENUINE PORCELA" and "PORCELAI," perhaps from the same maker. Lewis R. Boyd was issued a patent for his porcelain lid (Patent #88439) on March 30, 1869 (Whitten 2017); however, beyond that it is virtually impossible to assign a specific age to any of the Boyd lids. Another lid was marked, "Genuine Zinc Cap For Ball/Mason Jar." This presumably was made by the Ball Company after 1886, but again it is very difficult to date precisely. A few fragments of glass lids that were held in place by a metal clamp were made after 1882.

Four complete or nearly complete metal cans were found in the crawl space. All display the hole-in-cap style of manufacture, a primary and long-lasting feature of the early canning industry, starting in the 1820s. Using this method, a can with a round opening in the top was filled, and then the opening was closed using a cap with tiny pin-hole vent in the center. After boiling, the cap was closed with a drop of solder (Bitting 1912:9). All four cans have lead solder visible on exterior and interior and lapped side seams, indicating that they are pre-1900. The three complete cans (Figure 97) had been opened with a knife, by cutting an "X" in the top and bending back the four resulting tabs to make a square opening. This method usually indicates that the can contained larger objects like fruits or vegetables. The top of the fourth nearly complete can had been removed entirely.

Most of the remaining cans are heavily rusted and incomplete. Two can bodies were smashed flat. At least five had been opened with an "X" cut. A knife had been used to cut around the edges and completely sever the tops of two other cans. In total there were more than 40 can tops and caps. Most had the hole-in-cap closure described above, but a few had the hole-in-top style of manufacture, which is more recent, generally after 1900. The hole-in-top style differs from the hole-in-cap in that the can had a solid lid except for a tiny pin-hole vent at center, which was sealed with a drop of lead solder after the contents were cooked.

Three oval press-on can lids were found. Two side portions of a can of unknown shape was 1.5 inch deep. Two coffee can lids have "DRIP GRIND" impressed twice into the top. Coffee was not vacuum packed in tins until around 1906 (HibroCo 2014), and these cans were not widespread until the 1920s. One of the coffee can lids came from the yard and the other from the crawl space.

Metal Ware

Two silver-plated teaspoons (Figure 98) from the crawl space are faintly labeled "Rogers Smith & CO AI," a company in business from 1857 to the mid-1860s. Two halves of a different style teaspoon, which may be parts of a single utensil, have a few faint but unreadable letters. Only fragments remain of a smaller spoon. A bolster from a utensil handle is similar to one seen on a contemporary fork from the nearby Seth Hays House (Figure 99). Remains of two of the same type of fork (Figure 100) are rusted but preserve remnants of the three-tine portions. Of six partial wooden handles (Figure 101)



Figure 94. Bottom portion of Franklin Dexter Fruit Jar (catalog #1674-1), 1868 or later.



Figure 95. Hero Fruit Jar Company porcelain lid (catalog #793-2), 1869 or later.



Figure 96. Rubber seal and various lids and lid inserts for canning jars.



Figure 97. Three tin cans, opened with a knife by cutting an "X" in the top and then bending back the four resulting tabs to make a square opening.



Figure 98. Silver-plated teaspoon, faintly labeled "Rogers Smith & CO AI."

from a different type of utensil, one has "ct Br" inscribed in script on it.

Six metal handle fragments from utensils and two portions of a large kitchen knife, one with a wooden handle, were recovered. From Feature 508 a complete metal cup (Figure 102), put together with lead solder, has a strap handle. It is 3.5 inches in diameter and 3.25 inches tall. Metal cookware is represented by a few small pieces from a heavy iron cooking pot, a heavy brass cooking pot, and part of a handle from a brass cooking pan. From the crawl space came a steel kitchen strainer, 9–10 inches in diameter; it is bent, and about half of the steel screen is rusted away.

Food

A significant amount of food remains, including both animal and plant, was found.

Meat

Animal bones likely represent evidence of food, primarily beef, pork, poultry, and fish. A significant majority of the beef and pork bones have saw marks, indicating that they had been cut into steaks, chops, and ribs. Many of the saw cuts are flanked by shallow false starts, testifying that they were made by someone who was not a professional butcher.

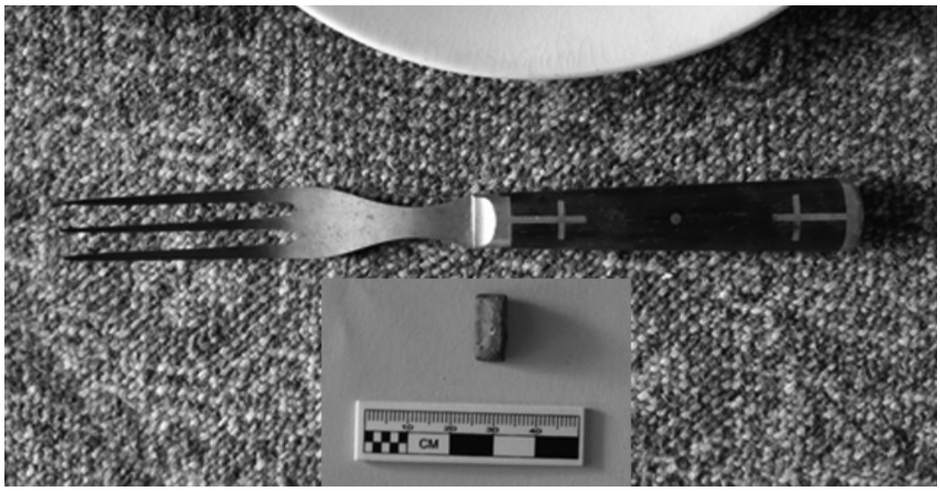


Figure 99. Bolster from utensil handle (catalog #420-4; below), compared to the one seen on contemporary fork (above) from the nearby Seth Hays House.

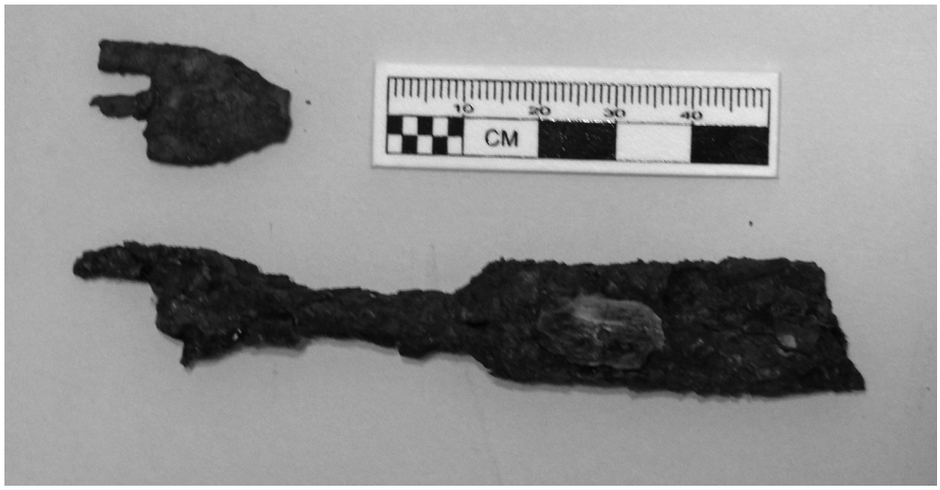


Figure 100. Rusted remains of two three-tine forks, similar to the one in Figure 99.



Figure 101. Portions of wooden utensil handles, including a fragment with a partial inscription.



Figure 102. Complete metal cup, put together with lead solder, found in Feature 508.

Beef bones are the most common. Because of the fragmentary nature of the bone and the similarity of beef and bison bone, some could be bison but probably are beef. The majority of these (76 percent, 881.1 out of 1162.9 g) came from the building interior with a clear concentration under the central and east-central part of the floor.

Pork bones are the next most common. Again, the majority of the pork bone (78 percent, 561.3 out of 715.9 g) was recovered from the interior, concentrated under the central and east-central section of the crawl space. The presence of a few bones from young pigs suggest that these animals were raised at the site. Jaws and teeth indicate that some of the butchering may have been done on the premises by residents.

Two partial bones are probably deer, demonstrating that some wild meat was being consumed. One small bone has a saw cut. Although too incomplete to identify positively, the bone might be rabbit, judging from its size. Several other uncut rabbit bones were found, arguing that rabbits were consumed.

Poultry bones are recognized as chicken or turkey. Chicken bones account for more than 80 percent by weight. Except for two fragments of turkey bone from Feature 512 in the northeast corner of the yard, all poultry bone came from the crawl space or cellar. A chicken beak suggests that chickens may have been kept or at least cleaned on the premises. Egg shell was recovered from 23 locations, mostly beneath the floor or between floorboards.

Fish remains comprise eight fish bones and one scale. Most came from the crawl space, but a vertebra and a scale were retrieved from a flotation sample, taken from the burned area at Feature 525.

Plants

Plant remains, thought to be food waste, came primarily from the crawl space. The counts given are approximate due to the fragmentary nature of many remains.

A wide variety of nut shells were recovered, by far the most common being black walnut. As walnut trees still grow in the immediate surroundings and nuts are frequently gathered and cracked by squirrels, not all of these nut shells can be attributed to human activity. However, the concentration of shells under the floor indicates a higher probability of human use. Pecans, the second most common nut, are smaller than those usually sold in grocery stores, so they probably were from local trees. Pecan trees still grow on neighboring lots. Nine partial hickory nut shells came from the crawl space. Due to their large size, these likely were purchased. Hickory trees still grow in the vicinity but are mostly varieties with smaller nuts. Shells from some exotic nuts came from under the floor: almond (n=1), Brazil nut (n=2), coconut (n=2), and English walnut (n=4). Although almonds and English walnuts can be grown locally, they seldom are, and these probably were purchased. Parts of 10 hazelnut shells were found. A variety of hazelnut is native to eastern Kansas but was rarely cultivated. On the other hand, the 14MO367 specimens are rather small for hazelnuts usually available for purchase. The exotics represent nuts that often were bought at Christmas time for treats and stocking stuffers.

A number of seeds or pits from fruit trees and vines were most commonly pits from the genus *Prunus,* tentatively identified as 44 peach, 43 plum, 31 cherry, and 3 apricot. More than 99 percent of these came from the building interior, with by far the

majority from the central and east-central portions of the crawl space. The small size of some plum and cherry seeds indicates wild native varieties that were gathered for food. A grape pip was recovered from the flotation sample taken from Feature 525, and 13 more were found between the floorboards and in the crawl space. Two pear seeds were in the crawl space. These fruits could have been grown in the yard or purchased. The 1873 perspective drawing of Council Grove (Figure 4) shows regular lines of trees on the lot across the alley north of the store, which might be an orchard that was the source of many of the fruit and nut seeds.

Evidence of garden crops include 3 corn kernels and 17 cob fragments from beneath the floor. These may have been direct food waste when the building was a residence but more plausibly date to the late 1870s, when the structure was used as a corn crib. The cobs vary from 10 to 16 rows, and 2 of the corn kernels are red with tan longitudinal stripes. A third kernel was chared and came from the burned area at Feature 525. Also recovered were a few grains of oats and parts of 14 peanuts.

Fifty-six watermelon seeds, one cantaloupe seed, and five pumpkin or squash seeds were collected. These probably were grown locally, maybe in a garden on the property. One watermelon seed was found near the east edge of the well cover, and another was from the yard near the southwest corner of the building. All other squash and melon seeds came from between floorboards or in the crawl space.

Fragments of one onion skin, one pepper or tomato seed, and parts of seven sunflower seeds were beneath the floor. The sunflower seeds are too large for native wild plants and resemble the type used for snacks.

Lamps

A total of 740 fragments of glass lamp chimneys (Figure 103) were recovered from 109 locations, mostly from the crawl space beneath the floor. With patience several chimneys might be refitted. An estimated 10 chimneys had scalloped rims. Fewer than a dozen sherds were identifiable as body, base, or globe. Also likely from lamp globes were other very thin glass pieces: 14 pink, a few milky white, and a couple of clear that had been painted blue. Nine metal items are from the lamp wick plate, wick tube, and wick feed mechanism. One wick tube bears an inscription, "Invented by C. W. Cahoon, patent # 36,451" and "PATENTED, SEP 16, 1862."

While one can assume that most of the lamp parts are from kerosene or coal oil lamps, the presence of two incomplete mantles indicates that some gas lamps were used. Perhaps the house had natural gas before electricity, or the mantles might have been



Figure 103. Fragments of glass lamp chimneys, including a base and two scalloped lips or tops.

from a camping lantern. Globs of melted colored wax suggest that candles were used at some point.

Clocks

Clock gears (Figure 104) were found in two places in the yard, and two were from the crawl space.

Keys

Several keys were discovered. These included larger door keys and smaller keys for a trunk or cabinet (Figure 105). Of two skeleton keys from the yard, one complete specimen was east of the building at the edge of the former brick sidewalk and the other, missing the proximal end, was west of the north end of the former addition.

Printed Materials

Several paper artifacts were preserved. Newspaper fragments came from 48 locations, many stuffed into cracks around the edges of the wood floor. Most retained no print or only a few letters or words. Among those that were decipherable are seven pieces with the date of September 1947. One was from the *Kansas City Star*. Four were from a local weekly paper, and one of those was a complete page from April 1948. That paper included an advertisement for the local IGA and a column of numbers with a sum at



Figure 105. Larger door key (catalog #408-1) and smaller key for a cabinet or trunk.



Figure 104. Clock gears and spring found in the yard and crawl space.



Figure 106. Probable horse hoof-cleaning tool, horse shoe, and horse shoe nail.

the bottom margin, written in pencil. Research by KATP volunteer Stephen J. Hanna (2016:10–12) determined that these numbers represented the prices of food advertised on the page and how this was converted into the resident's grocery list.

An advertisement or printed label with a blue background was refitted from six remnants in the lab. It was for Lothrop and Sheldon Blue Soap, which was manufactured in Ottawa, Kansas, from 1874 to 1879 (Cutler 1886). Another badly damaged paper fragment with intricate artwork from the crawl space is as yet unidentified. It is possibly a bottle label, due to its curvature. A few letters are discernible: on the first line "ICAN' (American?), on the second line "WHIT" or "WINT" (WHITE?), at the bottom left "RAN" maybe with "D" at the end (GRAND?), and at the bottom right "CHICAGO." This item conceivably could have a tie to the Wright Family, who came to Council Grove from Chicago.

Decorations

A very few examples of decorations comprise an incomplete glass Christmas ornament and three beads from a string like those used to wrap a Christmas tree. Three pieces of plastic plants and flowers were recovered.

Horse Tack and Wagon Parts

Excavations uncovered several components of horse tack: 4 partial leather harness straps, 8 harness buckles of varying shapes and sizes, 2 horseshoes, 13 horseshoe nails (plus 1 shoe with 7 nails in it), and what is probably a horse hoof-cleaning tool (Figure 106). Two wagon bolts from horse-drawn wagons were found.

Research Question 5. Is There Any Evidence of Earlier Use of This Site, Prior to Construction of the Store?

Eleven lithic flakes, one biface, and one hammer stone were collected at 14MO367. Of these, three flakes were on the crawl space surface. The hammer stone (Figure 107) of non-local stone was buried just below the cellar floor and clearly was not in place. One flake was less than 5 cmbs in a former driveway location. Another was near the structure's south wall in an area that was excavated when the wall was constructed. These objects undoubtedly were disturbed and moved during store construction or occupation. One retouched flake was found on the surface of N112 E123, well after the KATP

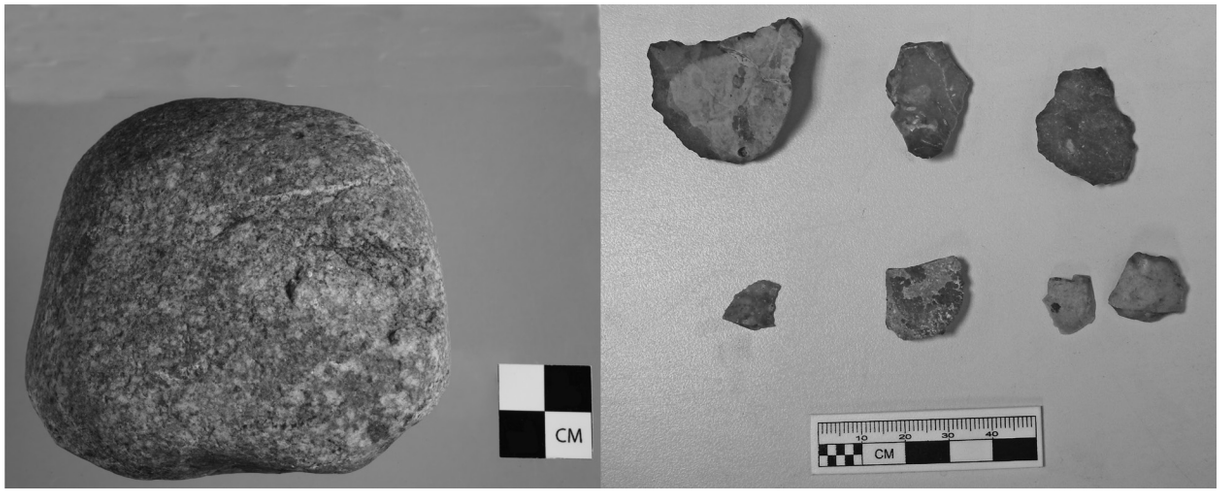


Figure 107. Hammer stone (left) buried just below the cellar floor; sample of other prehistoric lithics (right).

field school ended. Two flakes, recovered from N112 E125 at 37–47 cmbs, are the only prehistoric artifacts possibly in situ. In summary 11 lithic flakes and maybe 1 hammer stone are prehistoric. Only two of these were in potentially undisturbed contexts, and none was associated with a prehistoric feature.

A small portion of a bifacially flaked tool was on the surface southwest of the building several months after the KATP explorations. While it is conceivable that Indians, such as the Kaw who spent a night at the store in 1857, still might have been using chert expediency tools occasionally, the flaked stone much more likely resulted from the incidental passing of earlier American Indians along the nearby trail, which undoubtedly was in use long before European Americans traveled to and from Santa Fe on it (Figure 108). The proximity of the site to the natural crossing of the Neosho River and the isolated large natural grove of trees east of 14MO367 would have drawn people to the immediate vicinity long before the Santa Fe Trail traffic.

SUMMARY

When considering the artifacts recovered during this investigation, it is important to remember that a great deal of mixing occurred at this site. Items that are securely dated to a specific event, such as the eyeglass lens in the flooring, are rare. Most dates given in this report reflect the earliest date that objects might have arrived there. After 160 years of nearly continuous occupation, later inhabitants are certain to have caused significant contamination of remains left by earlier ones. Some things, such as canning jars or tableware, might have been brought in from other locations, kept, and reused or stored by residents for many years before being lost or discarded. Helen Prater used the structure as an antique shop for many years and made an effort to restore some original era furnishings,which may have introduced artifacts not directly related to earlier occupants.

Having said this, the Last Chance Store was constructed in such a way that it presented a unique and favorable archeological situation for glimpsing much of its history. During the store's original construction, a two-layer wood floor was installed, with subfloor and a very shallow crawl space beneath. The seams in the three wood layers did not line up, and the crawl space was surrounded by stone walls on all four sides. Other than a gap of a couple of inches at the top of the north cellar wall, no other openings provided access to the crawl space, which meant that it was nearly sealed off from the outside world.

In a few instances temporary openings allowed deposits of day-to-day objects into the crawl space. Apparently in the 1860s and 1870s termite damage became so bad that gaps were created through both flooring layers in a few places. These were big enough for small items to be swept or shoved into

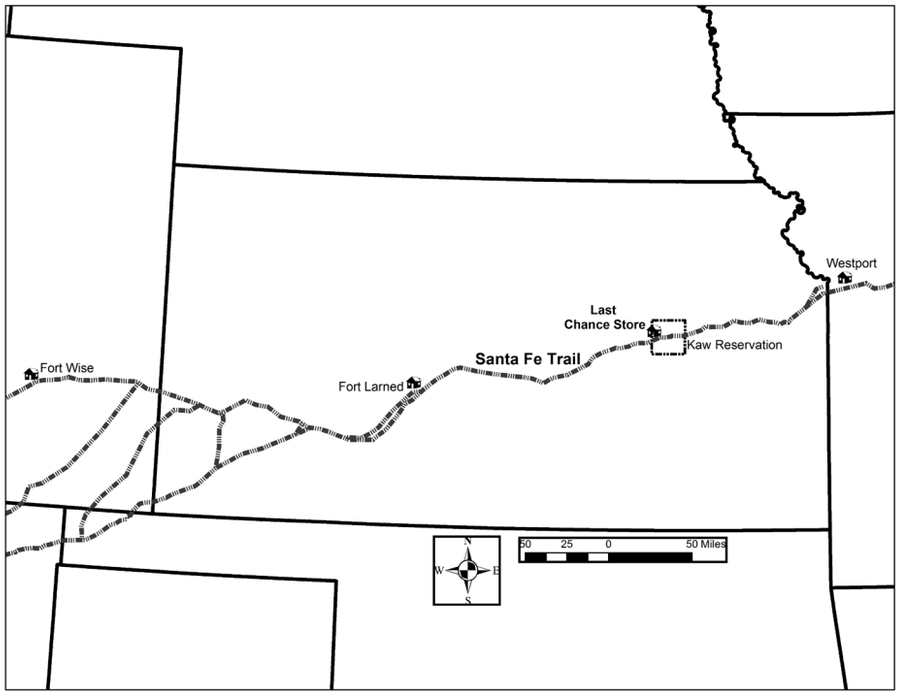


Figure 108. Map showing the location of the Last Chance Store, relative to the Santa Fe Trail and the Kaw Reservation.

the crawl space. At some point, either when Peter Houck had his store or just before the Tolbert family moved in, a third layer of flooring (L5) was added to cover the termite damage. When the Tolberts lived in the building, access holes were cut through the floor to install kitchen plumbing and two small openings were created during the construction of two new doors into the addition. During or after the Tolberts' residence, a third access hole was cut along the east kitchen wall to insert brick support columns under sagging floor beams. A child or small adult must have crawled under the floor to do this, as very little clearance exists under the joists. During a period in 1947–1948, some of the base boards were damaged or missing, leaving small gaps along the edge of the floor. The time frame is pinpointed by dated newspapers that, along with other materials, were stuffed into the gaps. All of these access holes were temporary, and none stayed open for very long. Things introduced into the crawl space during these brief intervals were protected from water and gnawing by animals, providing an unintended time capsule for a few well-distributed instances of the structure's history. With the above qualifications in mind, a chronological review of datable objects recovered from the interior follows.

Prior to Store Construction

A scattering of prehistoric artifacts was recovered, including a hammer stone, partial lithic biface, and 11 lithic flakes. All were produced by humans prior to construction of the store. None was clearly in original prehistoric context, and no specific activity areas were identified. These items probably were incidental to travel on the nearby trail or brought to 14MO367 by later occupants.

Store Construction

Many of the artifacts from the crawl space were introduced through termite incursions in the floorboards, three access holes cut into the floor, and two doors cut through the west stone wall. However, many of the largest items were too big to fit through the termite damage spots and were not near the later access holes. These likely were left or lost during the short period between erection of the stone walls and placement of the floor. Many are food related, including egg shells and some bones, and may provide evidence that workmen ate one or more meals at the work site. The objects include metal dinner plates and hole-in-cap cans cut open with

a knife. Utensils, such as spoons and three- tined forks, and unmarked medicine bottles could have been misplaced by workmen or later residents. The small pail in the crawl space could have been work related or served as a workman's lunch pail or water bucket. The wooden lid is from a cheese box-size container that could have functioned as a lunch box, too. Homemade dominoes might have entertained workmen during breaks. Although speculative, this scenario implies that these artifacts might originate from a single event in which workmen ate lunch while sitting on newly installed floor joists. The floor was so hurriedly put down that plates, a lunch box lid, and a few spilled dominoes were covered unintentionally. Perhaps during this same construction episode, a pair of iron-rimmed glasses, which conceivably hung on a chain around a workman's neck, broke loose; a single eyeglass lens popped out and landed between flooring layers across the room; and a hard rubber Goodyear button, manufactured between 1851 and 1886, was torn from a workman's clothing.

A large pulley ratchet, possibly part of a winch used to place floor joists, was likely left behind when the floor was installed. Many cut nails represent the time of original store construction, but cut nails also were used in renovations done as late as 1879–1880. The blade and shank of a hand-forged screw driver probably was left in the attic by the original workmen. The unidentified built-in Feature 530 on the east side of the attic was clearly part of the original construction. A timber, the same length as the structure's interior width, was buried in the east yard, surrounded by a cluster of cut nails, and might mark a construction staging area.

Early Store (1857–1859)

Thomas Huffaker apparently operated a store for Northrup and Chick just after the building was completed in spring 1857, and Thomas Hill might have run a business sometime between July 1857 and June 1859. Neither could have operated there for more than a few months. The many tiny Indian trade beads were very likely from this period. In addition, the post mold, potentially indicating the location of a sign at the southeast corner of the structure, could date to this interval or a little later. Coins, such as the 1844 Seated Liberty quarter, the 1851 three-cent piece, and the 1858 Flying Eagle penny, are from the store period. A Foster and Parry brass trade token dates to 1855–1861. That company was a dealer in stoves, iron, and hardware, so the token might relate either to a stove or fixture in the store or to hardware goods sold there. The single balance scale weight, some of the many lamp parts, the neck and rim fragment of a glass ink bottle, and two fountain pen nibs or tips might have come from this period. A Masonic lapel pin could have been associated with Thomas Huffaker or Tom Hill but maybe with later occupants who were also Masons.

Wagon bolts and horse equipment could have been associated with livestock operations at the early store, but later residents undoubtedly would have had one or more horses. A number of early items in the collection are the Frozen Charlotte doll (1850–1920), John Alcock china (1850–1861), Goodfellow vessel (1850s), annular ware sherds (1790–1840), Rogers, Smith and Company spoons (1857–1860s), probable Lea and Perrins Worcestershire Sauce bottle (after 1839), and fragments of stopper-top bottles. All could have been store merchandise but more likely came from later families.

Mather (1860), Wright (1860–1862?), and Harness (1864) Families

By the early 1860s some of the floor termite damage might have become evident. Genevieve Mather was 10 months old when her family moved there in 1860, and the Harness family reportedly had an infant while living in the building. The infant's leather shoe sole could be from one of these families, although it could be from later visitors or renters. For instance, when living there in 1943, the Burnett family had an infant. With the large number of children in the Mather and Wright families, quite possibly a porcelain doll hand, made in Germany in the 1860s or 1870s, and at least some of the ceramic marbles, slate tablets, and slate pencils could date to this period. The 1862 lamp wick tube could be from the Wright or Harness occupations or later, as could an iron door-lock plate, patented in 1860. The homemade buttons might have originated during this time.

Second Colorado Cavalry (1863)

Clearly termites had damaged the floor by 1863. Items from this period include Minié balls, top hat percussion caps, large percussion cap tins, and two Union Army General Service buttons. Some of the smaller caliber lead balls, the smaller percussion caps, and percussion cap tins are likely from this period, although some could be from other early residents. The Dodworth Lyre button probably was lost at this time. Some of the animal bone food remains almost certainly were deposited during this period.

Peter Houck's Grocery Store (1865–1869?)

The Hazeltine and Company medicine bottle (1864–1868), Dr. S. B. Hartman medicine bottle (1867 or later), and the Davis Vegetable Pain Killer bottle (1866–1870) could have been sold in Houck's grocery store but could be from a later occupation. Likewise the 1866 Shield nickel and the Meakin Brothers china (1865 to 1882) could be from this interval or later.

Gus Sauer's Ownership (1875–1879)

Sauer was known to use the structure as a corn crib. Seventeen partial corn cobs were beneath the floor and could be from corn storage or food waste.

Tolbert Family Before Addition (1880–1900?)

The top layer (L5) of floor boards, well, wood fence around the property, and two interior walls probably were added when the Tolbert family moved in. The north midden edge and the limestone feature, both located along the south edge of the lot, end abruptly at the property line, indicating that the midden and the limestone complex originated when the fence was in existence. The stash with its metal cup and whiskey bottle, made in 1883 or shortly after, and the carving on the cellar wall were created shortly after the Tolberts obtained the tract. Although they could have been later, a number of other artifacts were most likely from this period: tobacco tags (1870s or later), Lothrop and Sheldon Blue Soap advertisement (1874–1879), "J. & G. Meakin Hanley England" bowl and teapot (1890–1900), miniature iron and china doll toys (1891–1921), 12-gauge shotgun shells (1889–1908), three-cent Washington stamp (1870–1883), combs, two brass tool belt hooks, and sewing and quilting notions. Other items from this interval are the Franklin Dexter Fruit Jar (1868 or later) and lid for the Hero Fruit Jar Company (1869 or later), Boyd's Cap for Mason jar, "Genuine Zinc Cap For Ball/Mason Jar" (1869), and Ball Mason jars (1886 to 1993). Some of the ammunition, including the .45–70 cartridge (1873 or later), .41 caliber Derringer rim fire casing (1878–1891), possibly a few of the smaller caliber musket balls, and three .32 caliber rim fires found in the yard, would be pre- addition-era. Considering reports of Elizabeth Tolbert's fondness for gardening, the castor bean seeds and many of the garden produce seeds in the crawl space were conceivably from this time.

Tolbert Family After Addition (1900?-1933)

The cistern and septic tank probably were installed just before the addition. Knob and tube electric fixtures, gas lines, ceramic faucet handle plug, and gas lantern mantels are clearly from the early existence of the addition. Wire nails are from addition construction or later. The 1898, 1901?, 1903, and 1907-P Indian Head pennies, 1920 Buffalo nickel, 1921-W Winged Liberty Head dime, and 1925-D Lincoln penny were in circulation during this period. The Prince Albert can (1907–1965), porcelain (after 1884) and glass (after 1903) marbles, Bromo-Seltzer bottle (1907–1922), National Herb Company Medicine Dose glass, milk bottles, hole-in-top cans (after 1900), and "DRIP GRIND" coffee can lids (after1903) are from this interval or later. The three monkeys pendant appeared in several catalogs, starting in the 1930s.

CONCLUSION

The building now known as the Last Chance Store has seen many uses and many occupants since its construction nearly 160 years prior to the excavations reported here. The 2016 KATP field school documented a great deal of evidence about the residents and about functions and modifications to

the structure that reflect these changes over time. A combination of the historical records, local oral history, and material culture (the recovered artifacts) provides a much richer and more complete history of the property. In some cases the archeological deposits corroborate the written accounts, such as the short stay of the Second Colorado Cavalry. In other cases evidence of construction workers laboring, children playing, and women sewing provides images of daily life at different periods of the store's history. A hidden whiskey bottle reminds researchers that written history does not always tell the entire story of people's lives and reflects the dichotomy of public and private life. Indications of prehistoric visitors and tiny beads intended for Native American trade document previously unknown activities at 14MO367. These investigations show that the building was much more than a store that sold bacon, beans, and whiskey to Santa Fe Trail travelers. For much of the structure's history, it was identified as a community center, military barracks, grocery store, private house, home loan association, antique shop, or point of historic interest/tourist attraction. All of these activities contribute in their own way to the rich history of the site.

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BOOK REVIEWS

An Ice Age Mystery: Unearthing the Secrets of the Old Vero Site. RODY JOHNSON. University Press of Florida, Gainesville, 2017. xiv + 234 pp., preface, acknowledgments, notes, glossary, bibliography, and index. $24.95 (hardcover). ISBN 978-0-8130-5437-7. *Reviewed by* Jim D. Feagins, St. Joseph Museum.

In the banks of a Vero Beach canal, the fossilized bones of humans were discovered in association with those of prehistoric animals. This controversial Florida find was made more than a century ago—well before most leaders in the archeological community were ready to accept an ancient date for humans populating the Americas.

On an October day in 1915, a local farmer, walking beside the canal, discovered a protruding bone. Eventually the find came to the attention of Florida State Geologist Dr. Elias H. Sellards, who confirmed that it was human. Sellards and a few helpers spent several days excavating at the site. The human bone unquestionably was in a soil horizon containing bones of many other faunal species, including gigantic specimens. However, their "obviously older" age was the problem for many people. Thus, a stormy debate began, and arguments became heated and personal.

Dr. Sellards became the state geologist of Florida in 1907. A graduate of the University of Kansas, he earned his Ph.D. at Yale University. From the Vero canal excavation, Sellards identified bones of mastodon, mammoth, camel, ancient horse, giant sloth, and tapir, an armadillo's plate, and vertebrae from a huge fish. Ancient megafauna, as well as smaller Late Pleistocene animals, are relatively common in many parts of Florida, but not with human bones seemingly in association. As described in his fine report (Sellards 1916), additional fossilized human remains, bone and stone artifacts, and more prehistoric animal bones were found along a 500-foot section of the canal, as well as on the opposite bank. Among the finds was a stone projectile point (Purdy 2008:21; Sellards 1916:plate21).

Local and national newspapers had a heyday with the human find and titled it "Vero Man." Years later the original human bone was determined to be a "she"—"Vero Woman." Over the decades, the bone-rich soil horizon was found to also contain occasional artifacts and chipped-toolstone waste flakes, produced from non-local stone sources. Later chemical tests on the human and non-human bones supported Sellards' contention that they, indeed, had resided in the same buried soil horizon.

However, during the second decade of the twentieth century, several scientists, especially from the Smithsonian Institution, were quite critical of the Vero find and presented alternative possibilities to account for the association of mega and smaller prehistoric fauna with humans. They rejected the idea that humans could be contemporaneous with the ancient fossils; most believed that no humans existed on this continent at that time. Especially caustic were the comments of Dr. Aleš Hrdlička of the Smithsonian Institution's National Museum of Natural History. He said that the human remains were those of "modern" Indians. By that, Hrdlička meant that they were less than 6,000 years old—far younger than the Pleistocene animals. Here was a man in high position, who had spent many years working with bones, and his opinion and sharp tongue were not to be trifled with. Sellards (1918) put up a short but credible defense, which was largely ignored by most in the profession. After all, why should they get involved in a controversy that could adversely affect their own careers and reputations?

The Vero discoveries became but one small facet of a great debate—the longest running and most bitter feud in American anthropology (Meltzer 2015).

For many years the question rested, and the Vero Man issue faded. The Vero finds were largely forgotten and ignored except by a few local people who continued to examine the banks of the canal, do a little digging, and hoard their fossil finds. With passing decades there were other discoveries in Florida and elsewhere of human and prehistoric animals found in association (Feagins in press; Purdy 2008).

The town of Vero became the city of Vero Beach and with that came growth and commercial development. In 1997 research by a local librarian led to

a display highlighting the city's prehistory. The vast majority of the city's inhabitants, newcomers, had never heard of the Old Vero site. With more citizen research, including a visit to the Smithsonian Institution to view their Vero collection, interest and pride began to grow. A quite remarkably talented and energetic group of professional people (movers and shakers) formed the Old Vero Ice Age Sites Committee (OVIASC). Committee members established contact with archeologists across the nation. They also proved to be good at public relations and educating Vero Beach citizens about the importance and potential of the site. A substantial local museum featured the site to good advantage in well-presented displays. When the city's storm water plant was being considered to occupy a portion of the site location, OVIASC and many others became concerned.

In the meantime a spectacular find attracted national and even international attention. A local fossil collector, James Kennedy, had collected some broken bones from the site in 2006 or 2007. They seemed unspectacular and remained unwashed, stored below his kitchen sink until 2009. Kennedy claimed that, as he washed the soil off one of the large fossilized bone fragments, a well-rendered incised image of a mammoth appeared (Figure 1).The artistic style is similar to that on cave walls in France and Spain.

The Kennedy bone seemed almost too good to be true. As examples of fraudulent New World bone art have surfaced in the past, it is understandable that archeologists viewed the find with healthy skepticism. The bone has been examined by scientists from several prestigious institutions (Lepper 2012; Purdy et al. 2011), including the Smithsonian. The size and curvature suggest that it came from mammoth or mastodon or, less likely, ground sloth. Unfortunately, the highly mineralized bone probably retains little, if any, organic material for dating or DNA studies, and such studies would adversely impact the artifact. The bone itself is clearly ancient, and it did come from this buried Vero soil horizon, but when was the incising done? If it is faked, shouldn't that be easy to prove? Various scientific tests over several years have failed to prove it to be fake (Purdy et al. 2011). So, is it the oldest discovered example of Terminal Pleistocene art from North America? The opinions of scientists vary, with most expressing a "wait and see" attitude.



Figure 1. Mammoth engraving on a prehistoric bone from the Vero Beach site.

After the canal cut through the site and many decades of uncontrolled collecting, recent years have been kinder to the site's integrity. In 2010 the Vero Beach City Council directed the Historic Preservation Commission to set aside the area as an archeological site and to require a certificate to dig prior to any excavation on city property. OVIASC established a large network of supporters and advisors, not only in the community but well beyond. They obtained support from many well-known scientists; some quite prestigious private and public institutions; city, state, and federal agencies; and energetic people who had contacts to make things happen. Dr. James Adovasio (of Meadowcroft site fame), an anthropology/archeology professor at Mercyhurst University in Erie, Pennsylvania, became interested in the project. The committee realized that the site needed a state-of-the-art, multidisciplinary investigation, using precise excavating and documentation methods. That requires lots of money and a trained staff.

Under an agreement with Mercyhurst University, the first of several archeological excavation seasons began in January 2014. Because of the nearby canal, backfilling of the excavation was required before the next hurricane season started, so field time was limited. Ancient bone and tool stones were recovered, starting at a depth of approximately 8 feet. None of the abundant tool stone (Ocala chert, Brooksville chert, Tampa fossil coral, and Tampa

agatized coral) was from local sources. More than 500 flakes, bone fragments, including dire wolf, and a tooth from extinct horse were recovered. Some pieces had been burned. The ancient paleosol was rich in environmental and cultural information. Researchers were able to gain a better understanding of the site's geology, which was more complex than first thought. Charcoal at various micro-levels allowed refined dating of the site.

During the off season, OVIASC searched for additional grants and other funding as Mercyhurst started analysis of the first season's work and geared up for 2015. They already had found more than enough to vindicate Dr. Sellards' work of a century ago.

Notable discoveries during the second season were fire pits and bones of a large bison (*Bison antiquus*) from a layer dating 13,000–14,000 years old. Unfortunately, this field season ended before all the bison bones could be removed, so they were carefully protected prior to backfilling.

Due to an administrative change at Mercyhurst, the third excavation season was slated to be managed by Florida Atlantic University's Harbor Branch Oceanographic Institute, located 8 miles from the site. The Institute had been involved with ^{14}C dating of charcoal. This book ends as the team prepared for the third season. Without the kind of closure one ordinarily expects, perhaps the author plans to produce a follow-up volume.

An Ice Age Mystery: Unearthing the Secrets of the Old Vero Site is written for the general public by a writer who is not an archeologist and apparently does not have a strong science background. In a few instances his attempt to simply "bone-up" (pun intended) on scientific terminology led to awkward phrases and a misunderstanding about dating. While a good writer, Johnson's style is a bit disjointed in places. Still, the volume is an interesting and fairly quick read. The author is commended for including a glossary for the uninformed reader. Occasionally it is refreshing to catch up on what is going on in archeology outside the Plains. The book leaves this reviewer wanting to know what was discovered in the following season at the Old Vero site.

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A Grand Adventure: The Lives of Helge and Anne Stine Ingstad and their Discovery of a Viking Settlement in North America. BENEDICTE INGSTAD, translated by J. K. Stenehjem. McGill-Queen's University Press, Montreal, Quebec, Canada, 2017. xiv + 455 pp., 66 photographs and maps, acknowledgments, notes, appendix, and index. $35.95 (hardcover). ISBN 978-0-7735-4968-5. *Reviewed by* Jim D. Feagins.

A more appropriate title for this book might be, *The Many Grand Adventures. . . .*" At least that applied to explorer/writer/adventurer Helge Ingstad. His younger wife, archeologist Anne Stine Ingstad, had a single grand adventure. Their joint venture proved to be a truly outstanding archeological discovery: the oldest Viking settlement in North America. This is literally the stuff of "legends" or, in this case, "sagas." The Ingstads discovered and then proved that the settlement of longhouses on the northern coast of Newfoundland, Canada, was directly connected to the old Scandinavian sagas about Eric the Red, his son Leif Ericson, and others. A difficult task to accomplish in the best of conditions, they did it in spite of physical and financial concerns, unprofessional jealousies and political intrigues from some foreign colleagues, and early bureaucratic stumbling blocks and deceit from Parks Canada. The site of L'Anse aux Meadows in a remote corner of Newfoundland ultimately was recognized worldwide, listed as a World Heritage Site by UNESCO in 1978, and attracts some 60,000 visitors every year.

A Grand Adventure: The Lives of Helge and Anne Stine Ingstad and their Discovery of a Viking Settlement in North America is the English translation of the combined and condensed versions of two Norwegian volumes: *Eventyret: En Biografi om Helge Ingstad* (2009) and *Oppdagelsen: En Biografi om Anne Stine om Helge Ingstad* (2010). Both were written by Helge and Anne Ingstad's only child, Benedicte, who is a professor emerita of medical anthropology at the University of Oslo. The biographies clearly were written by one with considerable background information, not only from Benedicte's own experiences growing up with her parents but also from the family's 40 shelves of archived boxes, filled with notes, maps, photographs, unfinished manuscripts, letters, personal diaries and journals, etc. left by her parents. She also searched the archives of various international institutions and conducted extensive interviews with various family members and colleagues. While writing with authority, Benedicte also incorporates much warmth, excitement, and humor that comes through in the translations. She states her goal to convey ". . . a historical, critical account of events, including the situations and intrigues that surrounded the discovery of the Norse ruins in Newfoundland" (p.xiii).

In the space allotted for this review, it is impossible to give details of Helge Ingstad's many explorations, research, and adventures. Helge (1899–2001) had lived in three centuries. After high school Helge moved to Oslo, where he received his law degree in 1922. In 1925 he sold his successful law practice in Levanger, Norway, to become a fur trapper in Canada's remote northern "Barren Lands" for seven years, including one winter living with the Dene or Northern Athabascan nation called the "Caribou Eaters." Thereafter, he wrote a well-received book, *Land of Feast and Famine*, which subsequently was translated into many languages.

So began periods of explorations and discoveries, followed by periods of writing, publishing, and lecturing, which funded the next expeditions. Helge grew restless to see more remote places, meet new challenges, research other lifeways, and make new discoveries. He especially yearned for arctic lands. Norway's governor appointed him as representative for East Greenland during a time when Norway and Denmark had a land dispute over that part of Greenland. While he was allowed to trap on the side, he was required to serve certain governmental functions to help support Norway's claim.

Traveling by dog sled across rugged terrain during the long dark winter months involved many hardships and dangers. Unfortunately for Norway, the international court ruled in favor of Denmark.

By late 1933 Helge was again in the polar north, this time as the government representative on the Norwegian island of Svalbard in the Arctic Ocean. He visited the fishing and whaling villages and the Russian and Norwegian coal mining communities by dogsled in the winter. Traversing miles of snow and glaciers, he rescued a sick and demented fur trapper. They spent days in a snow cave during a severe arctic blizzard without adequate food for men

and dogs. Helge was barely saved from death by his lead dog Spot. Many months of hospitalization and home care were needed to recover his health.

Helge had been interested in Native Americans from an early age. His next travels took him to warm southern Arizona and then into northern Mexico. Although he had never been on a horse before, his first work there was on a ranch as a cowboy. He enjoyed the beautiful country, the people, the way of life, and the freedom. However, after a month of cowboy work, he went north to visit the Apache, pursuing his goal of learning about the indigenous people of the region. While staying with the Apache at the San Carlos reservation, he was pleased to discover that their Athabascan-based language had a few similar words and some of their legends were similar to those of the "Caribou Eaters." Hearing stories about Cochise and other Apaches, and how a few still hid out in the rugged Sierra Madre Mountains south of the border, he went to search for them.

When Helge was 35, he had received a fan letter from 17-year-old Anne Stine Moe. She was beautiful and intelligent and had grown up in the Lillehammer area. Helge was already famous, not only in Norway but internationally, as his books were translated into many languages and he lectured widely. Anne Stine and Helge Ingstad's paths soon crossed, and eventually a love story followed. They married in 1941.

World War II had a profound effect on Norway and on Helge and Anne and their relatives. The German invasion was traumatic, and life under the Nazis was difficult. By 1949 Helge had returned to the arctic, living with the Nunamiut in the village of Kotzebue, Alaska, located on the tip of a peninsula facing the bitter winds from the Bering Sea. He met new people, hunted with them, and learned of their lifeways and culture.

Anne Stine had several goals in life, one of which related to her interest in archeology. At the time she obtained her Master's degree from the University of Oslo, neither she nor Helge realized how helpful her archeological training would be during their joint seven-year effort at L'Anse aux Meadows. Helge, with the guidance of local resident George Decker, found the site in 1960. Helge was the fund raiser, the manager, and the "drive" behind the logistical operation in support of the research. However, Anne was in charge of the archeological work, and it was she who proved that this was a Viking site, as they fully expected. She wrote the lengthy scientific report, her doctoral dissertation, on the many seasons of archeological work at that site. Their work at L'Anse aux Meadows could not have been accomplished without the skills, talents, and drive of each, working together as a team. Many honors and awards eventually came their way.

The L'Anse aux Meadows settlement contained longhouses, constructed of sod and wood with multiple hearths spaced along their length. They were similar to structures constructed in Iceland and Greenland. In addition to these large dwellings were four boat sheds nearby and an area where bog-iron was smelted to manufacture nails and rivets.

The Vikings knew this process and undoubtedly were pleased to discover bog-iron close to the habitation site. Anne found a soapstone spindle-whirl and a large brass ringed-pin, which further confirmed that the site was of Viking origin. In addition, multiple ^{14}C dates centered on A.D. 1000, the time of the Norse voyages in the ancient sagas.

Each year Americans celebrate Columbus Day as a national holiday in recognition of the European discovery of the New World. There is also a commemorative Leif Ericson Day on October 9, although not many in the U.S. ever hear about that. Ericson and his hardy colonists settled in North America almost 500 years before Columbus arrived, while indigenous peoples arrived millennia before either of the European groups.

Now would be the time to describe multiple stories of professional and political intrigue over the L'Anse aux Meadows discovery. It had to be quite upsetting to the Ingstads when others tried to take credit for their discovery and still others wanted to throw up bureaucratic barriers to their continued work at the site. That story would require a much longer review, so it will be left for readers to discover for themselves.

McGill-Queen's University Press is located at 1010 Sherbrooke West, Suite 1720, Montreal, Quebec, H3A 2R7 Canada. This volume also can be ordered online through the press website or from Amazon.com. The book is an entertaining read by an author whose intimate knowledge of the Ingstads and thorough research brings their grand adventure to life.

ABOUT THE AUTHORS

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Bob Blasing retired in 2014 after more than 33 years with the federal government. He has Bachelor's degrees in anthropology from Montana State University and in geography from Kansas State University. He served for four years in the U.S. Air Force and was a land survey technician for the Bureau of Land Management in Montana, Wyoming, and Alaska prior to returning to school in 1980 to earn his Master's degree in anthropology at Wichita State University. During graduate school he worked as an archeologist for the National Park Service at Yellowstone and Rocky Mountain National Parks, Knife River Indian Villages National Historic Site in North Dakota, and Curecanti National Recreation Area in Colorado. He was a Bureau of Reclamation archeologist for 27 years in the Billings, Grand Island, and Oklahoma City offices. Currently he is president of the Professional Archaeologists of Kansas and a board member of the Oklahoma Anthropological Society and the Oklahoma Archeological Survey. He previously served on the board of the Plains Anthropological Society and is a past president of the Nebraska Association of Professional Archeologists. His major research interests include prehistoric trails and sacred geography of Plains Indians.

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Allison Douglas is a Ph.D. candidate at the University of Oklahoma, studying anthropology of education. She has been involved with the Oklahoma Public Archaeology Network since 2016. Her archeology training includes a B.A. from the University of Oklahoma and M.A. from the University of Kansas. The paper in this journal originated from her Master's research. Her interests have since developed in other directions, currently combining her passion for public archeology with broader concerns about anthropological concepts within K-12 social studies curriculum in Oklahoma.

Jim D. Feagins
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Jim Feagins is a retired private archeological consultant who still serves as part of the adjunct archeological staff for the St. Joseph Museum. He received an A.A. degree from Graceland University in Iowa, a B.S. degree from Pittsburg State University, and a M.N.S. degree from the University of Oklahoma. After 30 years as a science instructor for Consolidated School District No. 4, Grandview, Missouri, he retired in 1995. Active in promoting archeological education, he is president emeritus of the Missouri Archaeological Society. He also served as president of the Kansas City Archaeological Society and as a vice-president of the Missouri Association of Professional Archaeologists and the Kansas Anthropological Association. He is a life member of the KAA.

Clinton Thomas
Salina, Kansas

Clint Thomas is a lifelong resident of Kansas with a passion for local history. In 1990 he began walking the fields and creeks around Emporia, looking for stone artifacts. Since that time he has recorded numerous

sites in a three-county area and cataloged the collected artifacts. His love of history and primitive skills led him to experiment with archery; he has been making bows since 1992 and started flintknapping in 1998. He presented a primitive archery demonstration at the 2006 Kansas Archeology Training Program field school in Council Grove. His plans for the near future include donating the 14MO414 collection to the Kansas Historical Society. Clint is retired and resides in Salina, Kansas.

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BITIKOFER	SHAUN	5841 SWARTZ RD	KANSAS CITY	KS	66106-1547
BLASING	BOB	PO BOX 270296	OKLAHOMA CITY	OK	73137-0296
BOGNER	PAUL F	509 QUAIL CREEK AVE	NEWTON	KS	67114-5636
BRANDT	TOM	6112 FLOYD ST	OVERLAND PARK	KS	66202-3114
BRENNAN	SHARON	2540 GRAND OVERLOOK	GRAND JUNCTION	CO	81507-1798
BRIGGS	GLENN	140 NW COURTLAND AVE	TOPEKA	KS	66606-1263
BRIGGS	NEIL	1018 SW LANE ST	TOPEKA	KS	66604-1232
BRUBAKER	MARYLIE	ADDRESS UNKNOWN			
BRUNSELL	JANE R	321 N CHESTNUT	LINDSBORG	KS	67456-2607
BUEHLER	EMILY	4325 SW 30TH ST	TOPEKA	KS	66614-3017
CALHOUN	DEBORA	PO BOX 632	CIMARRON	KS	67835-0632
CALHOUN	MYRON & NANCY	2001 DUNBAR RD	MANHATTAN	KS	66502-3907
CARLSON	JACK	8243 GLEASON RD	LENEXA	KS	66227-2724
CATLETT	TOM	3615 TIMOTHY LN	RICHMOND	TX	77406-6871
CAUTHEN	MADELINE	6115 MAIN ST	KANSAS CITY	MO	65113-1435
CHAPMAN	DEAN E	2127 DARTMOUTH GATE CT	WILDWOOD	MO	63011-5436
CHENEY	NADINE	RT 1 BOX 105	TRIBUNE	KS	67879-9757
CHIN	LAILIN A	777 G RD	CEDAR POINT	KS	66843-9520
CHRISTENSEN	MARK	504 SELBY AVE APT 9	ST PAUL	MN	55102-4542
CLARKE	MIKE & DRU	7810 HOPKINS CREEK RD	ST GEORGE	KS	66535-9805
CLAYTON	DAWN	21013 W 81ST TER	LENEXA	KS	66220-2586
COLGROVE	AARON & TRICIA	586 S WALNUT ST	GARDNER	KS	66030-9261
COLLE	BRITT & LINDA	724 PENN DR	MCPHERSON	KS	67460-1718
COLSON	JANNA	724 18TH ST	HOXIE	KS	67740-4328
COMPTON	TORI	6831 CLEVELAND AVE	KANSAS CITY	KS	66104-2644
CONRAD	MARY	3900 NEARMAN DR	KANSAS CITY	KS	66104-1230
COOK	EVA C LORD	21903 W 57TH TER	SHAWNEE	KS	66226-8200
CORDER	ROBERT	6620 NE ST RTE 6	ST JOSEPH	MO	64507-0000
CRENSHAW	LUCINDA	1722 E 816 RD	LAWRENCE	KS	66049-9137
DALE	FRANK	1630 AVE L	COLDWATER	KS	67029-5641
DANIELS & A LUDLUM	JESSICA	1914 SW WARNER CT	TOPEKA	KS	66604-3267
DEINES	WILLIAM	23033 T RD	WAKEENEY	KS	67672-2759
DETRICH	VERNA	DECEASED			
DILTS	KARY	555 W MISSION RIDGE	COLBY	KS	67701-2230
DODDS	SHARI	11555 MYERS VALLEY RD	ST GEORGE	KS	66535-9737
DRESBACH	RUSSELL	250 E DANIEL ST	COLUMBIA	MO	65202-0096
DYE	NORMAN & NANCY	19014 R RD	MEADE	KS	67864-9513
EDENS	JACK	101 S 7TH ST	FREDONIA	KS	66736-1819
EINSEL	EUGENE	15424 I ST	GREENSBURG	KS	67054-6723
ELLISON	KATE	5924 NW 2ND ST STE 200	OKLAHOMA CITY	OK	73127-6514
FEAGINS	JIM D	800 SUNSET LN	BELTON	MO	64012-4922
FINCH & M S MILLER	STEVEN	PO BOX 52	PATAGONIA	AZ	85624-0052
FINKE	JERRY & MARILYN	835 NORTHPARK RDG	NEW BRAUNFELS	TX	78130-8319
FLOYD	MORRIS	813 E HEMPHILL AVE	HAYSVILLE	KS	67060-1823
FOSHA	MICHAEL	3710 W SAINT LOUIS ST	RAPID CITY	SD	57702-2141
FOX	JOHN	619A PRUDOM AVE APT A	PAWHUSKA	OK	74056-4230
FRANK	ANITA	6362 SW 10TH AVE	TOPEKA	KS	66615-3807
GAINES	W BRANDON	4820 SW 36TH TER	TOPEKA	KS	66614-3832
GARST	CHRISTINE	4304 SW 23RD ST	TOPEKA	KS	66614-1160

GENTINE	LYNN, MICHAELA & JESSICA	2961 SW TUTBURY TOWN RD	TOPEKA	KS	66614-4415
GEORGE	F SUSAN	2309 PLUM ST	HAYS	KS	67601-3034
GOEBEL	PAUL	DECEASED			
GOERING	MARK & SHEILA	PO BOX 3012	ENID	OK	73702-3012
GOOD	ELIZABETH	4414 UNITY AVE N	ROBBINSDALE	MN	55422-1146
HAAS	JAMES	3501 STOVER ST APT 195	FORT COLLINS	CO	80525-4528
HAND	DAVID	316 S ILLINOIS ST	KANOPOLIS	KS	67454-9553
HARDY	COLLEEN	2102 N FR 35	BOIS D'ARC	MO	65612-0000
HARRIS & J M VINCENT	ELIZABETH	112 E 16TH ST	HAYS	KS	67601-3635
HEASTY	DON & CAMILLA	237 RAINBOW DR #13791	LIVINGSTON	TX	77399-2037
HEATH & HEATH COVEY	TARYN	7338 GODDARD DR	SHAWNEE	KS	66203-4476
HICKS	GARY & LOUISE	12105 WESTGATE ST	OVERLAND PARK	KS	66213-2268
HINTZ	PAULINE	211 SHORELINE DR	LOUISBURG	KS	66053-6431
HOARD	ROBERT	6425 SW 6TH AVE	TOPEKA	KS	66615-1099
HORD	CHRIS	413 SE BROWNFIELD DR	LEE'S SUMMIT	MO	64063-6020
HOWELL	JEAN & BILL	90244 SW 130TH AVE	COATS	KS	67028-9441
HUBER	DON	1071 DARLOW DR #302	MCPHERSON	KS	67460-2741
HUENERGARDE	JIM	108 BIRCH ST	LIEBENTHAL	KS	67553-5321
HUTSON	RUTH	PO BOX 248	WESTMORELAN	KS	66549-0248
JAMESON	DONNA	PO BOX 245	BALDWIN CITY	KS	66006-0245
JOHNSON	PAUL & ROBIN	2567 23RD AVE	GYPSUM	KS	67448-9022
JOHNSON CO LIB	ACQUISITIONS	PO BOX 2901	SHAWNEE MISSION	KS	66201-1301
JOST	SONJA	311 W MAIN ST	LEHIGH	KS	67073-0000
KABERLINE	ABBY	8157 MIKE O'VINCE RD	OZAWKIE	KS	66607-4094
KANSAS HERITAGE CENTER		PO BOX 1207	DODGE CITY	KS	67801-1207
KANSAS HISTORICAL SOCIETY PERIODICALS		6425 SW 6TH AVE	TOPEKA	KS	66615-1099
KANSAS STATE UNIV	HALE LIB TECH SERV	1117 MID-CAMPUS DR N	MANHATTAN	KS	66506-0110
KECK	DICK & CYNTHIA	2709 W 74TH ST	PRAIRIE VILLAGE	KS	66208-3222
KECK	SETH	7396 FLUSH RD	ST GEORGE	KS	66535-9405
KENNEDY	CRYSTAL	6528 SE CALIFORNIA AVE	BERRYTON	KS	66409-9772
KENNEDY	SAM	DECEASED			
KINSEY	KAROLYN	PO BOX 143	UTICA	KS	67584-0143
KLARMANN	NICOLE	1142 SW HIGH AVE	TOPEKA	KS	66604-3951
KRAUS	HAROLD & VIRGINIA	1303 E 33RD ST #16	HAYS	KS	67601-9637
KRAUS	KURT & JULIA	3727 S XANTHUS AVE	TULSA	OK	74105-8141
KREISSLER	ALICE	6709 W O'NEIL ST	WICHITA	KS	67212-6332
KURTZ	CHRIS	5508-C POMPANO DR	MINNETONKA	MN	55343-8910
LATHAM	MARK	PO BOX 134	PITTSFORD	MI	49271-0134
LIFE	MICHAEL	3746 S HWY K-57	JUNCTION CITY	KS	66441-8256
LINCK	RANDY	PO BOX 264	HORTON	KS	66439-0264
LINDSTROM	JASON	1102 BARBERRY DR	HUTCHINSON	KS	67502-3365
LOGAN & L RITTERBUSH	BRAD	3331 NEWBURY ST	MANHATTAN	KS	66503-0303
LOVE	JILLIAN	1509 SW 26TH ST	TOPEKA	KS	66611-1330
LUNDEEN	GAIL	604 NE SHORELINE DR	LEE'S SUMMIT	MO	64064-1382
MADDEN	LOU	PO BOX 12354	DENVER	CO	80212-2360
MALLOUF	ROBERT J	5 SIERRA VISTA RD	ALPINE	TX	79830-1012
MASTERS	JUDY	10583 W 181ST ST	BURLINGAME	KS	66413-8672
MAXWELL	MARY ELLEN & RAY	25094 160TH CT	LEAVENWORTH	KS	66048-8369
MAYHEW	JIM	105 WESTWOOD DR	ABILENE	KS	67410-9260
MAYHEW	TANNER	5505 LONG VIEW DR	ST JOSEPH	MO	64503-0000
MCCALL	RANDY	21 WINONA AVE	LAWRENCE	KS	66046-4849
MCCHESNEY	KAROL	2220 FIR RD	MUNDEN	KS	66959-0098
MCCLENAHAN	JULIE	1298 N 550 RD	BALDWIN CITY	KS	66006-7254
MCCLENAHAN	KRISTA	1298 N 550 RD	BALDWIN CITY	KS	66006-7254
MCKINNEY	SHARON	15329 S LONE ELM RD APT 428	OLATHE	KS	66061-6205
MCLEAN & R CONARD	JANICE	1034 WELLINGTON RD	LAWRENCE	KS	66049-3029
MCMILLON	DAVID & PEGGY	36 NW 48 RD	GREAT BEND	KS	67530-9087
MILES	ANTHONY	6325 W 73RD TER	OVERLAND PARK	KS	66204-2032
MISSOURI ARCH SOC	MSU	901 S NATIONAL AVE	SPRINGFIELD	MO	65897-0027
MOORE	CAROL	PO BOX 187	ST GEORGE	KS	66535-0187
MOORE	MARGARET	221 N CAMPBELL AVE	BELOIT	KS	67420-2427
MOREHOUSE	JEAN	8878 SE 232ND ST	LATHROP	MO	64465-8563
MOSIER	JOSEPH	1904 TULIP TER	MANHATTAN	KS	66502-4958
MULDER	CLEVE	721 UNIVERSITY PL	SALINA	KS	67401-2574
MURPHY	LAURA	333 SW QUINTON AVE	TOPEKA	KS	66606-1179
MURPHY	MITCH	DECEASED			
MURRAY	KENT & GLENNA	29146 NE 1830 RD	GARNETT	KS	66032-8344
MYERS	CARL	1902 N SEDGWICK ST	WICHITA	KS	67203-1530
NADEN	MELANIE R	4272 EAGLE LAKE CT	BEL AIRE	KS	67220-1719
NANCE	ZACHARY	217 MILL ST	HARTFORD	KS	66854-9418
NICHOLAS	JOE, ADAM & ZACK	10344 CHEROKEE LN	LEAWOOD	KS	66206-2511

NIOCE	MARVIN & BECKY	4023 SW DRURY LN	TOPEKA	KS	66604-2414
O'HARA	LINDA	2523 US 24 HWY	BELOIT	KS	67420-3024
OLIVA	BONITA	3095 F RD	WOODSTON	KS	67675-9004
OLNEY	BRAD	8936 CEDAR LN	PRAIRIE VILLAGE	KS	66207-2218
OLSON	BILL & BETH	203 W COLUMBUS ST	LINDSBORG	KS	67456-1527
OLSON & J GRUBER	GREG	609 W MAIN ST	BELOIT	KS	67420-3012
OSAGE NATION HPO	DR ANDREA HUNTER	627 GRANDVIEW AVE	PAWHUSKA	OK	74056-4141
PEARSON	GAIL	501 N WESTERN AVE	BELOIT	KS	67420-1849
PETZ	AL	819 BANNOCK BURN RD	HUTCHINSON	KS	67502-2033
PHILIP	KAYLYNN	682 300TH AVE	HAYS	KS	67601-9518
PHILLIPS	MEL & DOROTHY	6717 CHERRY PL	OKLAHOMA CITY	OK	73127-6217
PITTSBURG STATE UNIV	AXE LIBRARY	1701 S BROADWAY ST	PITTSBURG	KS	66762-5856
POLSON	DAVID	15890 GARDNER PL	GARDNER	KS	66030-9669
POWELL & T MEADE	GINA	4025 HOLMES ST	KANSAS CITY	MO	64110-1125
PURVIS	REBEKAH	302 E NORTH ST	WESTMORLAND	KS	66549-0000
RACK	KIM, JAKE & MASON	5113 KINGSMILL RD	LAWRENCE	KS	66047-1897
RALSTON	JAMES	15603 W 81ST ST	LENEXA	KS	66219-1831
REED	EVELYN	PO BOX 1068	NEWTON	KS	67114-1068
REED	MARGIE	2635 DEBORAH DR	SALINA	KS	67401-3567
REED	TERRY, ALEXA, TYTUS & TATUM	403 S CORONADO AVE	LINDSBORG	KS	67456-2736
REXROAD	VIRGINIA	3712 ALDERSGATE APT B	HUTCHINSON	KS	67502-2367
RILEY	ZELLA	6109 W 76TH TER	PRAIRIE VILLAGE	KS	66208-4544
RINDOM	KRISTIN	419 ASPEN DR	EMPORIA	KS	66801-4669
RIVES	TIMOTHY	612 NW 3RD ST	ABILENE	KS	67410-2732
ROBERTS	JAMES	1036 ARROWHEAD RDG	INDEPENDENCE	MO	64056-1179
ROBERTS	PAUL	PO BOX 201	DENTON	KS	66017-0201
ROBERTS	TERRY	2321 ST MATTHEW DR	MANHATTAN	KS	66502-2214
ROCHELEAU	AUDREY & NANCY	41 OAKCREST RD	HOLDEN	MA	01520-1308
ROECKERS	HENRY	106 PARK PLAZA N	GARNETT	KS	66032-2303
ROHR	ROBERT	801 CATHEDRAL	VICTORIA	KS	67671-9413
ROWLINSON	DANIEL & JIMMETTE	2911 SW WHITNEY LN	TOPEKA	KS	66614-4814
ROWLISON	DON	RT 1 BOX 57M	STUDLEY	KS	67759-9326
ROYCE	CLARE H	8837 LONG BEACH CIR	ATLANTA	GA	30350-2208
RUDKIN	JANN & TOM	15000 BLACKBERRY HILL	LOS GATOS	CA	95030-7504
RUIZ & M BERENDSEN	ANGELO	913 CONNECTICUT ST	LAWRENCE	KS	66044-3035
RUSSELL-IVERSON	NATASHA & WILLIS	8 S NELSON ST	HUTCHINSON	KS	67501-3043
RYAN	SHANNON	2715 PONDEROSA DR	LAWRENCE	KS	66046-5157
SAGE	SHARON	9130 SW 97TH ST	AUBURN	KS	66402-9610
SALLEE	KENT	109 E GORDON ST	INMAN	KS	67546-0592
SAPP	WILLIAM	520 SE HACKAMORE DR	LEE'S SUMMIT	MO	64082-8221
SCHMIDT	JANIE & REX	14026 U ST	WILMORE	KS	67155-9508
SCIACCA	JOSH	126 S MISSION ST	COUNCIL GROVE	KS	66846-1833
SEUSER	GARRETT	17947 157TH ST	BASHOR	KS	66007-7386
SHERIDAN	ALAN	656 OLD HWY 40	WILSON	KS	67490-8777
SHERRADEN	KEN	CANCELED MEMBERSHIP			
SHIVELY	BARON	823 N ELM ST	MCPHERSON	KS	67460-2813
SICHTER	JAMES	10809 W 123RD ST	OVERLAND PARK	KS	66213-1957
SIEGEL	ANGELA & WILL	10019 HOWE DR	LEAWOOD	KS	66206-2414
SMITH	SUZANNE	8392 LOWER MCDOWELL RD	ALTA VISTA	KS	66834-9293
SNYDER-TORR	KATHY	3317 L RD	BELOIT	KS	67420-3090
SOTHAN	MEGAN	PO BOX 12	STEELE CITY	NE	68440-0012
SPELLMAN	BECKY	3515 N WALDRON ST	HUTCHINSON	KS	67502-1429
SPILLER	JACK & GAYNELL	1601 WATSON ST	EMPORIA	KS	66801-5211
ST HIST SOC OF WISCONSIN	LIB ACQUISITIONS SEC	816 STATE ST	MADISON	WI	53706-1417
STEIN	MARTIN	4399 OGAN MESA LOOP	LAS CRUCES	NM	88011-8373
STEPHENSON	STAN	1428 HOMESTEAD PL	MCPHERSON	KS	67460-2637
STIPPICH	JULIE A	1556 N DELLROSE ST	WICHITA	KS	67208-2219
STITES	DEAN & VALORIE	405 W BUFFALO ST	GIRARD	KS	66743-1407
STRICKLER	BRENDA	ADDRESS UNKNOWN			
STROBEL	TIM	8816 NORWOOD DR	LEAWOOD	KS	66206-1626
STROM	BYRON	632 E DOUGLAS AVE	DES MOINES	IA	50313-4567
STRUKEL	WENDY	602 N LEONARD ST	GIRARD	KS	66743-1033
STUBBS	MICHAEL	23320 ROCKTON RD	ESKRIDGE	KS	66423-9010
SUDBURY	BRYON	PO BOX 2282	PONCA CITY	OK	74602-2282
SULLIVAN	MELONIE	1720 PRESTWICK CIR	LAWRENCE	KS	66047-2086
SWANEK	ED	12779 HEADWATERS RD	HARVEYVIILLE	KS	66431-9319
TAYLOR	DOUGLAS	308 N BIRCH ST	HILLSBORO	KS	67063-1135
THURMOND	J PETER	RT 1 BOX 62B	CHEYENNE	OK	73628-9729
TITUS	REV MARY AL	700 MONTEREY PL APT50	HUTCHINSON	KS	67502-2248
TREMBLAY	LELAND	316 N MIDDLE ST	HILL CITY	KS	67642-1740
TUCKER	VITA	7015 W 133RD ST	BURLINGAME	KS	66413-8778

UNIV OF KANSAS	WATSON LIB RETRIEVAL	1425 JAYHAWK BLVD R 2105	LAWRENCE	KS	66045-7594
UNIV OF OKLA	BIZZELL MEMORIAL LIB	401 W BROOKS ST	NORMAN	OK	73019-0528
VANCE	FRED	5808 SW 27TH ST	TOPEKA	KS	66614-2011
VEHIK	DR SUSAN	2622 S PICKARD AVE	NORMAN	OK	73072-6922
WAGGONER	TRICIA & DERECK	1416 SW JEWELL AVE	TOPEKA	KS	66604-2733
WALKER	DANNY	1687 COUGHLIN ST	LARAMIE	WY	82072-2321
WALLACE	DENISE	1418 S CEDAR AVE	INDEPENDENCE	MO	64052-2139
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
WESTON	TIM	KSHS, 6425 SW 6TH AVE	TOPEKA	KS	66615-109
WHITE	JOE	952 LIMESTONE RD	UNIONTOWN	KS	66779-8036
WEICHERT	ALLEN	DECEASED			
WIECHERT	SANDRA	1501 INVERNESS APT 330	LAWRENCE	KS	66047-2063
WILDGEN	MIKE	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
WITTY	THOMAS	DECEASED			
WORKMAN	FRANK	304 MERCURY ST	SILVER LAKE	KS	66539-9607
WROBLEWSKI	CHRISTA & ANDREW	8011 N HOPE AVE	KANSAS CITY	MO	64141-3749
WULFKUHLE	VIRGINIA A	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
ZANE	KRISTEN	10218 BRIAR DR	SHAWNEE MISSION	KS	66207-3418