

Journal of the North Texas Archeological Society

Volume 2 - 2023

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ARTICLES

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JOURNAL OF THE NORTH TEXAS ARCHEOLOGICAL SOCIETY

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This program is supported in part by Humanities Texas, the state affiliate of the National Endowment for the Humanities.

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CENTRAL MEXICAN ORIGIN FOR AN OBSIDIAN PRISMATIC BLADE FROM THE TEXAS PANHANDLE

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Dedicated to the memory of Lloyd H. Erwin, who was indeed a wonderful man who would have enjoyed every moment of this journey. He loved his dad, Lloyd R. Erwin, and honored his memory by preserving the collection of those old bits of flint, obsidian, pottery, and bone, nestled in 1930s cotton, protected by those old handmade wooden display frames. Thanks to Dr. Boulanger for taking the time to bring a fresh perspective and a kind heart to this project.

~Charlene Erwin and William Erwin

Lloyd R. Erwin (1920–1992) was born to John H. Erwin and Nora Hudgins in Bethany, Oklahoma. Erwin lived and grew up on the ranch of his mother's family north of McLean, Texas in Gray County in the Panhandle. As a young boy Lloyd took an interest in Native American and historic artifacts, and he began collecting artifacts he found on the ranch property.

In 1939, the year Erwin graduated from McLean High School, he read an article about Native American arrowheads embedded in the bones of bison. Recognizing that he had points similarly embedded in animal bone, he sent these to E. H. Sellards at the Texas Memorial Museum (TMM). In return, Sellards offered Erwin a job on a paleontological excavation that summer as well as a student-worker position at the University of Texas (UT) in Austin the following year. During his time

as a UT undergraduate, Erwin donated objects from his collection to the TMM. And on at least one occasion, Sellards offered to purchase some of those artifacts, but Erwin declined (Sellards 1944).

Erwin enlisted in the U.S. Navy for World War II on February 15, 1942, serving in a Ship Repair Unit based out of New Caledonia in the Pacific theater. Following his discharge from the Navy (December 2, 1945), Erwin returned to Texas, maintained his interest in archeology, and often returned to his family's ranch property in McLean. He is listed as an assistant and informant by Adolph Witte (1947) during Witte's survey of archeological sites in the Panhandle, suggesting that Erwin was reasonably knowledgeable about locations of archeological sites in the region—and that he was interested in sharing this knowledge with archeologists working there.

Portions of Lloyd Erwin's collection remain curated at the TMM. Other portions are retained by his daughter-in-law, Charlene Erwin, first author of this report. Although we do not have a full inventory of Lloyd's TMM collection, the objects held by the Erwin family consist mostly of flaked-stone tools made on a variety of raw materials consistent with recovery from the Panhandle.

Among the items curated by the Erwin family is a single fragment of an obsidian prismatic blade. A prismatic blade is a narrow flake with parallel sides that is longer than it is wide, and that exhibits a triangular or trapezoidal shape in cross-

section (Crabtree 1982). Such blades are made by a specialized production sequence involving polyhedral cores. This artifact is highly unusual both in terms of its form and material. Prismatic blades of this size are exceedingly rare in post-Paleoindian contexts in Texas (Patterson 1976). In addition, obsidian does not occur geologically in the Texas Panhandle, and the closest geological occurrence of high-quality obsidian suitable for blade production is roughly 480 km (298 miles) to the west in the Jemez Mountains of northern New Mexico.

In this report, we describe the obsidian blade in Lloyd R. Erwin's collection and report on our analyses of its geochemistry to determine its provenance or geological source. The results of our analyses suggest that the blade is of Mesoamerican origin. We discuss some possible explanations for how it came to be part of Mr. Erwin's collections from the Hudgins Ranch property in far northern Texas. We conclude that this single artifact may represent an object discarded by one of the few Spanish entradas that passed through the Texas Panhandle during the sixteenth and early seventeenth centuries, and if so, that it is likely associated with the expedition of Francisco Vázquez de Coronado which passed through the Texas Panhandle in AD 1541.

THE PRISMATIC BLADE

Although some of the artifacts in Erwin's collection have been numerically labeled with India Ink, the obsidian blade bears no such number. For convenience, we refer to the blade here as CTE-1. CTE-1 is the proximal end of a blade fragment exhibiting a clean snap fracture below its distal termination (Figure 1). It is 65.5 mm in maximum length, 21.5 mm in maximum width, and 6.7 mm in maximum thickness. A single remnant flake scar representing the

detachment of the striking platform is present along the dorsal side of the blade.



Figure 1. Dorsal and ventral sides of the obsidian blade in the Lloyd R. Erwin Collection (CTE-1). Proximal end of the blade on the left-hand side; distal end on the right.

The margins of CTE-1 show usewear and evidence of unifacial retouch beginning roughly 31 mm from the proximal end. If the proximal end of the blade was hafted, this hafting would have protected the edges from usewear. The ridge along the dorsal side of CTE-1 shows crushing and grinding within 30 mm of the proximal end. This damage may also be consistent with the blade's proximal end having been hafted. Slight scratching on the ventral side of the blade is also consistent with hafting wear. The snapped distal end of CTE-1 shows a slight hinge fracture, suggesting that it was broken during use. No evidence of use or retouch is present on the snapped distal end of CTE-1, indicating that it broke during use, and that it was discarded with no attempts at reworking or reuse.

When a flint-knapped stone tool is exposed to fine-grained sediment for a significant duration of time—either through burial or

surface exposure—small amounts of that sediment will accumulate within the myriad scars and crevices on the tool's surface. In contrast, a freshly chipped stone tool will not bear any such buildup on its surface. Under low-powered (2–4x) microscopy, occluding sediment can be observed within the flake scars, suggesting that the blade is not a modern creation. Similarly, the dorsal ridge and other prominent edges of the blade show significant rounding and polishing consistent with a tool that has been carried and used as opposed to a modern tourist-trade item.

The obsidian on which CTE-1 is made is a distinctive emerald-green color and is nearly translucent. A few microscopic spherulites (tiny circular inclusions within the glass) are observable on the ventral side of the blade (Figure 1), but no other inclusions or impurities are present in the obsidian. The distinctive color and sheen of the obsidian is unlike obsidian found in the U.S. Southwest or the Northern Great Plains—source areas for most obsidian previously encountered in Texas and the southern Great Plains (e.g., Hester et al. 1991; Hoard et al. 2008; Perttula and Hester 2017). Rather, it is fully consistent with obsidian from the Sierra de Pachuca (aka Sierra de Navajas) deposit located approximately 90 km (60 miles) northeast of modern-day Mexico City, roughly 1690 km (1050 miles) south of McLean, Texas.

To test our visual identification of the source of CTE-1 as Sierra de Pachuca, we assayed the blade fragment by non-destructive X-ray fluorescence (XRF) spectrometry. Analysis by XRF allows for the determination of the approximate geochemical composition of the obsidian blade and the comparison of these data to similar data obtained from samples collected directly at the obsidian source.

Doing so allows archeologists to precisely identify the provenance, or geological source, of the object (Shackley 2005a).

ANALYTICAL PROTOCOL

The obsidian blade from Lloyd Erwin's collection was analyzed using a Bruker Tracer 5g handheld portable XRF spectrometer. The Tracer 5g uses a Rh-based X-ray tube operating at 50 kV at 35 μ a, and a silicon drift detector. Spectra collected by the spectrometer are quantified using a calibration based on 40 well-characterized obsidian reference specimens developed by the Archaeometry Laboratory at the University of Missouri (Glascock 2020; Speakman 2012). Three separate 30-second assays were performed on CTE-1. This protocol and the obsidian calibration routine permit quantification of the following minor and trace elements: titanium (Ti), manganese (Mn), iron (Fe), zinc (Zn), gallium (Ga), rubidium (Rb), strontium (Sr), yttrium (Y), zirconium (Zr), niobium (Nb), thorium (Th), and barium (Ba). The precision of Ti and Mn measurements using these protocols is relatively low, and the reported concentrations of these elements should be considered informational values. Similarly, Ba is difficult to quantify using a single-assay nondestructive analysis. The calibration used here has a lower limit of detection of between 500 and 600 ppm, and the accuracy of determinations of Ba above this can be variable depending on sample geometry and other factors. Thus, these three elements (Ti, Mn, and Ba) should be considered qualitative or semi-quantitative values and are not used in making determinations of provenance without a clear justification.

The Southern Methodist University (SMU) in-house quality-check standard, a solid piece of Glass Mountain Rhyolite obsidian, was assayed before and after analyses of

CTE-1. Average values for this obsidian check standard compare favorably with certified and consensus values for the RGM-1 standard reference material (which is powdered Glass Mountain Rhyolite obsidian) distributed by the United States Geological Survey. Data collected using the above protocols are well within the 2-sigma bounds for certified and consensus values for most elements (Table 1).

RESULTS

The chemical composition of CTE-1 (Table 2) is wholly consistent with obsidian from

the Sierra de Pachuca source in Central Mexico, specifically the Las Minas Green variety discussed by Ponomarenko (2004). To confirm this assessment of CTE-1, we also analyzed five pieces of Sierra de Pachuca obsidian obtained directly from the source area and housed in the comparative library of lithic sources in the Archaeological Research Collections at SMU. We present the average (mean) values of these five comparative "source" samples alongside the results for CTE-1 in Table 2 for ease of comparison. These results fully support CTE-1 as being Sierra de Pachuca obsidian.

Table 1. Means and average analytical uncertainties for 2 assays of the SMU in-house XRF standard (RGM-1), compared with certified (USGS) and consensus (GeoRem) values.

	RGM-1	USGS	GeoRem
n	2		
Titanium (Ti)%	.162 ± .02	.162 ± .012	.159 ± .004
Manganese (Mn)	350 ± 60	279 ± 31	300 ± 16
Iron (Fe)%	1.281 ± .020	1.301 ± .021	1.309 ± .021
Zinc (Zn)	37 ± 7	(32)	33 ± 1
Gallium (Ga)	15 ± 4	15 ± 2	16 ± 1
Rubidium (Rb)	150 ± 5	150 ± 8	150 ± 2
Strontium (Sr)	116 ± 4	110 ± 10	105 ± 2
Yttrium (Y)	24 ± 3	(25)	24 ± 1
Zirconium (Zr)	237 ± 5	220 ± 20	228 ± 4
Niobium (Nb)	8 ± 2	9 ± 1	9 ± 1
Barium (Ba)	912 ± 33	810 ± 46	827 ± 6
Thorium (Th)	13 ± 2	15 ± 1	15 ± 1

Table 2. Geochemical data (in ppm unless otherwise noted) for CTE0001 and five specimens of Pachuca (Sierra de Navajas) obsidian.

	CTE-1	Pachuca
Titanium (Ti)%	.066 ± .017	.055 ± .017
Manganese (Mn)	1058 ± 82	1001 ± 83
Iron (Fe)%	1.607 ± .022	1.56 ± .022
Zinc (Zn)	218 ± 13	212 ± 13
Gallium (Ga)	29 ± 5	24 ± 5
Rubidium (Rb)	196 ± 6	190 ± 6
Strontium (Sr)	4 ± 1	4 ± 1
Yttrium (Y)	110 ± 4	106 ± 4
Zirconium (Zr)	990 ± 10	947 ± 10
Niobium (Nb)	91 ± 4	82 ± 4
Thorium (Th)	21 ± 2	19 ± 2

DISCUSSION

CTE-1 is a utilized and broken prismatic blade made on Sierra de Pachuca obsidian that is only available at outcrops located roughly 90 km (60 miles) northeast of Mexico City in central Mexico. This obsidian was widely utilized by the Nahuatl and others, and it continued to be used by Indigenous peoples in the production of obsidian tools until shortly after Spanish Conquest when obsidian was replaced by iron. The form of this tool (i.e., a prismatic blade) is wholly consistent with the tool forms made and utilized at roughly the time of the Spanish Conquest. The *macuahuitl* (sword), *tepoztopilli* (thrusting spear), and other weapons made and used by the Mexica and other Central Mexican groups involved a highly elaborate blade technology (e.g., Cervera Obregón 2006). Both the provenance and form of CTE-1 are consistent with an origin in central Mexico. How did such an artifact come to be in the artifact collection of a young man working his family's ranch in the Texas Panhandle?

We see at least three possible answers to this question: (1) Erwin obtained this blade through trade/exchange of artifacts with other collectors or during a trip to Mexico City; (2) the blade was intended as a hoax to garner attention to Erwin and his collection; and, (3) the blade was genuinely collected in Texas by Erwin and is a genuine archeological find. For reasons elaborated below, we favor the third hypothesis. We propose that the most parsimonious explanation is that the blade is genuine physical evidence of the AD 1540–1542 entrada of Francisco Vázquez de Coronado, which passed through northern Texas in AD 1541.

Hypothesis 1: Modern Trade/Travel/Exchange

Did Lloyd Erwin procure the blade either through trade with other artifact collectors or travel to a region closer to where Sierra de Pachuca obsidian blades were made and used in the past? All other artifacts in his collection are consistent with items that would have been gathered from the surfaces of sites in the Texas Panhandle. These include a variety of Archaic through Historic period projectile points consistent with forms common to Texas (Turner et al. 2011) made on locally available materials such as Alibates agatized dolomite and Tecovas jasper (Quigg et al. 2011), Ogallala formation cherts (Hurst et al. 2010), and Dakota-Morrison orthoquartzite. We have not seen any other items of Mesoamerican origin in his collection, suggesting that it is unlikely Lloyd was actively trading artifacts with other collectors to whom Mexican obsidian was more easily accessible. Moreover, family oral history indicates that the first time Erwin left Texas was during World War II, and that the family had little money that would have been spent on extravagances such as foreign travel or buying artifacts. Given the absence of any other indication of travel or trade in his collection, we reject this explanation.

Hypothesis 2: Hoax

Given the notoriety of Coronado's expedition and the hullabaloo surrounding its quatercentennial in 1940 (Kendall 1986; Zimmerman 1940)—the time at which Lloyd Erwin was collecting artifacts—we concede that there is a possibility that young Lloyd surreptitiously obtained an obsidian blade from Mexico and placed it in his collection in an attempt to garner attention, prestige, or money (recall the above-cited letter from Sellards offering to purchase some of Erwin's artifacts). Amateur archeologists have certainly perpetrated hoaxes in the

past (Burgess and Marshall 2009; Mainfort and Kwas 2004; Meltzer and Sturtevant 1985; Normile 2001), and we should always remain vigilant for this possibility. Indeed, numerous Coronado-related hoaxes have been perpetrated on academics and the general public alike (Hoig 2013; Kansas Historical Society 1999).

Yet, Erwin's collection was amassed nearly 30 years *before* archeologists recognized that the chemical composition of an obsidian artifact could be used to identify its source, and this practice did not become commonplace in Texas until the late 1970s (e.g., Hester et al. 1980). It also occurred nearly 80 years *before* archeologists documented other prismatic blades as evidence of the path of Coronado's entrada (Dolan and Shackley 2021; Shackley 2023). We also note that at the time of Erwin's collecting, scholars postulated that Coronado's routes were either far to the north, west, or east of the McLean area (see for example maps provided by Everett 2023). And, while Erwin donated materials to the TMM, he does not appear to have taken up Sellards' offer to purchase items. Instead, he kept them for himself and does not appear to have engaged in any promotion of the blade or of any other item in his collection. Lastly, there are no other items so far examined in Erwin's collection that point to fakery or foul play.

While we cannot rule out entirely the possibility of a hoax, it seems highly implausible that Erwin would have had the foresight in both geochemistry *and* archeology to craft a hoax that would lay dormant for 80+ years until it was sprung 30+ years after his death. For these reasons, we reject the idea that the blade in Erwin's collection is a hoax or a plant intended to fool archeologists.

Hypothesis 3: The Coronado Expedition

There is presently no clear evidence for a trade network connecting Indigenous peoples of the Texas Panhandle to those living in Central Mexico prior to the Spanish Conquest of Mexico in the early 1500s. Moreover, CTE-1 does not appear to be heavily reworked as may be expected for an artifact passed down through expansive trade networks, such as the single blade on Pachuca obsidian recovered from Spiro Mounds in Oklahoma (Barker et al. 2002). Indeed, as discussed above and shown in Figure 1, the blade appears to have been only lightly used and retouched.

Sierra de Pachuca obsidian has been recovered from other archeological contexts in Texas; however, such finds are restricted to southern portions of the state in contexts associated with the Late Prehistoric and the Early Historic periods (Hester et al. 2017; Jones et al. 2018). Similarly, finds of Sierra de Pachuca obsidian on the southern Great Plains appear restricted to contexts dating to the sixteenth century (Hoard et al. 2008; Macaluso 2012; Shackley 2005b). Research in neighboring New Mexico has turned up a handful of Sierra de Pachuca blades at archeological sites (Dolan and Shackley 2021; Shackley 2023). One common theme to these finds is their association with Spanish colonial activities, including entradas into the southern portions of North America.

The association of Sierra de Pachuca obsidian with Spanish colonial activities in the Americas stems from the Spanish practice of bringing with them *indios amigos*—Indigenous allies from various *Nahua* populations in Central Mexico (Flint 2009). These allies brought with them tools and weapons of their own making, consistent with the kinds of tools and

weapons made and used immediately prior to the Spanish conquest. As noted above, many of these relied on a specialized blade technology. As the brittle obsidian blades broke, they were discarded and replaced. The trail of Spanish entradas through the modern United States can be traced in part by the presence of central Mexican obsidian (e.g., Dolan and Shackley 2021; Shackley 2023).

The most obvious candidate for a Spanish-led entrada that included indios amigos carrying Mexican-obsidian-tipped weapons and tools is the Coronado expedition of AD 1540–1542. Although Coronado's exact route through the Texas Panhandle in AD 1541 is uncertain, current understanding suggests that it passed through or close to

McLean (Figure 2; Flint and Flint 1997). It may have followed the Canadian River past Amarillo, then headed east-southeast to the Red River, whereupon a smaller contingent separated and headed northward to near the modern city of Fort Dodge, Kansas. Alternatively, the recent discovery of a suspected Coronado campsite at 41FL81 (the Jimmy Owens site) by Blakeslee and Blaine (2003) suggests that the expedition into the Panhandle was further south, in Blanco Canyon along the Brazos River, and from there a smaller contingent led by Coronado headed north to Fort Dodge (Figure 2). In either scenario, the proposed path of the entrada would pass through the area of Lloyd Erwin's boyhood home, and the area in which he is known to have collected artifacts between 1930 and 1940.

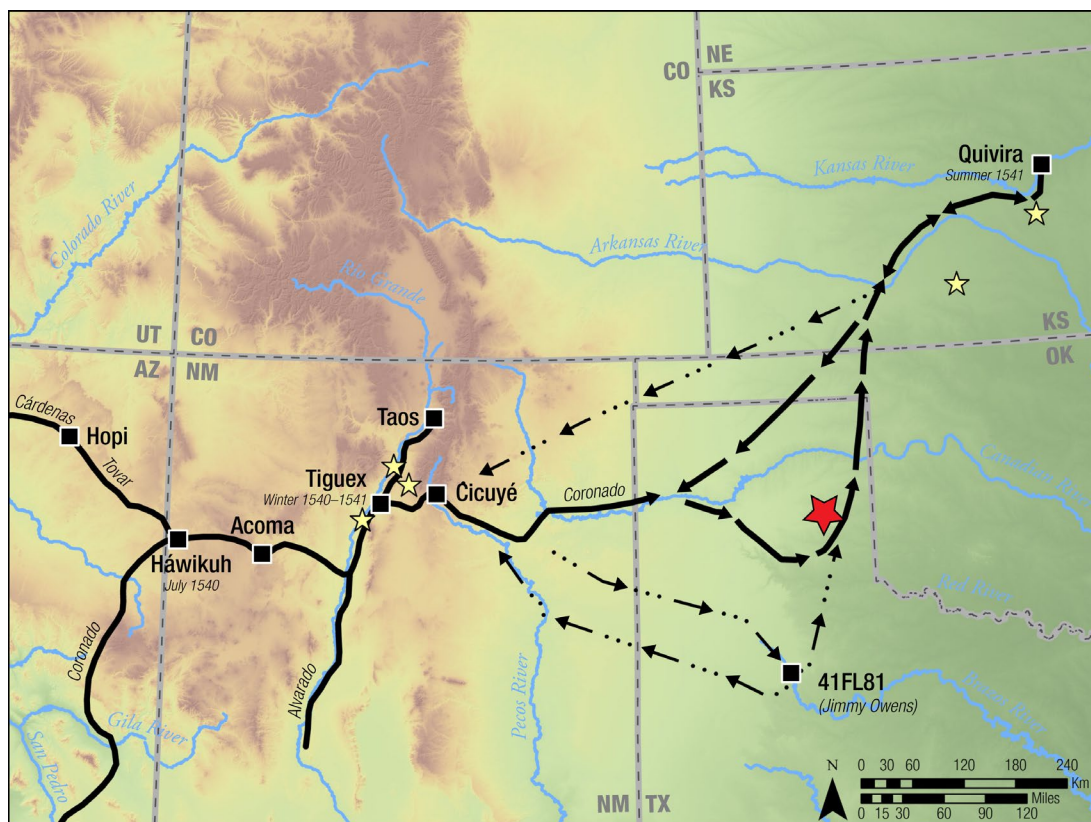


Figure 2. Map of northern New Mexico and the southern Great Plains depicting the reconstructed paths of the Coronado entrada (1540–1542). Solid lines are well attested by documentary and archaeological evidence; dashed lines are approximate routes based on the U.S. National Park Service; dashed-and-dotted lines are based on the recognition of 41FL81 (Jimmy Owens site) as a campsite of the expedition. Stars indicate recovery localities of Sierra de Pachuca obsidian tools. The large red star represents the ostensible findspot of the Lloyd Erwin blade near McLean, Texas.

Although it is tempting to attribute this blade to Coronado's *indios amigos*, another possible explanation is that the obsidian was carried through the area by some other later entrada, such as the Oñate expedition to Quivira in AD 1601. However, Oñate brought with him fewer than 150 *indios amigos*, whereas Coronado brought with him upwards of 2,000 (Flint 2009; Flint and Flint 1997). No indication of obsidian-tipped weapons is given in the extensive equipment lists recorded for Oñate's expedition (Craddock and Polt 2013), perhaps because knowledge of how to prepare blade cores and produce blades (as well as the specialized technological system of crutches, braces, and punches necessary for their production) diminished by the end of the sixteenth century, or perhaps because Oñate's *indios amigos* were primarily porters and assistants rather than warriors. Although obsidian usage among *Nahua* populations continued for some time after the Spanish conquest (Rodríguez-Alegría 2008), production of highly specialized blades decreased until the tools were ultimately replaced with metal ones. Thus, if CTE-1 is a discarded blade of central Mexican manufacture—and all present indications are that it is—the most-likely explanation for it being found in the Texas Panhandle seems to involve the Coronado entrada that passed through the Panhandle in AD 1541.

CONCLUSION

We have reported here for the first time the recognition of a single blade made on Sierra de Pachuca obsidian, ostensibly recovered from the ground surface near McLean, Texas. We suspect that this blade represents a hafted knife or razor carried northward by a *Nahua* ally — an *indio amigo* — accompanying the Coronado entrada to Quivira. This blade was used by its owner more than 1,000 miles away from his

homeland. Perhaps while being used to butcher a bison—a creature its owner had never before seen—the knife snapped in half. In disgust and frustration, its owner cast the blade onto the hot ground of the southern High Plains. There it remained for nearly 400 years until a teenager working on his family's ranch saw it glistening in the scorching Texas sun. It was picked up, dusted off, and placed—perhaps as an afterthought—on the far edge of a handmade wooden frame containing 30 or so flint arrowheads and chipped-stone tools. It was not the most glamorous or exciting artifact in the collection, but the dark-green glass was unlike any other material seen in the gravels of McClellan Creek or the Canadian River.

The obsidian blade sat largely ignored on the edge of one frame of Lloyd Erwin's artifact collection as Erwin moved to Austin for college; as he enlisted and went to war; as he moved to Dallas, married, had a son—also named Lloyd. It went unrecognized as his son and daughter-in-law, active members of the North Texas Archeological Society (née Tarrant County Archeological Society) and the Texas Archeological Society proudly shared his collection with the public. And, there it sat until one day in early May, more than 80 years after Lloyd Erwin first picked it off the ground, when Erwin's daughter-in-law showed the frame to an unsuspecting faculty member who just happened to catch its greenish tint as the frame was being turned in the sunlight.

We propose that this small unassuming artifact fits all of the requirements for convincing evidence of a Coronado presence in the McLean area. It is the correct form of artifact, the artifact is fully consistent with other such finds, it is the correct material, it was found in the correct location, and there is no indication of an intentional hoax. If corroborating evidence can be found in the

same vicinity, the Lloyd Erwin blade may be the first unequivocal evidence of a Coronado-related site in the Texas Panhandle, thus confirming the location of the route the entrada took through this region.

In publishing this brief report, we hope to demonstrate the continued importance of amateur archeologists—citizen scientists—and the active role that they play in documenting and preserving the history of Texas, of the nation, and of the world. However strong the analysis presented here may be, only the recovery of in situ archeological evidence that can definitively be associated with the Coronado expedition will establish beyond a reasonable doubt that a young Lloyd Erwin unwittingly discovered a site of the Coronado entrada on his family ranch near McLean, Texas at some point between 1930 and 1940. Continued public involvement in, and stewardship of, cultural resources—including 80-year-old artifact collections—remain our best hope in locating and preserving such evidence.

ACKNOWLEDGMENTS

This paper resulted from a chance meeting of the two authors during the North Texas Archeological Society's January 2023 meeting, and we thank the society for its continued role in bringing together professionals and amateurs in the study of Texas archeology. We thank Mike Adler, Kacy Hollenback, R. Lee Lyman, and Ian Jorgeson for comments and edits to earlier drafts of this paper. We also thank Scott Brosowske and Chris Lintz for their suggestions and collegiality. The SMU in-house check standard of Glass Mountain Rhyolite was provided by Lucas Martindale-Johnson of Far Western Anthropological Research Group. Funding for the XRF spectrometer used here was provided by the QUEST Fund.

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OBSIDIAN ARTIFACTS FROM EASTERN NORTH CENTRAL TEXAS ARCHEOLOGICAL SITES

Jesse Todd

Obsidian artifacts have been recovered from at least six counties in eastern North Central Texas (Figure 1). The counties are Collin, Cooke, Dallas, Johnson, Parker, and Somervell. This article provides an overview of the sites and counties where obsidian artifacts have been identified in North Central Texas as well as a discussion of X-ray fluorescence (XRF) information which helps determine the source of material.

XRF is a method by which material is bombarded with x-rays or gamma rays. The resulting fluorescence allows for the chemical or elemental analysis of the material. The analysis or chemical signature then can be compared to the signature of other materials to determine if they are alike or not which results in the identification of the source area.

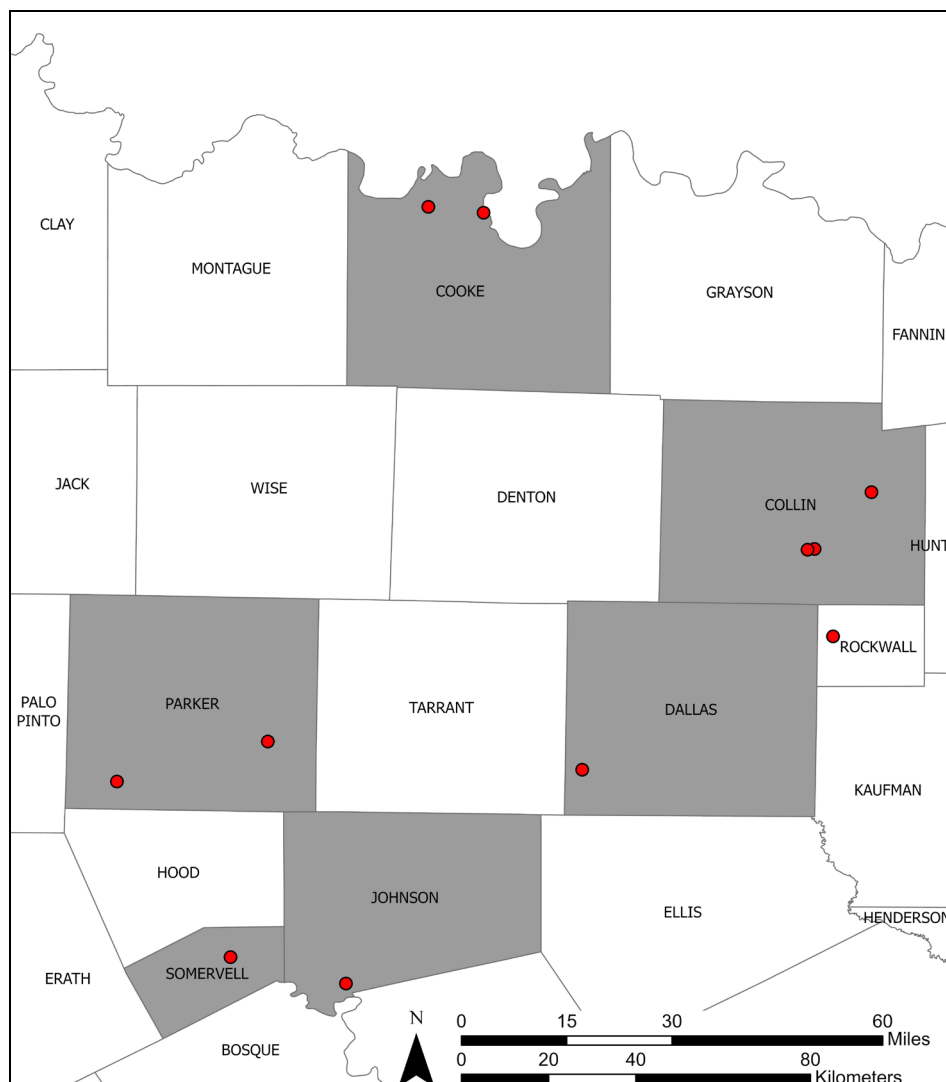


Figure 1. Counties and general site locations where obsidian has been found in eastern North Central Texas.

COLLIN COUNTY

The Branch Site (41COL9) is located on a terrace parallel to the East Fork of the Trinity River and is about 700 m east of the river's floodplain. The Late Prehistoric-aged site contains a rim-and-pit structure with two associated burials, numerous arrow points, a few dart points, pottery sherds that include ceramics from the Southwestern United States and the Caddo, bone tools, and other lithic tools (Crook 2007). Five obsidian arrow points and two worked pieces of obsidian were discovered at the site. The five arrow points were found in a single cache and probably were from sources located in Oregon and Idaho, areas which previously had not been reported being found in Texas. Chris Lintz, who is especially interested in obsidian artifacts and their source areas, requested that five of the seven artifacts be re-analyzed and sourced by Dr. Craig Skinner of the

Northwest Research Obsidian Studies Lab which has an extensive Pacific Northwest/West Coast obsidian database. XRF studies (Table 1) conducted on the five obsidian arrow points discovered at the site indicate the obsidian originates from Idaho, Oregon, and possibly Idaho, Oregon, and Utah (Crook 2016).

The Branch #2 Site is located approximately 200 m west of the Branch site and appears to be a temporary camp for Puebloan traders dating to around AD 1300. Twenty-five artifacts were recovered, which mainly were sherds such as Chaco Black-on-White and Santa Fe Black-on-White as well as other Puebloan sherds and turquoise. An obsidian end scraper also was found at the site. No sourcing analysis was done on the obsidian artifact, but x-ray powder diffraction and chemical analysis of the turquoise indicated that its origin was from central New Mexico (Crook 1985).

Table 1. XRF Trace Element Re-Analysis of Five Obsidian Arrow Points from the Branch Site (41COL9), Collin County, Texas (Crook 2016:29).

Artifact	Mn (ppm)	Fe (ppm)	Rb (ppm)	Sr (ppm)	Y (ppm)	Zr (ppm)	Nb (ppm)	Probable Source
41COL9-1 Alba-like point	265	16,555	223	45	67	433	48	Browns Bench, Idaho-Nevada-Utah
41COL9-2 Catahoula-like point	168	7,442	218	26	29	109	11	Owyhee (Toy Pass), Idaho
41COL9-3 Alba-like point	953	18,291	261	1	85	670	44	Massacre Lake/Guano Valley, Oregon
41COL9-4 Side-Notched Triangle-like point	1,130	4,004	199	17	45	61	33	Timber Butte, Idaho
41COL9-5 Catahoula-like point	265	14,587	217	48	55	417	50	Browns Bench, Idaho-Nevada-Utah

Mn = Manganese, Fe = Iron, Rb = Rubidium, Sr = Strontium, Y = Yttrium, Zr = Zirconium, and Nb = Niobium

The Upper Farmersville site (41COL34) is located in northeastern Collin County immediately southwest of the confluence of Pilot Grove and Indian creeks which lie within the East Fork River basin. The site ranges from Archaic to Late Prehistoric age and a wide variety of activities occurred at the site (Crook and Hughston 2009).

Fourteen Puebloan artifacts were recovered during investigation and among those artifacts were two untyped obsidian arrow points (Crook 2013:37). XRF analysis conducted at the laboratory of the Gault School of Archeological Research (Prehistory Project) located at Texas State University in San Marcos indicated that the

obsidian was from the Polvadera Peak of New Mexico. Crook points out that the obsidian really originated from one of the four small domes, El Rechuelos, in the Peak's area which is located in central northern New Mexico north of Jemez Pueblo.

COOKE COUNTY

The Dillard site (41CO174) is a village site located on Fish Creek near its junction with the Red River. Although no complete residential structures were found, post holes indicate the presence of houses. Corn was grown at the village which ranges in age from ca. AD 1000 to 1450. A black, translucent Washita arrow point was found at the site. Martin (1991:150) believes the obsidian originated at Obsidian Ridge just southwest of Jemez, in northern New Mexico.

A piece of obsidian was recovered by an artifact collector, Mr. Ward, from Dr. Cole's site (41CO177) which also is located adjacent to Fish Creek (Martin 2005:148). The potential Late Prehistoric site appears at least to be a lithic scatter with two pottery sherds. Based on the amount of obsidian found at the Dillard site, Martin (*Ibid*:150) suggests that the obsidian was obtained from the Dillard site (41CO176) which is located further downstream.

DALLAS COUNTY

The Cobb-Pool site (41DL148) lies within the Mountain Creek drainage and was discovered during the archeological investigations for Joe Pool Lake. Mountain Creek is a tributary to the West Fork of the Trinity River. Of note, three house structures were discovered at the site, abundant maize residue, and Caddoan ceramics. Numerous faunal bones were recovered from the site which ranges in age from ca. AD 1000 to 1200. R. King Harris

discovered a few obsidian flakes at the site and one was sent to the Lawrence Berkely Laboratory at the University of California, Berkeley, for x-ray fluorescence analysis. The results indicated the obsidian could not be traced to any known Texas or New Mexico outcrop. Mexico may be the source for the obsidian (Skinner and Connors 1979:37; Peter and MacGregor 1988).

JOHNSON COUNTY

Four obsidian flakes and a blade tip were found in the mainly Archaic-aged rock midden at the Ham Creek Site (41JN15) located on a terrace above Ham Creek about a mile upstream from the creek's confluence with the Brazos River (Forrester 1964). A wide variety of Late Archaic-aged points with a small amount of Middle Archaic points was found in the midden along with animal bones, freshwater mussel shells, gouges, drills, manos, metates, etc. Forrester (1964) suggests that the site was seasonally inhabited by a Central Texas group or a Central Texas influenced group occupied the site. The obsidian artifacts were found in the upper level of the two-level midden which indicates they may be Late Archaic or Late Prehistoric in age.

PARKER COUNTY

Mr. Homer Norris, a local artifact collector and amateur archeologist, stated that he found a black obsidian projectile point from one of the many sites he recorded along the South Fork of the Trinity River. Unfortunately, his notes did not indicate where the point was discovered (Perttula 2020:39). Art Tawater, Texas Archeological Steward, informed Laurie Moseley III, also a Steward, that he discovered a few flakes of obsidian from a site in southwestern Parker County, Texas (Moseley 1996:41).

SOMERVELL COUNTY

Archeologists from Brazos Valley Research Associates (Moore 1995) discovered site 41SV5 during an investigation of the 200-acre Glen Rose Golf Course. The site of undetermined age is located east of Glen Rose and on the west bank of the Brazos River. Most of the site was destroyed before the archeologists investigated the area. Hunting, food gathering, lithic reduction, and hide-processing appear to have been the foci of the site's residents (Moore 1995:12). Some form of trade is indicated by the discovery of two pieces of obsidian.

CONCLUSIONS

Obsidian artifacts are not abundant in eastern North Central Texas, but their presence does indicate a large trade network. They appear, however, to be concentrated in Collin County. As Crook (2013:42) states, the reason may be that it was a center for trade for bois d'arc wood and Crook suggests that the presence of the Branch #2 Site is evidence of this as well as direct trade with Puebloan peoples. A trade route along a major waterway such as the Red River is not unexpected and the distance between the origin of the East Fork of the Trinity River in Cooke County is not that far from the Red River. Alan Skinner suggests that travel would be easier along the drainage ridge between the Red and the Elm Fork rather along the up and down experienced along river channels. The paucity of Southwestern trade artifacts such as obsidian would suggest that there was not a heavy volume trade between eastern North Central Texas and the Southwest which might be a result of lack of interest in Southwestern products or the non-desire to gather resources for trade. Forrester (1964:35) ended his discussion of the Ham Creek site with the relevant question "Who brought the obsidian to the site?" One would think it was traders from the

Southwest but some of the obsidian sources are from the northwestern United States, but then, New Mexico is located southeast of these states and there was probably trade with natives of the northwestern United States.

ACKNOWLEDGMENTS

My thanks to Molly Hall for providing the map for Figure 1.

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BECOMING AMERICAN

ANALYSIS OF THE ARTIFACTS RECOVERED FROM THE SLADKY FARMSTEAD MIDDEN (41PR125), PARKER COUNTY, TEXAS

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*Do you know it's very saucy to
inquire into people's private lives
like this?*

This was a response to a request published in the November 1911 *Women's Home Companion* magazine for readers to reply to questions concerning their spending habits (Horowitz 1985:72). Would not "trash trawling," the practice of sifting through garbage cans for information, elicit the same response? That is exactly what archeologists do when they excavate and analyze the contents of trash middens.

The analysis of the contents of a farmstead midden, located on Art and Diane Tawater's ranch in southwestern Parker County is presented here. The property, now a State Archeological Landmark (41PR125) (Figure 1) was once the home of an emigrant family from Austria-Hungary, Joseph and Francis Sladky and their five children, who farmed the land from 1894 to 1954. The property was sold to Hugh and Vaudine Cooper in 1955. Figure 2 depicts an aerial photograph of the property that year. The Coopers ran cattle on the property and used the house and barn for hay storage until 1960 when they built a new barn using the wood from the Sladky house and barn in its construction. In 1979, they split the property into smaller tracts and put it up for sale. The Tawaters bought 15 acres containing the Sladky home site. They learned from the Coopers that the house was never electrified, nor was it ever plumbed for water (Tawater 1991). The impression was that the Sladkys were poor. But it might be that after Joseph's death in

1937, his sons John and Virgil and his daughter, Victoria, saw no need to modernize the house that they had lived in all their lives. They owned 100 acres, had no debt, and appear to have been frugal and self-sufficient. With no living descendants in Texas and few archival records available, the information gleaned from the artifacts recovered from the midden reveals that the Sladkys were very much like their neighbors when it came to their circumstances, experiences, and material possessions. Like other emigrants from Europe, men like Joseph Sladky had either worked as laborers in industrialized cities or had farmed other people's lands. America promised them a new life where they could be masters of their own livelihood, and Joseph Sladky did just that. He became a naturalized citizen in 1906 (Naturalization Records 1995). No doubt, the first years were difficult for the family, being unacquainted with the English language and American customs, but they persevered. With strength of purpose, Joseph and his family did indeed, become Americans.



Figure 1. Sladky Farmstead (41PR125) State Antiquities Landmark marker.



Figure 2. A 1955 aerial photograph of the Sladky farm. The house is outlined in red, the forge in yellow, midden and root cellar in green, and the mile marker is marked in with a red oval. The old Lipan to Weatherford wagon road, running west-east is now Cougar Road (Courtesy of Art Tawater).

From 2009 through 2012, Art Tawater, an Archeological Steward with the Texas Historical Commission, conducted an archeological investigation of his property which consisted of a metal detector survey and test excavations. With his metal detector, he located three areas of metal concentrations. One of these areas southeast of the house appeared to be the area where the Sladky's forge was located, based on the high number of hand-forged metal artifacts and charcoal-stained soil. Another area was tested, which was identified as the entrance of the root cellar. The third area was a mounded area located northwest of the house in what turned out to be a trash midden (locations of these areas are marked on Figure 2). Thirteen one-by-one meter units were excavated in this area using a trowel and all of the soil was screened through one-quarter inch wire mesh. Over 8,500 artifacts were recovered, dating from

the late nineteenth through the mid-twentieth century. The artifact assemblage consists of whole and broken fragments of glass bottles, canning jars, glass and ceramic tableware, stoneware, clothing accessories, toys, farm-related items, and ammunition. Tawater recorded the property in 2010 as an archeological site and received the designation of 41PR125.

THE SLADKY FAMILY

Joseph and Francis, 37 and 39 years of age, emigrated from Mähren, Moravia, a part of Austria-Hungary in 1894 (Czech Republic today). They arrived in New York with their four children, Mary, 10, John, 8, Virgil, 6, and Victoria, 3. It is unknown why the family chose Parker County to settle (Passenger and Immigrant List Index 1894; United States Federal Census 1900).

In 1895, Joseph purchased ten acres in southwestern Parker County, located on the north side of the old wagon road from Lipan to Weatherford (Figures 2 and 3) (Tawater 1991). Travelers were always stopping at his home asking how far it was to Weatherford, so John carved a rock mile marker with “W → 17 2/3 M” (Weatherford 17 2/3 miles) and placed it close to the road so travelers could see how far they had to travel to Weatherford (Tawater 1991). The rock mile marker is still on the property where John had placed it, now covered with shrubbery, to keep it safe. The location of the marker is depicted on Figure 3.

Tawater’s (1991) research revealed that Joseph built a 30 ft. by 30 ft. four-room house, a barn, a root cellar, a forge, and other out-buildings from lumber. He also built a well out of native limestone. He and his family planted a large kitchen garden, grew cotton and corn, and raised livestock. In 1896 Joseph and Francis had another child, whom they named Anna (Annie). In 1901, their oldest daughter Mary died and was buried in the Holder Cemetery in Buckner (Find A Grave 2023c).

In 1903, Joseph purchased 90 acres adjoining his property to the north and most likely planted cotton and corn. Located approximately 2.5 miles east of their farm, the community of Buckner had grown to include a cotton gin/gristmill, retail establishments, a post office, and a cemetery (Minor 1994). Four miles to the north of the farm was the community of Dennis. In 1892, after a bridge was built across the Brazos River, Judge N. M. Dennis, a Parker County lawyer and farmer, developed the community to serve the local farmers and ranchers. A post office, church, and school were established (Minor 2014). The locations of these communities are depicted on a 1907 postal map of Parker County (Figure 3).

Between 1900 and 1910, Francis died and was probably buried in the Holder Cemetery, although no marker exists for her (United States Federal Census 1910). No death certificates were issued for either Francis or Mary. On September 12, 1915, John registered for the draft. The Draft Registration Card stated that he was born on June 19, 1885, and that he was of medium build and height, had brown hair and blue eyes. Two years later, his brother Virgil registered. The card, dated June 5, 1917, stated that he was 30 years old and was born on April 19, 1887. He was described as tall, of medium build, had brown eyes and brown hair. He was determined to be disabled (World War I Draft Registration Cards 1917-1918).

Sometime during the early decades of the twentieth century, Joseph Sladky diversified his crops, as many farmers did, by planting grape vines, pecan, peach, and pear trees, and raised bees (Tawater 1991).

On November 27, 1918, at the age of 21, Annie married another immigrant, John A. Severin, 32, in Weatherford and moved to Polk County, Missouri (Texas County Marriage Records; United States Federal Census 1920a). In the 1940 Census, she and her husband, and their three children – Hattie, 19, Agnes, 18, and Tony, 14 were back in Texas and living in rural Parker County. Ten years later, the family was residing in Belle Plaine, Benton County, Iowa. Annie’s husband John was working in a lumberyard at that time (United States Federal Census 1940a; United States Federal Census 1950a).

The three oldest Sladky children, John, Virgil, and Victoria, never married. They continued to operate the farm after their father died on April 14, 1937. Joseph Sladky’s death certificate stated that he was 70 years old and died of old age (Texas

Death Certificates 1903-1982). In the 1940 and 1950 Censuses, the siblings were living together and working the farm. Virgil died in 1953 and John in 1954. Virgil's death certificate stated that he had died on February 11 at the age of 65 from terminal pneumonia due to cerebral apoplexy and generalized debilitation. Victoria moved shortly after John's death to a nursing home in Weatherford and died there in 1976 (Art Tawater, personal communication 2023).

Joseph, Mary, John, and Virgil were all buried in the Holder Cemetery located in

the Buckner community (Find A Grave 2023a, 2023b, 2023c, 2023d). All of gravestones are simple granite markers engraved with the same style of lettering (Figure 4). It appears that they were replacements for the original markers that had deteriorated over time. It is unknown who had these new gravestones placed on the graves, possibly it was Victoria after the death of her brother John in 1954. This could explain why Mary's birth year is incorrect (the 1900 Census had her listed as 16 years old, suggesting that she was born in 1884, not in 1865).

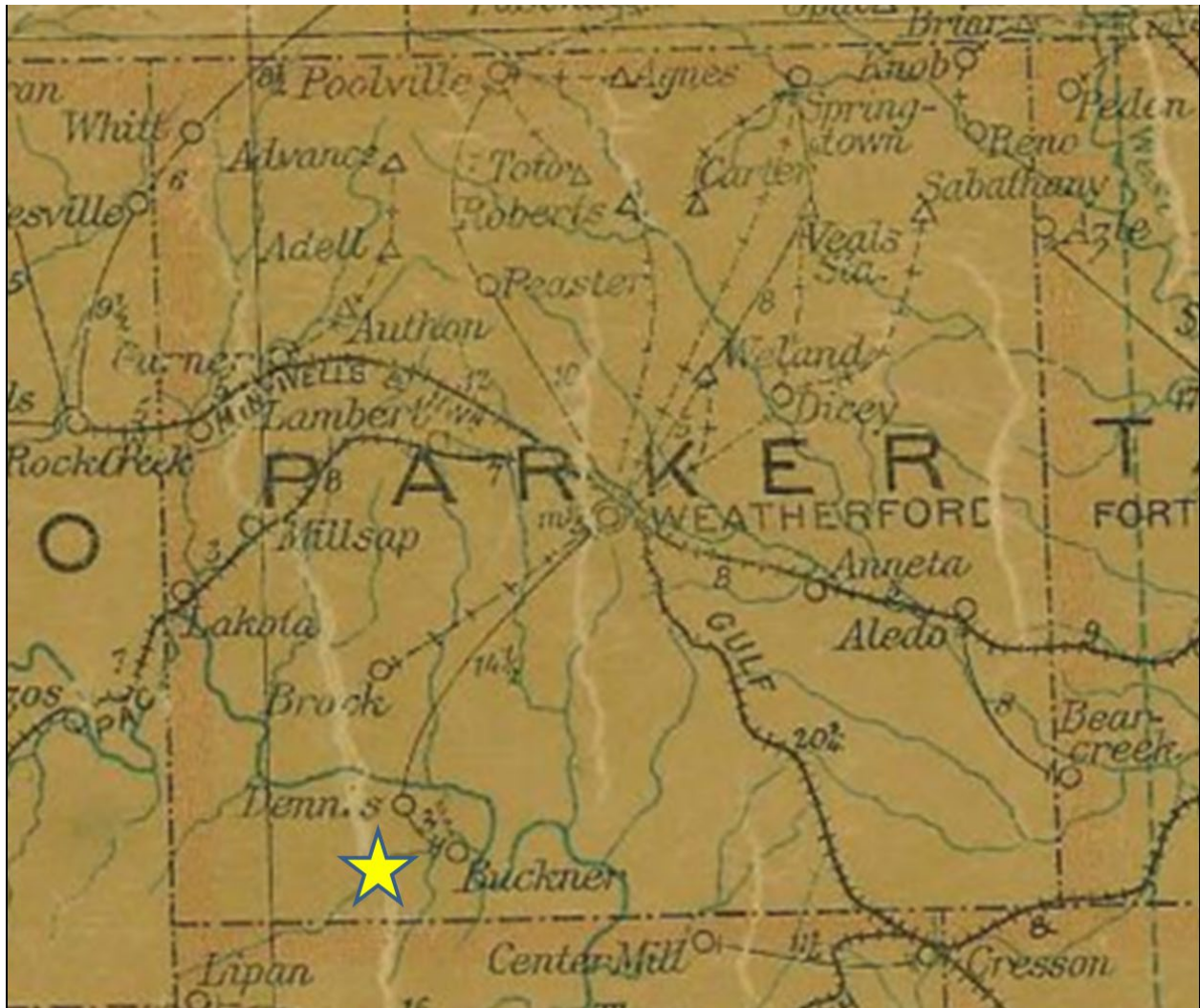


Figure 3. Parker County 1907 postal map (Texas Escapes 2022). The location of the Sladky farm is marked. Buckner is located to the east and Dennis is located to the north of the farm.



Figure 4. The Sladky family's gravestones in the Holder Cemetery, Buckner, Parker County, (top left) Joseph (Find A Grave 2023b); (top right) Mary (Find A Grave 2023c); (bottom left) Virgil (Find A Grave 2023d); (bottom right) John (Find A Grave 2023a). The birth date on Mary Sladky's gravestone is incorrect. She had to have been born in 1883 or 1884.

RURAL PARKER COUNTY

When the Sladkys arrived in Parker County, the county's population and economy was expanding due in part to the construction of three railroads that had been built through Weatherford, the county seat. The Texas and Pacific Railway extended its tracks through Weatherford in 1879, and in 1887 the town became the northern terminus of the Gulf, Colorado and Santa Fe. Another railroad, the Weatherford, Mineral Wells and Northwestern, completed its construction in the county by 1891. While linking the area to national markets, the

railroads also attracted newcomers, like the Sladkys, to establish new farms and communities. In 1890, there were 2,536 farms and ranches in Parker County. Within 10 years, 1,000 more had been established; the majority of these were less than 100 acres in size, the Sladky's farm being one of these newly established farms. Crop production in the county grew as more farms were being established. Corn was planted on 37,000 acres in 1890 and grew to 60,000 acres in 1900. Similarly, cotton production expanded from 39,000 acres in 1890 to 61,000 acres in 1900, reaching its

peak in 1910 of 90,000 acres. During the following decade, however, acres planted in cotton declined to 47,500. The county lost 20 percent of its farms between 1910 and 1920. Those who survived had diversified their crops by planting fruit trees and watermelon, as the Sladkys did. The Depression wiped out most of what remained of the area's cotton economy and farmers began growing peanuts, hay, and fruit crops which have become the major components of the county's agricultural economy today (Echeverria 2019).

ARTIFACT ANALYSIS

Aware that his property was first settled by a family from Eastern Europe in the late nineteenth century, Art Tawater began excavating the mounded area, first identified in his metal detector survey where bottle and ceramic fragments were eroding from the surface. By the end of 2012, he had opened 13 contiguous one-by-one meter units across the midden. He washed and sorted the artifacts by type and refitted those that he could. When the author received the artifact bags, it was agreed upon that since all of the artifacts were recovered from the midden, an archeological feature, they should be analyzed as a complete assemblage, and not as individual assemblages from each unit. The artifacts were sorted into five categories: glass bottles and jars, glass tableware, ceramics, personal items, and metal objects. Each category will be discussed in that order.

The artifacts within each category were further subdivided based on their functions. For example, the category Glass Bottles and Jars was divided into four subcategories: vessels that contained pharmaceutical products, those that contained foods and beverages (this subcategory included condiment/food bottles/jars, canning jars, and beverage bottles), those that contained

products related to household and farm use, and those that could not be determined. Resources used in this study were four mail-order catalogues – the 1894-1895 Montgomery Ward & Co. catalogue, and the 1897, 1902, and 1908 Sears, Roebuck & Co. catalogues (Israel 1976 [1897]; Schroeder 1970 [1895]; Schroeder 1971 [1908]; Sears Roebuck & Co. 1969 [1902]). In an introductory section, entitled “Browsers’ Delight,” in the 1897 Sears, Roebuck & Co. catalogue, S.J. Perelman states, “...there are over six thousand items, ranges through every conceivable form of artifact from autoharps to kraut cutters, from dulcimers to teething rings, from foot scrapers to feather boas. One can well imagine some archeologist of the twenty-fifth century scratching his head... over this gigantic kitchen midden...” (Israel 1969 [1897]). Almost every type of artifact that was recovered from the midden could be found in these catalogues.

Glass Bottles and Jars

Glass was not often used to make items like bottles or jars until the mid-nineteenth century (Trautman 2022). Before that time, earthenware and pottery vessels were the preferred objects used for storage. As the Industrial Revolution revolutionized the consumer market, glass bottles became the vessels of choice. Until the early decades of the twentieth century, glass bottles took shape under the watchful eye of a glassblower. The skilled glassblower carefully blew molten glass into a wooden or iron mold and after it was removed from the mold, the glassblower would “finish” the bottle lip. With the invention of a number of semi-automatic bottling machines in the 1890s, which molded the bottle lip along with the bottle's body, it was no longer necessary to hand-finish bottles. This innovation was fueled by the mass production of medicinal, food and home

products, available for purchase in every general store and pharmacy across the country as well as through mail-order catalogues (Lindsey 2021d; Lindsey 2021g; Trautman 2022).

The main objective of the analysis of the glass bottle and jar assemblage was to identify the products that the Sladky family purchased and consumed. The shape of a bottle or jar does not always provide clues to what it contained, but there are a few distinctive shapes that have become synonymous with specific products – bottles or jars containing pickles, ink, milk, proprietary medicines, and home-canned foods, to name a few (Sutton and Arkush 1998:196).

The glass bottle/jar assemblage was first sorted by color and further subdivided into smaller groups based on their bottle/jar part – finish/neck, body/panel, and base. They were then counted and weighed as depicted

in Table 1 and Figure 5. Colorless glass accounts for the majority – 38 percent – of the bottle/jar glass in both counts and weight, followed by solarized glass at 27 percent, and aqua-colored glass at 19 percent.

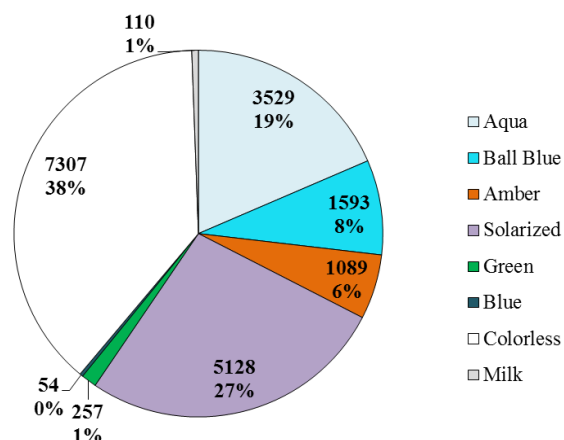


Figure 5. Percentage of bottle/jar glass by color and weight (grams).

Table 1. Counts and Weights of Whole Bottles and Bottle Glass Shards Sorted by Color.

Color	Whole Bottles Qty/Weight	Finish/Neck Qty/Weight	Body Qty/Weight	Base Qty/Weight	Total Qty/Weight
Aqua	4 / 505 g	15 / 420 g	353 / 2,160 g	20 / 444 g	392 / 3,529 g
Ball Blue	-	19 / 114 g	245 / 1,036 g	17 / 443 g	281 / 1,593 g
Amber	1 / 148 g	4 / 32 g	285 / 727 g	9 / 176 g	313 / 1,089 g
	1 cap / 22 g				
Solarized	-	30 / 748 g	409 / 2,317 g	42 / 2,063 g	481 / 5,128 g
Green	-	-	111 / 257 g	0	111 / 257 g
Blue	-	4 / 11 g	6 / 9 g	5 / 34 g	15 / 54 g
Colorless	2 / 203 g	45 / 589 g	28 embossed panels / 212 g 3,560 other / 5,489 g	266 / 814 g	3,901 / 7,307 g
<hr/>					
	Whole	Rim	Center	Total	
Milk canning jar lids	Qty/Weight	Qty/Weight	Qty/Weight	Qty/Weight	
Opaque	1 (2 refits) / 35 g	11 / 29 g	4 / 9 g	17 / 73 g	
Translucent	1 / 34 g	2 / 3 g	-	3 / 37 g	
Grand Total					5,514 / 19,067 g

Each color group was then resorted into four categories based on each shard's defining characteristics (e.g., distinctive bases, finishes and necks, body shapes, and

embossing) – pharmaceutical products, food/beverages, farm/household products, and undetermined. Attempts were made at refitting body/panel shards to bases and/or

finish/neck shards. From this, the minimum number of vessels (MNV) within each color group was determined based on the following criteria: one, whole or refitted bottles or jars; and two, finish/neck, body/panel, or base shards exhibiting unique characteristics that could represent a whole bottle. Within each color group, the remaining fragments of finish/neck, body/panel, and base shards were placed in their respective groups and assigned an accession number and a MNV count. For example, Accession Number 234 consists of 16 colorless glass base shards exhibiting stippling from which a MNV count of 11 was determined. Figure 6 provides the MNV counts for each category. The MNV count for pharmaceutical bottles is 139, followed by food/beverage at 46 (7 condiment bottles/jars, 13 beverage bottles, and 26 canning jars), 9 for farm/household products, and 21 for unidentified bottles/jars.

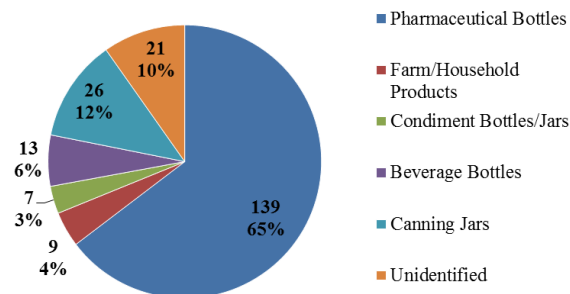


Figure 6. MNV by type.

PHARMACEUTICAL BOTTLES AND JARS

The pharmaceutical category includes proprietary medicines (patent medicines), “ethical” medicinal products, and personal-care products (e.g., perfume, lotions, and salves). A MNV count of 139 was determined. These products were bottled in a variety of glass containers manufactured from aqua, solarized (decolorized by manganese dioxide), amber/brown, blue, green, and colorless glass (Figure 7). Forty-two percent of the bottles represented in

this category were manufactured from colorless glass, followed by 21 percent solarized and 19 percent aqua. The majority of the bottles represented in the assemblage were rectangular in shape, had indented panels, short necks and small orifices. They exhibited a variety of cork-closure finishes – oil, patent, prescription, brandy, bead, and double-ring. Those with externally threaded finishes were made from colorless, blue, and amber-colored glass. Fike’s (1989) nomenclature was used to describe the attributes of these shards.

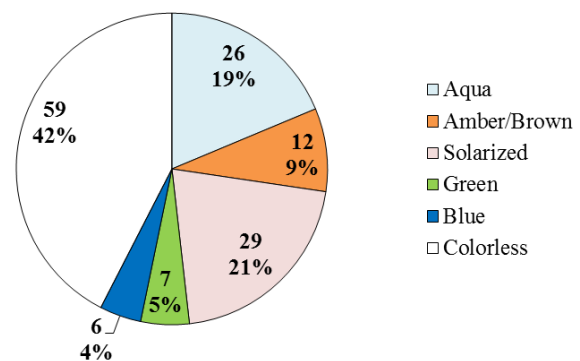


Figure 7. Percent of the MNV of pharmaceutical bottles and jars by glass color.

Bottles and bottle-glass shards representing twelve identifiable pharmaceutical companies were recovered from the midden. They have been grouped by the curative powers. Those discussed first promised that their products would cure stomach and blood ailments – the W.F. Severa Company, George H. Mayr’s Manufacturing Chemist, the Dr. Peter Fahrney and Sons Company, the LAX FOS Medicine Company, and Chapoteaut Paris. The second group of proprietors marketed their products to relieve coughs and the symptoms of lung ailments – Chamberlain’s Medicine Company and Richardson-Vicks, Inc. The third group assured their customers that their products would soothe sore muscles – J.H. McLean Medicine Company and the Ballard Snow Liniment Company. One proprietor is represented in the fourth

group – W.S. Kirby Company, manufacturers of Oxidine – which was advertised to relieve the symptoms of malaria. The last to be discussed represents two companies who sold their products door-to-door by traveling salesmen – the W.T. Rawleigh Medical Company and the J.R. Watkins Company.

W.F. Severa Company

The remains of 22 bottles of various sizes and colors that once contained medicinal products manufactured by the W.F. Severa Company were recovered from the midden. In 1880, W.F. Severa, an emigrant from Czechoslovakia, opened a drugstore in Cedar Rapids, Iowa. In 1901, the retail part of the business was sold, and the company became the W.F. Severa Company – wholesale manufacturers of proprietary medicines. The product line included medicines and personal-care preparations and could be purchased in general stores and pharmacies; the most popular product being Stomach Bitters (Fike 1987:180; Meyer 2014).

The W.F. Severa Company is represented by two whole bottles (Figure 8); the first is an aqua-colored glass bottle exhibiting a tooled oil finish and a Blake base. Blake bottles exhibit a rectangular base with beveled corners, four indented panels, and a rounded shoulder. The Blake bottle was the most common type of bottle used for patent medicines and personal-care products from the 1880s through the 1920s (Embree 2021:57). This bottle was embossed on the side panels with “W.F. Severa // Cedar Rapids, Iowa”. Four additional aqua-colored glass bottles are represented by embossed side panel shards. It is unknown what these bottles contained.



Figure 8. W.F. Severa medicine bottles recovered from the midden, (top) amber-colored glass bottle; (bottom) aqua-colored glass bottle (Photograph by Bryan Jameson).

The company also bottled its products in amber-colored glass bottles. The second whole bottle is an amber-colored bottle, exhibiting the same embossing on its side panels, but differs in that it has a tooled prescription finish and a Monarch base. Seven amber-colored glass panel fragments representing three W.F. Severa Company bottles were also recovered. Severa bottled his Stomach Bitters in rectangular, amber-colored glass panel bottles (often referred to as flasks) as well as in square bottles, the rectangular bottle being the \$0.50 size and the square bottle selling for \$1.00 in 1909 (Meyer 2014). An example of an amber-colored glass rectangular panel bottle of W.F. Severa's Stomach Bitters (not recovered from the site) with an intact paper label is depicted in Figure 9.

The label on this bottle states:

A Valuable Laxative Tonic, Invigorant and Strengtheners of the Digestive Organs. Recommended for Old and Delicate People. Indicated in the Treatment of DYSPEPSIA, INDIGESTION, COSTIVENESS AND INTERMITTENT FEVER (Meyer 2014).



Figure 9. W.F. Severa's Stomach Bitters amber-colored glass panel bottle with label (Meyer 2014).

This nine-ounce bottle contained 25 percent alcohol and cost \$0.50. To comply with the Pure Food and Drug Act of 1906, the company had to include the amount of alcohol used in the formula. According to the label, the formula was revised in 1909. In today's dollars, a 1909 bottle of W.F. Severa's Stomach Bitters would have cost \$16 (CPI Inflation Calculator 2023).

A cardboard box that contained a square bottle provided additional information of its curative powers:

A reliable remedy for dyspepsia, every species of indigestion, intermittent fever and all kinds of periodical disorders. A mild and safe invigorant for delicate females, a good tonic for ordinary family purposes. A powerful recuperant after the frame has been reduced. An excellent appetizer as well as

strengtheners of the digestive forces. An agreeable and mild laxative stimulant. Persons in a debilitated state should commence by taking small doses and increase with their strength (Meyer 2014).

Three solarized-glass bottles of two different sizes are represented by embossed side panels. In addition, the company used colorless-glass bottles. Included in the colorless-glass assemblage are a number of indented side panel shards of various sizes embossed with the name (e.g., "...F. Severa...") or the company's address (e.g., "... Rapids, Iowa"), representing 10 bottles. An additional base/panel shard, embossed with an "I inside a Diamond" trademark (1915-1929) of the Illinois Glass Company, is also represented. It may have contained W.F. Severa's Gothardol. Figure 10 provides an example of this proprietary medicine which exhibits an "I inside a Diamond" trademark embossed on its base and "W. F. Severa // Cedar Rapids, Iowa" embossed on its side panels. The intact label on the front of this bottle was written in English, and the label on the back was written in an East European language. The ingredients on this label listed alcohol and chloroform, and the product was advertised as a liniment.

Since four bottle sizes are represented in the collection, they could have held any number of the products listed in the company's circulars (Figure 11) and almanacs. The company manufactured 32 products (Meyer 2014), a few of which include Severa Antiseptol (mouthwash), Severa Armatic Compounds (internal medicine used to relieve pain in the arms, legs, and back), Severa Baizol (appetite simulant and gas expellant), Severa Regulator (a general tonic for female complaints), Severa Blodal (improves nutrition), and Severa Esko (skin irritations and mosquito repellent).



Figure 12. Mayr's Wonderful Stomach Remedy Company, (left) solarized-glass panel shard recovered from the midden (Photograph by Bryan Jameson); (right) example of a complete bottle of the remedy (eBay 2023c).

Figure 13 provides a testimonial of the curative effects of Mayr's Wonderful Stomach Remedy placed in the *Jacksboro Gazette* by a local pharmacist, dated November 11, 1914. The testimonial was given by T.A. Hensley of Alvarado, Texas:

I have been suffering from stomach troubles for a long time, such as colic attacks, bloating after eating, sick spells, indigestion, constipation and inactive liver and gall stones. Now I do not feel like the same man. I can cheerfully recommend this stomach remedy to all stomach sufferers (Jacksboro Gazette, 11 November 1914).

Mayr's Wonderful Stomach Remedy was comprised of a bottle of medicine and two sachets of powders. The patient was instructed to take the first powder at about 3:00 pm, drink the whole contents of the bottle before bed, and take the second powder in the morning. This remedy was analyzed by the Bureau of Chemistry in a Department of Agriculture report. The report stated that the medicine contained olive oil flavored with fennel. The first powder contained either Rochelle salts (potassium sodium tartrate) or Epsom salts (magnesium sulphate) and the second contained sodium phosphate. Although the medicine was proven effective in emptying the patient's bowels, George H. Mayr was fined \$25.00 for misbranding in September 1916 (National Library of Medicine 2023;

U.S. Department of Agriculture, Bureau of Chemistry 1916:603).

<h2 style="text-align: center;">Texan is Restored by Mayr's Wonderful Stomach Remedy</h2>	
<p>Alvarado Man Gets Appetite and Comfort Back After Taking First Dose.</p> <p>T. A. Hensley of Alvarado, Texas, suffered for a long time from derangements of the digestive tract. He had colic attacks and indigestion. His liver was inactive and he was in pain after eating.</p> <p>He took Mayr's Wonderful Stomach Remedy. From the very first dose it brought swift results. He wrote: "I have taken your treatment for stomach trouble and consider it a Godsend to suffering humanity. I have been suffering from stomach troubles for a long time, such as colic attacks, bloating after eating, sick spells, indigestion, constipation and inactive liver and gall stones. Now I do not feel like the same man. I can cheerfully commend this remedy to all stomach sufferers."</p> <p>Mr. Hensley's experience is typical of those of the thousands who</p>	<p>have taken Mayr's Wonderful Stomach Remedy with such success. The first dose proves.</p> <p>Mayr's Wonderful Stomach Remedy clears the digestive tract of mucoid accretions and removes poisonous matter. It brings quick relief to sufferers from stomach, liver and bowel troubles. Many declare it has saved them from dangerous operations and many are sure that it has saved their lives.</p> <p>We want all people who have chronic stomach trouble or constipation, no matter of how long standing, to try one dose of Mayr's Wonderful Stomach Remedy—one dose will convince you. This is the medicine so many of our people have been taking with surprising results. The most thorough system cleaner ever sold. Mayr's Wonderful Stomach Remedy is now sold here by J. H. Walters and druggists everywhere.</p>

Figure 13. Mayr's Wonderful Stomach Remedy testimonial on the first page of a Jacksboro, Texas newspaper, dated November 11, 1914 (Jacksboro Gazette, Jacksboro, Texas 11 November 1914).

Dr. Peter Fahrney and Sons Company

A MNV count of four was assigned to this proprietor. A medicine bottle representing the Dr. Peter Fahrney and Sons Company consists of a solarized-glass indented-front panel shard embossed with "...RED BY / DR. FAHRNEY & SONS C... / ...AGO ILL. U.S.A." (Figure 14). Three additional colorless-glass panel shards representing three bottles were also recovered. The first was embossed with "...EY & SONS..."; the second with "...CAGO ILL..."; and the third with "...ILL...". All three shards were similar in thickness and size.



Figure 14. Solarized-glass panel shard recovered from the midden, representing the Dr. Peter Fahrney and Sons Company, embossed with “...RED BY / DR. FAHRNEY & SONS C... / ...AGO ILL. U.S.A.” (Photograph by Bryan Jameson).

Before the Civil War, Dr. Peter Fahrney took courses at Jefferson Medical College of Philadelphia and Philadelphia School of Pharmacy, afterwards practicing medicine in Pennsylvania and Maryland. After the war, he moved to Chicago and began manufacturing medicines. In 1889, he and his four sons incorporated as Dr. Peter Fahrney and Sons Company. The company produced several products, but the most widely advertised was “Dr. Peter’s Blood Vitalizer” (Bay Bottles 2018). One advertisement, dated March 14, 1901, placed in the *National Tribune*, describes the medicinal benefits of taking Dr. Peter’s Blood Vitalizer:

Cure your Rheumatism quickly and surely, have the tortures of swollen joints and muscles banished, have comfort and rest brought to your aching limbs and frame by cleaning the blood – the curse of all your troubles. Drive out the impurities of your blood and nourish it with Dr. Peter’s Blood Vitalizer (Bay Bottles 2018).

LAX FOS Medicine Company

The MNV count for this proprietary medicine is two. A solarized-glass panel bottle containing a laxative manufactured by LAX FOS Medicine Company is represented by an indented panel embossed with “...FOS...”. This product was also bottled in colorless-glass bottles. Two indented side panel shards embossed respectively with “WINSTE...” and “...AX...” were recovered from the midden (Figure 15). This product was first manufactured by the S.H. Winstead Medicine Company in Paducah, Kentucky in the 1870s until its formula was sold to the Paris Medicine Company of St. Louis, Missouri in 1916. LAX FOS was manufactured through the 1950s and sold primarily in the South (Arner 1916:26; Virginia Commonwealth University Special Collections and Archives 2022). An example of a bottle of Winstead’s laxative, dated to 1908-1914, is provided in Figure 15.



Figure 15. Winstead’s Lax-Fos, (left) two side panel sherds embossed with “...WINSTE... and ...AX...” recovered from the midden (Photograph by Bryan Jameson); (center and right) representatives of bottles containing Winstead’s Lax-Fos (National Museum of American History 2022; WorthPoint Corporation 2023).

According to the label, LAX FOS would “cleanse the system thoroughly in biliousness, constipation, sick headache, sour stomach, colds, heartburn” (National Museum of American History 2022). An advertisement placed in the June 1, 1922 edition of the Bamberg Herald of South Carolina states that one must take this medicine for two to three weeks in order to “induce regular action” (Figure 16). With 12 percent alcohol, it should indeed be “Very Pleasant to Take” (Bamberg Herald, 1 June 1922).

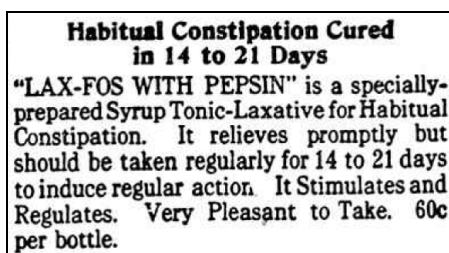


Figure 16. Winstead's LAX FOS advertisement in a 1922 Bamberg, S.C. newspaper (Bamberg Herald, Bamberg, South Carolina. 1 June 1922).

Chapoteaut Paris

An aqua-colored glass panel shard embossed with “PARIS” may represent a bottle embossed with “CHAPOTEAUT // PARIS”. Edmond Fougere, a native of France, living in New York in the 1840s, began importing cod liver oil from France. The company was sold after the Civil War, but it retained its name and product line which expanded to include other French- and English-made medicines, like Vin Chapoteaut (Fike 1987:158). Depicted in Figure 17 is an 1894 advertisement for Vin Chapoteaut in the *Boston Medical and Surgical Journal*. The advertisement stated that this peptone wine is recommended for

constitutional weakness or lack of digestive power for old, anemic, dyspeptic, and convalescent patients. It is extensively prescribed in the Paris Hospitals in cases of insufficient nutrition, as in Cancer, Consumption,

Diabetes, Bright's Disease, Ulceration of the Stomach, and other wasting diseases (Period Paper Historic Art, LLC. 2022b).

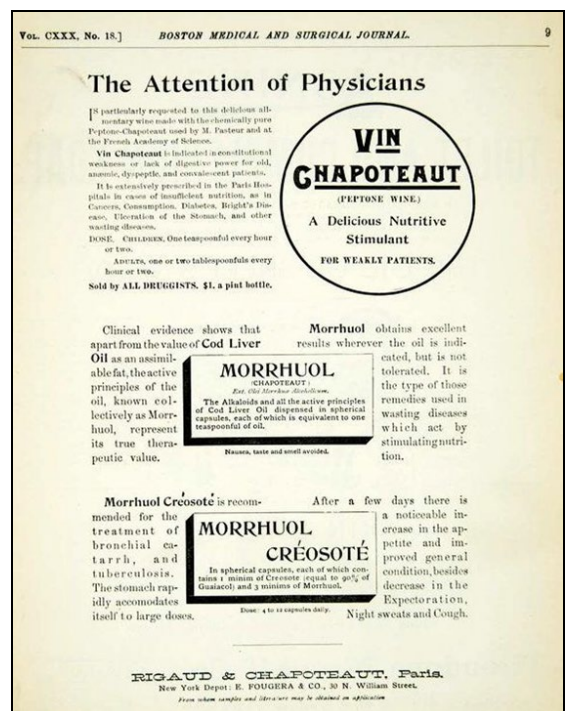


Figure 17. 1894 Vin Chapoteaut advertisement (Period Paper Historic Art, LLC., 2022b).

A small Chapoteaut Paris bottle is depicted in Figure 18.



Figure 18. Example of a small Chapoteaut Paris panel bottle with embossing similar to the shard embossed with “PARIS” found in the midden (eBay 2023a).

Chamberlain's Medicine Company

The MNV for the Chamberlain's Medicine Company is seven. One complete aqua-colored glass panel bottle with four indented panels embossed with "CHAMBERLAIN'S / COUGH REMEDY" on the front panel, and "CHAMBERLAIN MED. CO. // DES MOINES, IA, U.S.A." on the two side panels was recovered from the midden. It exhibits a tooled oil finish and a Blake base (Figure 19). Panel shards representing six additional aqua-colored glass bottles of three different sizes were identified in the assemblage. One of the shards was embossed with "...AIN... /...NT", may represent a bottle containing CHAMBERLAIN'S / LINIMENT (Fike 1987:133-134).



Figure 19. Chamberlain's Medicine Company bottle recovered from the midden (Photograph by Bryan Jameson).

In 1873, Lowell and Davis Chamberlain started a drug company in Des Moines, Iowa. In 1881, they introduced one of their most popular products, the cough remedy. Twelve years later, Chamberlain's Medicine Company was incorporated, and it achieved national and international distribution. Its product line included Chamberlain's Colic, Cholera, and Diphtheria Remedy, Chamberlain's Pain Balm, and Chamberlain's Hand Lotion. In 1930, the business was sold to the William R. Warner Company of New York City (Fike 1987:205-206; The Virtual History Museum, Douglas County Colorado 2013; Wilson 1911:110).

Cough Syrup

A fragment of an aqua-colored panel bottle embossed with "...UGH S..." may represent a bottle containing cough syrup. Americans of the late nineteenth century feared contracting tuberculosis and most proprietary medicines selling pectorals warned potential customers not to ignore a cough, since it could later develop into a serious illness like tuberculosis. Cough syrups were labeled as cough remedies, cough balsams, and cough cures. Their common ingredients contained alcohol, morphine, and chloroform. The chloroform quieted the cough, while the morphine and alcohol relaxed the body (Adams 2020 [1907]:45).

Richardson-Vicks, Inc.

Two jars of Vicks VapoRub are represented by five cobalt-blue base shards. The first is embossed with an inverted "...V · VIC..." The second is embossed with "...VICKS..." and a trademark of three intertwined Vs placed within a circle (Figure 20 provides an example). Two cobalt-blue threaded rims and four body shards recovered from the midden may be parts of these jars. An early trademark of Vicks VapoRub used from the 1910s through the 1930s was a triangle placed within a larger triangle. Jars manufactured after that were embossed with "Vicks / VapoRub" and three intertwined Vs placed within a circle (Glass Bottle Marks 2023i).



Figure 20. Base of a Vick's VapoRub jar with similar embossing to that found on one of the cobalt-blue base shards recovered from the midden (eBay 2023e).

In 1890, pharmacist Lunsford Richardson of Selma, North Carolina, took over the retail drug business of his brother-in-law Dr. John Vick, of Greensboro, North Carolina who was selling Vick's Family Remedies. The most popular remedy was Croup and Pneumonia Salve. In 1905, it was reintroduced as Vicks Magic Croup Salve, and rebranded in 1912, as VapoRub. The salve contained menthol, camphor, oil of eucalyptus, and other oils, blended in a base of petroleum jelly. It was advertised as a cough suppressant and nasal decongestant when applied to a patient's chest. The Spanish Influenza epidemic of 1918 increased sales of VapoRub from \$900,000 to \$2.9 million in just one year (Tomlin 2012; Walters 2020; Wikipedia 2022j). Figure 21 depicts a newspaper advertisement stating that the epidemic was "Simply the Old-Fashioned Grip Masquerading Under a New Name" (Walters 2020).



Figure 21. Vicks VapoRub advertisement, ca. 1918 (Walters 2020).

Dr. J.H. McLean Medicine Company

The MNV count for Dr. J.H. McLean Medicine Company is two. Two panel fragments of an aqua-colored glass bottle embossed respectively with "...LCANIC..." and "Mc..." represents a bottle containing Dr. J.H. McLean's Volcanic Oil Liniment. In 1849, J.H. McLean began his career in the patent medicine business as George A. Westbrook's partner in St. Louis, Missouri, selling Mexican Mustang Liniment. Two years later, he created his own brand, Dr. McLean's Volcanic Oil Liniment. Pictured in Figure 22 is a photograph of a representative bottle. The liniment contained turpentine oil, oils of camphor, sassafras, flaxseed, and pine. In 1863, McLean graduated from St. Louis Medical College and began expanding his product line. His sons ran the company after his death in 1886. An 1895 advertisement in a Jacksboro, Texas newspaper (Figure 23) claimed that the liniment would relieve "Pain from sprains, bruises, cramps, diseased or torn flesh, aches, wounds, Neuralgia [pain caused by nerve damage], etc." (Jacksboro Gazette, 7 February 1895). In 1901, the company's almanac (Figure 24) featured a number of products: J.H. McLean's Strengthening Cordial and Blood Purifier, Liver and Kidney Balm, Catarrh Snuff, Tar Wine Lung Balm, Vegetable Condition Powder, and Eye Salve. The J.H.

McLean Medicine Company also printed its almanac in German and Czech (Figure 24). The company stayed in business through the early 1970s. Today, Volcanic Oil is manufactured by Oakhurst Company of Levittown, New York (Fike 1987:194; Huetsch 2019; Museum of Health Care at Kingston 2022; Oakhurst Company 2023). The liniment was and is marketed to relieve muscle and joint pain (Amazon 2022).



Figure 22. Representative bottle of Dr. J.H. McLean's Volcanic Oil Liniment (WorthPoint Corporation 2022d).



Figure 23. Advertisement of Dr. J.H. McLean's Volcanic Oil Liniment in an 1895 Jacksboro, Texas newspaper (Jacksboro Gazette, Jacksboro, Texas. 1895).

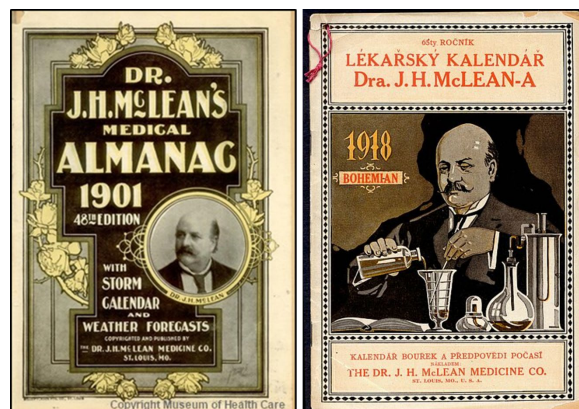


Figure 24. Cover pages of Dr. J.H. McLean's almanacs, (left) Dr. J.H. McLean Medicine Company's 1901 Almanac, printed in English (Museum of Health Care at Kingston 2022); (right) Dr. J.H. McLean Medicine Company's 1918 Almanac printed in Czech (Bohemian) (rdhinstl.com 2023).

One of the most unique artifacts recovered from the midden is an amber-colored glass bottle cap with external threads, embossed with "THE DR. J. H. MCLEAN'S MEDICINE CO. / ST. LOUIS MO." (Figure 25). This cap would have been used on a bottle with internal threads on its finish. This closure/finish is extremely rare and was used primarily on liquor bottles and flasks dating from 1861 to the late 1870s (Lindsey 2021e). No examples of a similar cap or internally threaded bottle could be found in the literature or through an internet search. It possibly served as the closure for a J.H. McLean's Volcanic Oil Liniment bottle. Today, the Oakhurst Company's liniment is enclosed with a metal cap that is labeled with the same format (Figure 26).



Figure 25. Dr. J.H. McLean's amber-colored glass cap with external treads, recovered from the midden, (left) top view; (right) side view (Photographs by Bryan Jameson).



Figure 26. Note that the labeling of the cap of this modern bottle of Dr. J.H. McLean's Volcanic Oil Liniment is similar to the embossing on the glass cap recovered from the midden (Valdez 2021).

Ballard Snow Liniment Company

The MNV count for Ballard Snow Liniment Company is two. A Ballard Snow Liniment Company bottle is represented by an aqua-colored front panel shard embossed with “...SNOW / ... CO. / ...MO”. It is similar to the one depicted in Figure 27. An additional panel shard embossed with “...MO.” with

the same font and size may also represent a bottle of this proprietary medicine.

The Ballard Snow Liniment Company was established by James F. Ballard of St. Louis, Missouri in the mid-1880s. The product contained turpentine and oil of horseradish reported in *The Composition of Certain Patent and Proprietary Medicines*, published by the American Medical Association (Fike 1987:133; Finchman 2022; Street 1917:23). This liniment was advertised in a Jacksboro, Texas newspaper (Figure 27) as “A Sure Cure” for rheumatism, sprains, and stiff joints. The advertisement claimed that the liniment’s antiseptic properties would reduce inflammation by penetrating fibrous tissues in order to promote free circulation of the blood and revive the natural elasticity of the muscles. The advertisement also included a testimonial (Figure 28; Jacksboro Gazette, 13 December 1906).



Figure 27. Representative bottle of the Ballard Snow Liniment Co. (National Museum of American History 2023).



Figure 28. Ballard Snow Liniment Co. medicine advertisement in a Jacksboro, Texas newspaper (Jacksboro Gazette, Jacksboro, Texas. 13 December 1906).

W.S. Kirby Company – Oxidine

A solarized-glass oval base shard with a cup-bottom mold seam, embossed with "OXIDIN..." was recovered from the midden. Oxidine was a remedy advertised to treat the symptoms of malaria. It was originally manufactured by the W.S. Kirby Company in Dallas, Texas early in the twentieth century. Kirby owned two Dallas drug stores, both of which operated soda fountains (Chapin 1907). Kirby sold the rights to manufacture Oxidine to Patton-Worsham Drug Company of Dallas in 1908. In November of that year, the United States Attorney of the Northern District of Texas, acting upon a report by the Secretary of Agriculture, filed a notice of judgment against the company for violating the 1906 Pure Food and Drug Act (Wilson 1911). The judgment provided information found on

the bottle labels as well as on the box. The front label on the bottle:

Trade-mark (registered) tasteless Oxidine. Alcohol five percent. Serial number 1271. Guaranteed under the Food and Drugs Act, June 30, 1906. An antidote for malaria, a food digester and constipation remedy. A true tonic and blood medicine. An effective remedy for chills and fevers. A mild liver and kidney medicine, and relieves headache and la grippe. Price 50 cents. Manufactured only by the Patton-Worsham Drug Co., Dallas, Texas. Memphis, Tenn.

The front panel of the carton:

The life is in the blood. To have health the blood must be pure. Malaria poisons the blood and deters the action of the liver. Oxidine is effective in purifying the blood, regulating the liver, and cleansing your system from malaria, the cause of sickness.

The back panel of the carton included a testimonial:

Patton-Worsham Drug Co., Dallas, Texas. Dear Sirs: I want to inform you that Oxidine has relieved me and my family of the worst siege of chills and malaria that I ever saw. After paying the doctors \$50.00 I began the use of Oxidine with the most gratifying results. We are all entirely well now and there has been no re-appearance of malaria in the family for over two months. You are at liberty to use his testimonial in you desire. Yours truly, J.H. Fielding.

The judgment provided the results of an analysis of a sample of Oxidine by the Bureau of Chemistry. It contained 58 percent sugar, 37 percent water, 3 percent alcohol, oil of peppermint, and less than 1 percent cinchona alkaloids.

W.T. Rawleigh Medical Company

The MNV count for W.T. Rawleigh Medical Company is five. The first is represented by a partially refitted solarized-glass bottle. The first shard of this bottle is a front panel shard embossed with “...leigh... / ...MARK”; the second shard is from a side panel embossed with “...D CO”; and the third shard represents a Blake base/panel with an Owens scar. The second bottle is represented by an indented front panel shard embossed with “Rawleig... / TRADE MARK” and the other by a side panel shard embossed with “...AWLEIGH...” (Figure 29). The third is similar to the others described above, and represents an indented front panel embossed with “Rawl... / TRADE...”.

Two additional Rawleigh bottles made from colorless glass are also included in the MNV count. The first includes three refitted front panel shards embossed with “Rawleig... / TRADE MARK”. The second includes two indented panel shards: one embossed with “R...” and the other with “...RAWLEIGH...”.



Figure 29. Shards of a solarized-glass bottle representing the W.T. Rawleigh Medicine Company, recovered from the midden, (left) side panel embossed with “...RAWLEIGH...”; (right) front panel embossed with “Rawleig... / TRADE MARK” (Photograph by Bryan Jameson).

In 1892, William Rawleigh began business making ointments in a small factory in Freeport, Illinois. Four years later, he incorporated and trademarked the name, “Rawleigh’s” and began manufacturing medicinal and non-medicinal products. By

1914, Rawleigh’s was recognized as one of the largest manufacturers and distributors of over 100 medicines, personal care, and cleaning products. In 1916, the company’s name changed to “The W.T. Rawleigh Company.” Instead of selling his products wholesale, he hired “Rawleigh Men” to sell products door-to-door. Figure 30 is a photograph of a Rawleigh Man and his wagon. By 1922, over 20 million customers had admitted Rawleigh Men into their homes, including the Sladkys (Lockhart 2020; Rawleigh’s 2022; Whitten 2018).

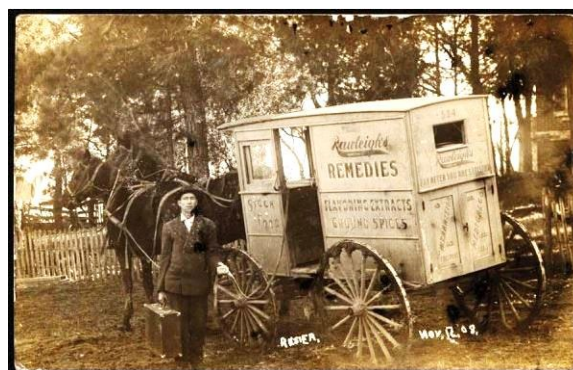


Figure 30. The Rawleigh Man, ca. 1909 (Wikipedia 2022k).

J.R. Watkins Company

The J.R. Watkins Company is represented by two colorless-glass refitted front-panel shards embossed with a large font “...ATKIN...” representing one bottle (Figure 31). An additional colorless-glass base shard exhibiting a Blake base and an Owens scar, was embossed with “CONTAINER / MADE IN USA” may also belong to this bottle (Figure 31 provides an example). This labeling was used on J.R. Watkins Company bottle bases.



Figure 31. J.R. Watkins Company bottle, (top left) refitted colorless-glass panel shards embossed with “...ATKIN...” recovered from the midden (Photograph by Bryan Jameson); (top right) also recovered from the midden – a colorless-glass base shard exhibiting a Blake base and an Owens scar, embossed with “CONTAINER / MADE IN USA” may belong to the same bottle (Photograph by Bryan Jameson); (bottom) examples of an aqua-colored glass bottle, embossed on the front panel with “WATKINS / TRIAL MARK” and “CONTAINER / MADE IN USA” on the base (Glass Bottle Marks 2022). 2022).

J.R. Watkins began selling his home-made J.R. Liniment door-to-door in 1868 in Plainview, Minnesota. The liniment was made with camphor from pine trees and capsicum from red peppers and was advertised to relieve minor muscle aches, soreness, and stiffness. Watkins was so confident of his home-manufactured product that he introduced the Watkins “Trial Mark” bottle, along with the first-ever money back guarantee (see example in Figure 31, “TRIAL MARK” is embossed in a smaller, horizontal font at the top of the front panel). In 1885, he moved his company to Winona, Minnesota and it grew to become one of the largest direct-sales companies in the United States. The company distributed many different types of household products including home remedies, cosmetics, vitamins, food extracts, and cleaning products. In 1904, the company developed the slogan – “When you deal with a Watkins’ agent, you patronize a reliable man” (Digital Public Library of America 2022; Griffin 2012).

Like many large proprietary medicine companies, the J.R. Watkins Company produced an almanac. Figure 32 (left) depicts the cover page of the 1917 Almanac cover showing two women sitting on a porch. In the distance, a man is arriving with suitcases. A horse and carriage is parked behind him. The caption reads, “Waiting for the Watkins man.” The J.R. Watkins Company also advertised in women’s magazines. Figure 32 (right) depicts an advertisement for Watkins Mulsified Coconut Oil Shampoo in the 1920 June issue of the *Ladies’ Home Journal*.



Figure 32. J.R. Watkins publications, (left) cover page of the J.R. Watkins 1917 Almanac (MacClain 2015); (right) advertisement for Watkins Mulsified Coconut Oil Shampoo in the 1920 *Ladies’ Home Journal* (Griffin 2012).

A 1910 photograph of Daniel W. Pflueger and his traveling Watkins Store is depicted in Figure 33.



Figure 33. 1910 photograph of Daniel W. Pflueger, a Watkins traveling salesman (Griffin 2012).

Unidentified Pharmaceutical Bottles

The MNV count for unidentified pharmaceutical bottles is 88. These shards were sorted by glass color.

Aqua-Colored Glass (MNV=6)

A whole aqua-colored glass machine-made rectangular bottle with a bead finish, embossed on its base with “2 FL. OZ” and a “P in a circle”, was recovered from the midden. This mark represents the Pierce Glass Co., in business from 1905-1987 (Lockhart, et al. 2018:87).

Five additional bottles are represented by panel/body fragments: an indented side panel shard embossed with “...H PA.”, an indented side panel shard embossed with “...MEDIC...”, an indented side panel shard embossed with “...GE...”, an indented side panel shard embossed with “...NS...”, and an oval body shard embossed with “...Mc...”. Once bottle manufacturing became fully automatic in the 1920s, embossing fell out of use (Fike 1987:5).

Included in this category are two base shards – one exhibiting a Blake base and an indented front panel, the other, an oval body/base of a small cup-bottom mold bottle. These may belong to two of the panel/body shards described above. The assemblage also includes six finish shards – a tooled patent finish, a tooled bead finish, and four neck/finish fragments exhibiting tooled oil finishes.

Amber-Colored Glass (MNV=7)

Seven unidentified amber-colored glass bottle bases were also recovered. These include three cylindrical shards exhibiting cup-bottom mold seams, an oval-shaped shard with a cup-bottom mold seam, a rectangular bottle with a cup-bottom mold seam, and two rectangular bottles exhibiting the Illinois Glass Company “I inside a Diamond” trademark (1915-1929)

(Lockhart, Schulz, Schriever, Lindsey, and Serr 2016b:368, 376). Also included are three panel shards, a prescription finish/neck of a small square panel bottle, and an externally threaded finish shard of a small bottle.

Solarized Glass (MNV=22)

Based on their size and shape, 22 finish/neck shards were determined to belong to pharmaceutical bottles. Pharmaceutical bottles tend to have short and narrow necks and mouths and expanding shoulders (Fike 1987:13-17; Lindsey 2023). Included in the assemblage are eight tooled oil finishes, one improved tooled finish, five tooled patent finishes, one tooled brandy finish, one prescription finish, three double-ring finishes, one machine-made patent finish, and two machine-made brandy finishes. None of these shards appear to be part of any of the solarized-glass bottles previously described.

Not included in the MNV are panel and base shards. These include three panel shards embossed with “...MEDI...”, “...W...”; and “...AD’S”. Base fragments represent 15 bottles. These include five bases of rectangular bottles exhibiting Blake bases, two of which have cup-bottom mold seams and three of which exhibit Owens suction scars. Oval bottle bases include three base fragments with cup-bottom mold seams, one with a post-bottom mold seam, two exhibiting Elixir or Handy bases, and one exhibiting a Slender Handy base. Three base shards representing cylindrical bottles include two exhibiting cup-bottom mold seams and a machine-made cylindrical bottle exhibiting an Owens scar.

Green-Colored Glass (MNV=7)

Six of the 64 green glass panel shards were embossed with the capital letters of proprietors’ marks. These include “...NSFIE...”, “...SFO...”, “...LEE...”, “...A...”,

“...MPH...”, and “...MEDIC...”. None could be refitted. Also included was a beveled rectangular or square base/panel shard embossed on the lower part of the panel with “...C...”. It did not appear to be associated with any of the panel shards.

Blue-Colored Glass (MNV=4)

Two light-blue colored glass threaded rim shards of a small jar and two body shards of the same color, possibly represent one bottle. Also, three distinct base/body shards of different shades of blue are also included in the unidentified pharmaceutical category.

Colorless Glass (MNV=42)

Colorless-glass pharmaceutical bottles are represented by an oval machine-made bottle embossed with an ascending scale of numbers “10,” “20,” “30,” “40,” and “50”. These numbers probably represent milliliters. Ten milliliters is equivalent to two teaspoons. The Federal Food, Drug and Cosmetic Act of 1938 required that drugs be labeled with directions for dosage. Oval bottles were the most popular type of druggist bottle styles (Lindsey 2023).

The colorless-glass base shards were separated into two groups. The first group consists of 11 shards that exhibit embossing. The first two are represented by base shards of two small oval bottles, one exhibiting a Slender Handy base and the other, a Crown Oval base, both embossed with a “J” placed within a keyhole. This was the trademark of the Knox Glass Bottle Company, and it was used on containers made at the company’s Jackson, Mississippi factory from 1932 through 1953 (Glass Bottle Marks 2023f). The third is represented by a base shard exhibiting a circular cup-bottom mold seam and embossed with “...FG’ CO” and “...LA...”, the fourth, by a small rectangular Blake base shard embossed with the Illinois Glass Company trademark – a Diamond with the number 369 placed within its

center. This number represents a mold type and was used on bottles produced in the 1910s through the 1920s (Glass Bottle Marks 2023c). The fifth through ninth are represented by an oval base shard and four rectangular base shards embossed with the “I inside a Diamond” trademark of the Illinois Glass Company of Alton, Illinois from 1915 through 1929 (Glass Bottle Marks 2023e). The tenth representative is a cylindrical bottle base shard embossed with the “Diamond Oval I Entwined” trademark of the Owens-Illinois Glass Company. This company formed when Owens Bottle Company of Toledo, Ohio and Illinois Glass Company of Alton, Illinois, merged in 1929 (Glass Bottle Marks 2023h). The eleventh representative is a rectangular base shard exhibiting the “Diamond Oval I Entwined” trademark and the cursive script of Duraglas which was used on bottles dating from 1940 through the 1970s (Glass Bottle Marks 2023d).

The second group consists of 38 remaining base shards, some of which were refitted. From this, a MNV count of 30 was assigned.

Also represented in this category are a number of finishes representing 19 bottles. These include one tooled oil finish shard, one tooled collared ring finish shard, one small fragment of a bead finish shard, two tooled patent finish shards, and one improved tooled oil finish shard. The improved tooled finish is often found on bottles dating to the end of the mouth-blowing era (1895-1900) (Lindsey 2010:18). Also included are two machine-made oil finish shards, four machine-made double ring finish shards, and seven externally threaded finish shards.

In addition, three panel shards representing two bottles: one shard exhibits a graduated scale of lines and numbers: “[line] 120 [line] [line] 130”; and the second is represented by

two fluted panels of an oval bottle, possibly representing a personal-care product.

Summary

Over the course of 50 years, the Sladky family purchased a number of pharmaceutical products, many of which were patent medicines. The brands identified were advertised to relieve upset stomachs and respiratory illnesses. They also purchased a couple of brands of liniments to sooth sore muscles and joints. It appears that the W.F. Severa Company brand was their first choice for relieving stomach discomfort. The company published an almanac in the Czechoslovak language which may have appealed to the family. With various sizes of bottles recovered, they may have held different medicines such as Severa's Stomach Bitters, Severa Baizol, or Severa Regulator. Other brands purchased by the Sladkys advertised to cure stomach troubles included George H. Mayr's Wonderful Stomach Remedy, Dr. Peter Fahrney and Sons Blood Vitalizer, and LAX FOS. During a time when many people suffered from respiratory illnesses such as tuberculosis and pneumonia, the symptoms brought on by the common cold could be a reason for concern. The Sladkys purchased a number of products to relieve coughs, these included Chamberlain's Medicine Company Cough Remedy and Vicks Vaborub. Apparently, a member of the family suffered from chills and fever brought on by malaria and purchased Oxidine to relieve these symptoms. Two liniments identified were Dr. J.H. McLean's Volcanic Oil Liniment and Ballard's Snow Liniment. A large number of unidentified and unembossed bottle bases, panels/bodies, and finishes may represent medications formulated by the "ethical" pharmaceutical industry or by local pharmacists. Medications were also purchased from traveling salesmen

representing the J.R. Watkin's and the W.T. Rawleigh Companies.

FOOD AND BEVERAGE CONTAINERS

The MNV count for food and beverage containers is 46. This subcategory consists of a whole bottle and fragments of food/condiment containers (N=7), beverage bottles (N=13), and canning jars (N=26). The food/condiment bottles are represented by distinctive body shapes, finishes, and bases made from aqua-colored and colorless glass. Beverage bottles are represented by distinctive finish and base shards. Canning jars are represented by externally threaded rims (finishes), cylindrical body and base shards made from aqua-colored, Ball blue, green, and colorless glass. Also included in this category are canning jar lids, most of which were made from milk glass.

Heinz Company

An aqua-colored, rectangular base/indented panel shard exhibiting a cup-bottom mold seam and embossed with "...NZ CO", represents a H.J. Heinz Company condiment bottle. In 1869, Henry J. Heinz founded Heinz Noble and Company with a friend, L. Clarence Noble, and began making his mother's horseradish. The company went bankrupt in 1875. The following year Heinz founded another company, F. & J. Heinz, with his cousin, Frederick Heinz and his brother John Heinz. One of this company's first products was Heinz Tomato Ketchup. The company continued to grow and in 1888, Heinz bought out his two partners and reorganized the company as the H.J. Heinz Company. Its slogan, "57 Varieties" was introduced in 1896. Its product line included mustard, catsup, pickle relish, sauerkraut, gherkins, pickled cauliflower, and chow chow. The majority of bottles containing H.J. Heinz Company condiments and pickles were embossed with the company's name/logo on

the base (D'Costa 2012; Lockhart, Schriever, Lindsey, and Serr 2016:117-118). However, this fragment is different in that the company's name is embossed on the bottle's panel. An example of a similar whole bottle is depicted in Figure 34.



Figure 34. Representative example of a rectangular-shaped H.J. Heinz Co. condiment bottle with H.J. Heinz Co. embossed on the indented panel (Lockhart et al. 2016:118).

Horseradish Bottle

A square-shaped, aqua-colored panel bottle (Figure 35) with a wide mouth and a tooled patent finish may represent a container for horseradish. A ring encircles the bottle at the junction of the neck and shoulder. As with many food/condiment bottles, horseradish was bottled in various shaped bottles, but the ring at the junction of the neck and shoulder, was a favored design for horseradish products (Fike 1987:10). The base of the bottle exhibits a valve mark, a definitive indication of machine-made manufacture by a press-and-blow machine, used in the late nineteenth and early twentieth centuries. A valve mark is usually perfectly round and roughly 1/2 inch in diameter (Lindsay 2021c).



Figure 35. Condiment bottles recovered from the midden, (left) an aqua-colored panel bottle with a wide mouth and a tooled patent finish that may represent a container for horseradish; (right) base of a French's Mustard jar embossed with "DESIGN PAT'D" and "FEB 23-15" (Photograph by Bryan Jameson).

French's Mustard

A French's Mustard jar is represented by a machine-made, colorless-glass circular base shard embossed around its circumference with "DESIGN PAT'D" and "FEB 23-15" with the number "4" in the center (Figure 35). This embossing is unique only to French's Mustard. The jar would have had its shoulder embossed with "IT'S FRENCH'S".

In the late nineteenth century, Robert and George French established the R.T. French Company. After the death of Robert in 1893, George developed a creamy yellow mustard. In 1904, his brother Francis introduced French's "Cream Salad Brand" at the St. Louis World's Fair. By 1921, French's Mustard had adopted its trademark – a red flag – and began advertising to the general public (French's Mustard 2017). Figure 36 depicts a 1922 advertisement for the Cream Salad Mustard.



Figure 36. A 1922 advertisement for French's Cream Salad Mustard (Wikipedia 2022e).

Other Food Jars

Four food/condiment jars are represented by wide-mouthed finish shards, one of which consists of two refitted aqua-colored glass tooled patent finish/short neck shards, the second by an aqua-colored glass tooled patent finish shard, the third by a colorless-glass tooled patent finish, and the fourth by a colorless-glass flat-collared ring finish shard.

The Sladkys purchased condiments to flavor their foods. These included French's Mustard, horseradish sauce, and any number of condiments ranging from catsup to pickle relish bottled by the J.H. Heinz Company.

Small Bottles and Jars

Twenty-seven colorless-glass circular base shards representing 21 small bottles/jars were also recovered from the midden. Ten of the shards exhibited no embossing, and all have cup-bottom mold seams surrounding their heels. Sixteen of the base

shards exhibited stippling, a technique first used by Owens Illinois Glass Co. on bottle/jar bases in 1940. Stippling consisted of tiny dots poked into the baseplate of the mold. This process aided in preventing shallow cracks from developing in the base during rapid cooling. Other glass manufacturers adopted the technique. The stippling on these shards varies; some seem to have been more uniformly applied, while others have a more random appearance. Two of the base shards have stippling on their heels. Two additional stippled base shards have a polygon design embossed on their surfaces. In 1940, the company created a new formula which was stronger and used less glass in container production. The result was Duraglas. The name Duraglas is often embossed on the bases of bottles/jars that exhibit stippling (Lockhart and Hoenig 2018:305-306).

Beverage Bottles

The MNV count for this category – beverage bottles – is 13. It is represented by shards of alcohol, beer, and soda/mineral water bottles. Alcohol bottles can often be classified based on their specific finishes such as brandy and champagne, or by their shapes, such as whiskey flasks. Beer bottles are similar in shape to soda or mineral water bottles and often exhibit crown finishes. Beer bottles tend to be made from amber-colored glass while soda/mineral water bottles tend to be manufactured from aqua, solarized, green, and colorless glass. Older soda bottles were made from thicker and heavier glass and may exhibit a blob finish (Lindsey 2021f).

Aqua-Colored Glass (MNV=1)

An aqua-colored shard exhibiting a blob tooled finish may represent a soda bottle that employed a Hutchinson stopper (Figure 37). Because of the pressure placed on the bottle with carbonated soda, the finish had

to be strong enough to hold a cork in place. When a cork was used, a wire was placed over the top of the bottle and secured around the neck (Munsey 1970:104). In 1879, Charles Hutchinson invented an internal stopper that replaced the cork closure on blob-top bottles and called it the Hutchinson stopper. The Hutchinson stopper consisted of a rubber gasket and two metal plates which were attached to a wire spring loop. When inserted into the bore of a bottle the internal pressure of the soda held the plates/gasket against the inside of the bottle, sealing the product. The contents were accessed by pushing down on the top of the wire spring loop which released the pressure and opened the closure. Between the mid-1880s and 1905, the Hutchinson closure was a common closure found on American soda bottles, eventually being surpassed by the crown cap/finish in the 1910s (Lindsey 2021f).

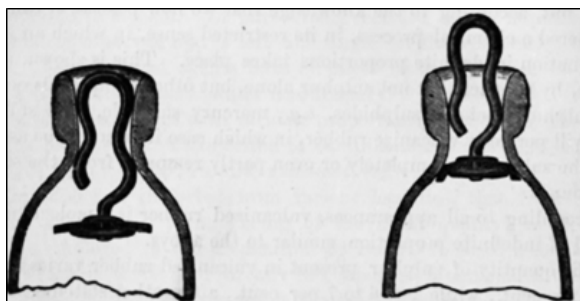


Figure 37. Hutchinson closure design (Chest of Books 2023).

Solarized Glass (MNV=4)

Two solarized-glass liquor bottles are represented by two large brandy finish/neck shards. Two very thick body shards exhibiting different amethyst hues may represent two soda bottles. Also included are two refitted shards of a heavy cup-bottom mold bottle, which may be associated with one of the soda bottles described.

Amber-Colored Glass (MNV=3)

A MNV count of three has been determined for the amber-colored glass beverage bottle assemblage. Two of the bottles are represented by two finish shards, one exhibiting a crown finish and the other, a machine-made brandy finish, respectively representing a beer bottle and a liquor bottle. One of the bases that may be associated with the crown-finish shard. It is embossed with the “I inside a Diamond” trademark and was used by Illinois Glass Co. from 1915-1929 (Lockhart, Schulz, Schriever, Lindsey, and Serr 2016a:368; Lockhart, Lindsey, Serr, Schulz, and Schriever 2022:497).

The third beverage bottle is represented by a circular base made from dark-brown, thick glass, exhibiting a cup-bottom mold seam and embossed with “...ENTED NO...”. This fragment has a fluted design extending upward from the cup-bottom mold seam (Figure 38). This design was patented by Robert H. Lewis for the Charles Boldt Glass Company on November 30, 1897 (Burke 2016). Lewis applied for a liquor bottle patent on September 20, 1897 and received it on November 30th. The patent drawing depicts flutes extending down the neck and around the heel of the bottle. The base was embossed with “DESIGN PATENTED [arch] / NOV. 30 1897 [inverted arch]”. The patent also exhibits a cup-bottom mold seam and a brandy finish (Schulz, et al. 2014; Lindsey 2022). This shard may represent a bottle that once held Hayner Whiskey. A cylindrical body shard of the same dark-brown color may be part of this bottle. It is embossed with “...R... / ...IO...” (if complete – “HAYNER WHISKEY DISTILLERY / TROY OHIO”). Figure 39 provides photographs of embossed Hayner Whiskey bottles made from colorless and amber glass. Munsey (2013:11-12) noted that the company also bottled its whiskey in dark purple and solarized glass bottles.



Figure 38. Shards representing Hayner Whiskey bottles recovered from the midden, (left) dark-brown glass base embossed with “...ENTED NO...”, note the fluting above the heel; (right) colorless-glass body and base shards, base embossed with “...DESIGN PATENTED...” (Photographs by Bryan Jameson).



Figure 39. Hayner Whiskey bottle attributes, (left) note the fluting on the neck, shoulder, and above the heel, as well as the embossing on the bottom of the body with “DISTILLERY / TROY OHIO” (Holabird Western Americana Collections 2023); (right) note the embossing “DESIGN PATENTED / NOV 30TH 1897” on the base (Burke 2016).

Colorless Glass (MNV=4)

The assemblage includes six colorless-glass bottle shards that may also represent four Hayner Whiskey bottles. The attributes of these shards resemble the patented bottle shape, designed by Robert H. Lewis described above. The first is represented by a base shard embossed with "...DESIGN PATENTED..." (Figure 38). The second and third by base shards embossed with "...V 30th...". The fourth is represented by two refitted slightly tinted aqua-colored glass finish/neck/shoulder shards, one exhibiting an improved tooled brandy finish with fluting extending towards the shoulders and the other, a fluted shoulder shard.

In 1866, Lewis Hayner founded the Hayner Distilling Company in Troy, Ohio. Over the next 50 years, Hayner Distilling grew to be one of the largest distilleries in Ohio. It was the largest mail-order whiskey business in the United States because its spirits were more affordable than most. In 1898, one could receive four quarts of Hayner Rye Whiskey in the mail for the prepaid price of \$3.20 (\$116 in today's dollars; CPI Inflation Calculator 2023), as depicted in an advertisement (Figure 40). The vast majority of Hayner's business was made illegal with the passage of the Webb-Kenyon Interstate Liquor Act of March 1913 which prohibited the shipping of liquor to "dry states" from "wet" ones, although enforcement of this law did not really occur until 1917. At that time, Texas was not a "dry state" (Burke 2016; Munsey 2013; World Population Review 2023). Despite the fact that the distillery often advertised its products "for medicinal purposes," the distillery closed its doors in 1920 with the passage of the National Prohibition Act (Hayner Distilling Company 2022). Since four of these bottles are represented in the assemblage, the Sladkys may have been enticed by the advertisement and purchased some whiskey through the mail.



Figure 40. Advertisement for Hayner's Rye, selling it directly to the customer (Bottle Pickers 2022).

A thick cylindrical, colorless-glass body shard, embossed with "W FORB..." may represent a Beaver Bank Mineral Water bottle. This mineral water was produced by Walter Forbes and Company of Edinburgh, Scotland. Information from *Trade Marks Journal*, April 16, 1890, reprinted in *The Chemist & Druggist: The Newsweekly for Pharmacy*, Volume 36 (1890:561), stated that W. Forbes and J. Hindes, trading as Walter Forbes and Company of Beaver Bank, Edinburgh, had applied for a trademark, that being a sketch of a beaver. It is possible that the Sladkys purchased an imported mineral water while on a trip to Weatherford or Fort Worth.

In summary, so few soda and beer bottle shards were recovered from the midden. It is possible that the Sladkys were not spending their disposable income on these products. Another explanation is that the soda and beer bottles were recycled. Second-hand bottle dealers paid from 1/2 of a cent to two cents for each bottle around the turn of the century (Busch 1987:70). However, prior to Prohibition, the family

did purchase at least five bottles of Hayner Whiskey.

Canning Jars

The MNV count for canning jars is 26. Mouth-blown canning jars were commonly made in post-bottom molds from the mid-nineteenth century through the early years of the twentieth century. Soon after, mouth-blown cup-bottom molded canning jars appear. During this time, a number of glass manufacturing companies were experimenting with manufacturing canning jars in press-and-blow semi-automatic bottling machines. Jars manufactured in these machines do not have seams around their heels or on their bases (as mouth-blown jars do); instead, they have a valve or ejection mark on the base. However, some semi-automatic manufactured canning jars exhibit unique features, such as a baffle mark that somewhat resembles an Owens scar on the base, or a cup-mold-like seam around the heel (Lindsay 2021b; Lockhart, et al. 2013:61, 76; Tooley 1953:452).

Aqua-Colored Glass (MNV=4)

Shards belonging to four aqua-colored canning jars were recovered from the midden. The first jar is represented by five shards of a two-quart jar. Two of its base shards were refitted and three of the body shards were embossed with an arched "...SON'S", horizontal "P...", and "...TENT" (if complete, "Ball / MASON'S [arched] / PATENT [horizontal]"), dating to 1900-1920 (Toulouse 1971:33). The refitted base shards exhibit valve marks created by a press-and-blow machine. In 1889, Ball patented and started to use a semi-automatic glass blowing machine known as the "F.C. Ball Machine." This was one of the first semi-automatic machines to go into operation in the country, gradually replacing mouth-blown canning jars (Berge 1980:101).

The remaining three aqua-colored Ball canning jars are represented by body shards that are similar to those described above, embossed with "MASON'S [arched] / PATENT [horizontal]". The first representative body shard is embossed with "...ON'S / ...EN...". The second is represented by two refitted body shards embossed with "...AS... / PAT...", and the third by a body shard embossed with "...AS...". These may represent quart-sized jars. Additional shards of canning jars include five aqua-colored refitted shards with externally threaded rims that may be associated with one of the canning jars described above.

Ball-Blue-Colored Glass (MNV=6)

The Ball Company made a distinct "Ball blue" canning jar from 1909 through the 1930s (Lindsey 2020a; Lockhart, et al. 2013:64-65). This color is more intense than other aqua-colored canning jars of this time period. The assemblage includes 14 base fragments, some refitted, representing six canning jars, all of which are two-quart in size. The first canning jar is unique in that it consists of four refitted base shards, three of which have seeds embedded in glass bubbles (common on early bottles made by press-and-blow semi-automatic machines), possibly manufactured in a F.C. Ball machine (Lockhart et al. 2013:67-68). The second, third, and fourth Ball blue canning jars are represented by base shards with valve marks made by a press-and-blow machine, possibly a Ball or a Ball-Bingham machine, patented in 1910 (Lockhart et al. 2013:69). The fifth and sixth Ball blue canning jars are represented by base shards exhibiting thick base/heels and cup-bottom mold seams, a diagnostic attribute of a semi-automatic Haley-Bridgewater machine, patented in 1899 (Lockhart et al. 2013:81-82).

Also included in the assemblage are three embossed body shards; the first is embossed with “...SO... [arched] / ...T... [horizontal, only the top of the letter T is visible]”, and the second is embossed with “...ll [cursive letters in *Ball* that terminate with the last L]”. There were multiple manufacturing dates for this rendition, which include “*Ball* / IDEAL”, “*Ball* / THE Mason”, and “*Ball* / MASON’S [arched] / PATENT [horizontal]” (Toulouse 1971:30-33). Based on the color of glass used, it probably dates to the 1910s-1930s (Lockhart et al. 2013:74). The third canning jar body shard embossed with one of Ball Brothers’ distinct trademarks – a slanted cursive script known as the “3 Ls.” The last L in the word *Ball* extends towards the right and loops to form the third L, and then extends toward the left as a straight, diagonal line (Figure 41) (Brantley 1975:16). According to Toulouse (1971:28-33), this embossing was used on bottles manufactured from 1890-1920, while Lockhart et al. (2013:74) provide a tighter date range of 1896-1910.

The assemblage also includes six externally threaded rim (finish) shards representing two canning jars which may be associated with the base and body fragments mentioned above. The first rim is represented by three (two were refitted) shards that belong to a jar with a regular mouth diameter of 2 3/8 inches. A thick bead separates the rim from the body, which came into use after 1910 (Toulouse 1971:394). Machine-made, externally threaded rims have a smooth rim (post-1910, always after 1915). This development led to the creation of a metal cap with a single continuous thread which required only a couple of quick turns to open (Leif 1965:26-29; Lindsey 2021e). The second rim is represented by shards exhibiting a regular mouth and a stippled surface on its lip (not ground as would be found on a mouth-blown jar).



Figure 41. Ball blue canning jars, (top left) example of a jar embossed with a cursive *Ball* with “2 Ls” (Lockhart et al. 2013:78, Figure 30); (top right) example of a jar embossed with the “3 Ls” (Etsy 2023a); (bottom left) body shard embossed with cursive “...ll” recovered from the midden (Photograph by Bryan Jameson); (bottom right) body shard embossed with the “3 Ls” recovered from the midden (Photograph by Bryan Jameson).

Green-Colored Glass (MNV=1)

One green-colored glass canning jar is represented by 17 body shards. Based on their thicknesses, these shards do not appear to belong to a carbonized beverage bottle. From the early 1880s through 1900, Hero Glass Works produced thousands of green-colored glass canning jars, and these shards may represent one of these (Lockhart, Schriever, Lindsey, and Serr 2016c:220, 230-232).

Solarized Glass (MNV=6)

Six solarized-glass canning jars are represented by six base shards. The first base shard represents a two-quart canning jar which exhibits a valve mark produced by a press-and-blow machine. The remaining

five base shards represent quart-sized canning jars (base diameter of 3¾ inches). One of these shards exhibits an embossed Diamond trademark with 395 in the center, produced by the Illinois Glass Company in the 1910s through 1920s (Glass Bottle Marks 2023c). The second exhibits a post-bottom mold seam with a side seam extending over the heel. It may represent a canning jar blown in a post-bottom mold, which together with its color, places its manufacture towards the end of the nineteenth century. The third and fourth base shards exhibit cup-bottom mold seams encircling the heel. Cup-bottom molds were used to produce any type of mouth-blown bottles, the majority made between the mid-to late 1880s and the late 1910s (Lindsey 2021b). The fifth base shard is too small to identify its attributes and does not appear to be associated with any of the other base shards.

Colorless Glass (MNV=9)

The assemblage includes 44 rim shards. Based on the height of the rims, they were sorted into three categories. Some of these were refitted. Within each category, the lengths of each of the rim shards were added together and the sum was divided by 8 ¾ inches, the circumference of a regular canning jar mouth. This provided a MNV count for each category. The first category consisted of 12 rim shards with thick threads and a rim height of 9/16 inches. This produced a MNV count of two. The second category consisted of 10 rim shards with thick threads and a vertical rim height of 14/16 inches. This provided a MNV count of three. The third category consisted of 22 rim shards with thick threads and a vertical height of 1¼ inches. This provided a MNV count of four, totaling nine canning jars.

Two, possibly three, colorless-glass canning jars, manufactured by the Kerr Glass Manufacturing Company are represented by

two base shards and one body shard. The “Kerr Economy” jar was made in large quantities at their plants in Sand Springs, Oklahoma, and Altoona, Kansas. These jars were embossed on their bases with “KERR GLASS MFG. CO.” and date from 1904 to circa 1920. Sometime after 1920, Kerr stopped embossing “KERR GLASS MFG. CO.” on the bases of their jars (Glass Bottle Marks 2023g; Lockhart, Schriever, Lindsey, and Serr 2016a:133-137, 139). The first base shard was embossed with “SAND SPRIN...” (if complete, the embossing would have read: “KERR GLASS MFG. CO. [arch] SAND SPRINGS, OKLA [inverted arch]”). The second base shard, similar to the first but included additional embossing “...GLASS M... [arch] ...GS OK... [inverted arch]” and “PAT... / ...UG 31 1915” located in the center. An example is depicted in Figure 42.



Figure 42. Example of a Kerr canning jar base embossed with the same lettering as that recovered from the midden – “KERR GLASS MFG CO [arch] / SAND SPRINGS OK [inverted arch] with PAT / AUG 31 / 1915” located in the center (Lockhart, Schriever, Lindsey, and Serr 2016a:139).

The company began embossing the bodies of their canning jars with a cursive “Kerr” around 1912-1915. These included the Kerr

Economy, the Kerr Glass Top, and the Kerr Self Sealing. The “SELF SEALING” Mason canning jar was first produced in 1904 (Lockhart, Schriever, Lindsey, and Serr 2016a:138). One of the body shards was embossed with the upwardly slanting letters “...EAL... / ...ENTE...” (if complete: “Kerr [cursive] / SELF SEALING / MASON” and occasionally the word “PATENTED” was found beneath) (Lockhart, Schriever, Lindsey, and Serr 2016a:142-143).

A colorless-glass canning jar base shard embossed with the cursive “Ball” and underline was also recovered from the midden. According to the Glass Bottle Marks website (2023a) and Lockhart et al. (2013:60-79), the company produced “generic” jars that were unembossed on their bodies. These jars were purchased by food and other companies to contain their products sold in retail stores. Many of these “generic packer jars” carried the cursive “Ball and line” trademark on their bases. Figure 43 depicts the embossing on the bottom of a jar that was used for honey.



Figure 43. Example of a “generic” or “packer” bottle base embossed with a cursive “Ball” and underline, similar to a base shard recovered from the midden (Glass Bottle Marks 2023a).

Canning Jar Body Shards

The bottle/jar glass assemblage includes unidentified body shards of rectangular, square, and small circular and oval bottles in aqua, solarized, amber, Ball blue, green, and colorless glass. It also includes body shards exhibiting the curvature of canning jars. Sixty-one percent (by weight - 6,380 g) of all the unidentified body shards belong to the canning jar category. In order to determine how many canning jars this group of canning jar body shards may represent, a modern, quart-sized canning jar was broken, and the body shards were separated from the rim and base shards and weighed., weighing in at 5.8 g. The unidentified body shards were then weighed, the weight recorded at 190 g; representing approximately 33 quart-sized jars (The MNV for canning jars was previously determined to be 26). Realizing that two-quart canning jars were recovered from the midden, this number may be high. However, the large number of canning jar body shards brings forth this question: Why and how did so many broken canning jars find their way into the midden? It is speculated that most of them fractured during the canning process.

Canning Methods

The canning jar shard assemblage includes aqua and solarized glass jars, suggesting that the Sladky women were canning foods as soon as they established their kitchen in the late 1890s. However, by the second decade of the twentieth century, their canning activities had intensified, noted by an increased number of colorless and Ball blue glass canning jars represented. In the first two decades of the twentieth century, home canning became more popular. The United States Department of Agriculture (USDA) made its first reference to the canning process in the May 1909 issue of *Farmer's Bulletin* 359, entitled “Canning

“Vegetables in the Home” followed by “Canning Peaches on the Farm” in 1910 (Parloa 1905). These guidelines outlined the safest method for home canning (International Food Additives Council 2023). With the passage of the Smith-Lever Act of 1914, a national Cooperative Extension Service was created. In partnership with land-grant universities, the USDA established hands-on programs to inform and educate rural women and girls about the scientific advances in the field of home economics. In Texas, home demonstration work began with canning clubs for girls and during World War I, it expanded to increase food production on the home front. The USDA promoted the cultivation of “war gardens,” changing the name to “victory gardens” after the war was won. To maximize the utility of war gardens, the government emphasized a number of food preservation methods, namely canning, as patriotic ventures. Numerous posters were produced emphasizing the correlation between canning and the Allied victory (Figure 44). The extension service home demonstration agents played a significant role in spreading and supporting home canning initiatives through the years of the Great Depression and World War II (National Agricultural Library 2023). In 1929-1930, 22-year-old Grace Woodruff served as the Home Demonstration Agent for Parker County. That year, she spent 228 days in the field providing demonstrations for women and girls ranging from home canning methods and tending chicken flocks to garment construction (Hobbs 2015:26-27). It is possible that Victoria Sladky attended some of these demonstrations.

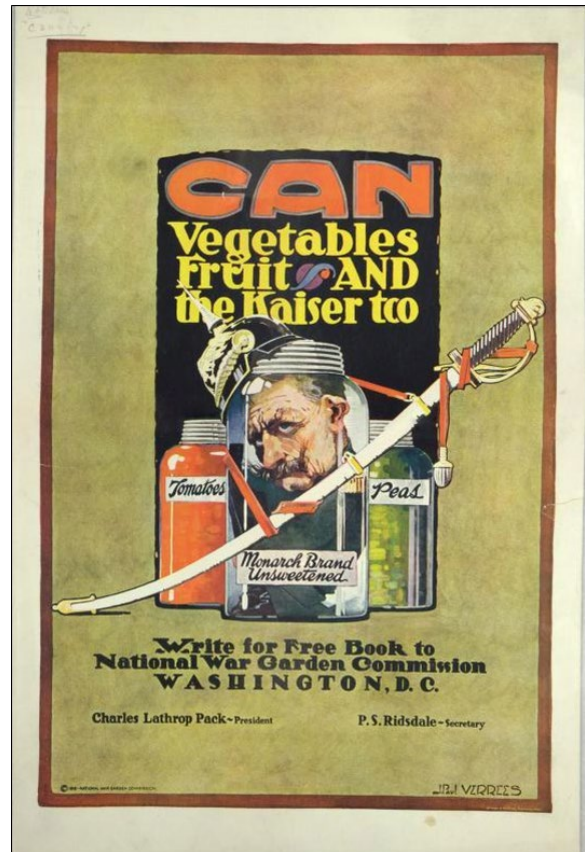


Figure 44. WWI canning poster (National Agricultural Library 2023).

In order to address the question as to why and how such a large number of canning jar fragments were disposed of in the midden, a review of the most popular canning methods of the time is presented. These include open kettle, oven, hot-water bath, and the pressure cooker methods. Women learned to can from their mothers and other women, but they also learned from reading articles in women’s magazines, pamphlets published by the USDA and the state extension services, as well as from canning jar manufacturers like the Ball Company (Michaels 2015:23). The oldest canning method was the open-kettle method – cooking food in an open kettle, pouring the boiled food into sterilized jars, and then sealing the jars. Heating food in a kettle was considered quicker than heating food in a jar. The disadvantage to this method was that food could become contaminated

during the process. The second method, oven canning, was a popular method around the turn of the twentieth century, in part because it did not result in heating up the kitchen. In 1905, an author of an article in *Farmers' Bulletin* claimed, "This method of canning fruit, in the opinion of the writer, is the one to be preferred. The work is easily and quickly done, and the fruit retains its shape, color, and flavor better than when cooked in the preserving kettle" (Parloa 1905). It was not until the 1930s-1940s when this method was deemed unsafe primarily because the canning jars would explode in the oven (Figure 45). During World War II, headlines in the *New York Times* included "Oven Canning Method Found Most Unsafe: 80 percent of Accidents Last Year in Home Preserving Laid to It" (National Agricultural Library 2023; University of Illinois College of Agriculture and Agricultural Experiment Station 1932:11). The third method, the hot-water bath, involved sterilizing hot jars, filling them with cold-pack or hot-pack foods, stirring the food with a wooden utensil to remove air bubbles, loosely securing the lids, and placing the jars on a perforated platform (to allow water to circulate under and around the jars), and lowering it into the canner just before the water reached its boiling point. The jars had to be covered with an inch or two of water. Once the water reached a steady boil, the canner was covered and the countdown began, following the prescribed time of the recipe. When the time was up, the jars were removed from the canner; the lids were tightened, and the jars were allowed to cool for 12 to 24 hours (United States Department of Agriculture 1917). The fourth method and the safest one for canning non-acid foods (corn, beans, peas, squash, beets, and spinach) was pressure canning. These foods needed heat above the boiling point to make them safe to eat, and the only sure way to attain that high of temperature was

under pressure. The steps followed were similar to those described under the hot-bath method (National Agricultural Library 2023; University of Illinois College of Agriculture and Agricultural Experiment Station 1932:11-13, 17-18).

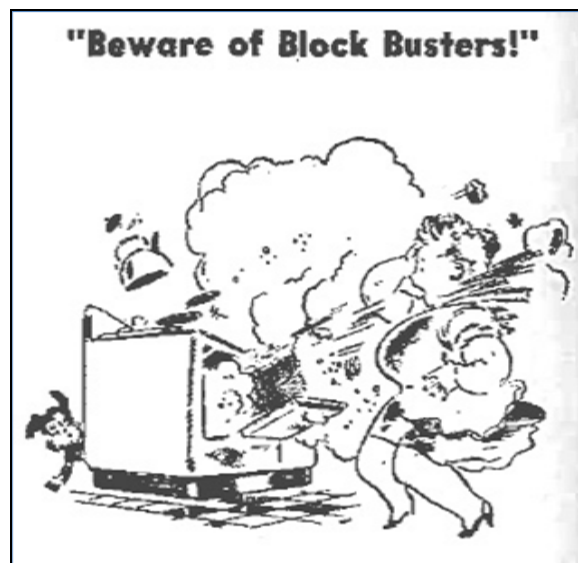


Figure 45. Advertisement placed in the *Home Safety Review* (June-July 1945) to discourage the oven canning method (National Safety Council 1945).

A number of things could go wrong during the canning process that would cause the jars to fracture. It is not possible to determine what methods the Sladky women used in canning their produce, but it is known that 18 canning jar bases were recovered along with hundreds of body and rim shards. This suggests that thermal shock was the reason. Since the base of the canning jar is thicker than the sides, it leads to uneven heating. Thermal shock is characterized by a crack running around the base of the lower part of the jar and sometimes extending up the sides. This occurs when the glass jar undergoes an abrupt temperature change. This could have occurred when hot food was placed in a cold jar or when cold-pack food was not placed in a hot jar prior to canning. The most common way a jar could undergo thermal

shock was when the processed jar was removed from the canner and placed on a cool or wet surface, or even in a drafty room. In discussing canning peaches with his mother, Kerr County resident, Delton Novian stated that before she removed a batch of canned peaches from the pressure cooker, it was his job to close the windows in the kitchen to prevent a draft from cracking and breaking the hot jars (personal communication 2022). Other causes could be attributed to small cracks in the jar: the jar having previously been scraped with a metal utensil, air bubbles trapped inside the jar, overfilling or under filling the jar, jars touching other jars during the canning process, using old rubber gaskets, and not maintaining a steady boil (Iowa State University, Extension and Outreach 2014; Northwest Edible Life 2015). Any one of these things could have occurred while the Sladky women were processing their produce.

Canning Jar Liners

The assemblage includes representatives of 14 milk glass (current name) or opal or porcelain glass liners (former names), including two complete liners. One is represented by two refitted opaque milk glass shards exhibiting no embossing and the other was made from translucent milk glass and was embossed with “BOYD’S GENUINE PORCELAIN LINED” and the Hero Cross trademark embossed in the center (Figure 46) (Toulouse 1971:146).

Prior to the invention of the liner, circa 1869, most canning jar closures were metal lids until the “lighting closure” system was invented in 1882. These closures resembled the Mason’s 1858 patent which comprised of a zinc lid and a rubber sealing ring. While sufficiently cheap, the zinc lid system lacked a buffer between the metal and food, giving the food a “quite perceptible taste” (Beaupré 2021; Milner 2004).

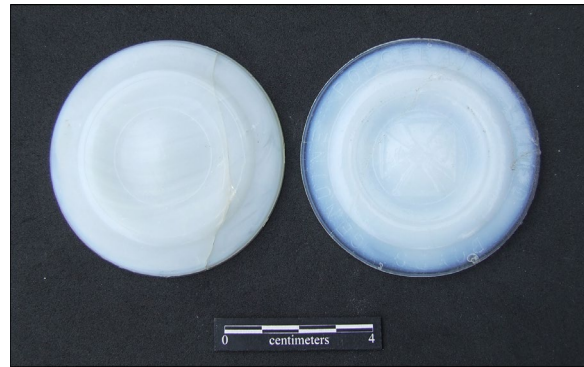


Figure 46. Milk glass canning jar lid liners, (left) two refitted opaque milk glass shards exhibiting no embossing; (right) translucent milk glass canning jar liner embossed with “BOYD’S GENUINE PORCELAIN LINED” and a Hero Cross, manufactured by the Hero Glass Company (Photograph by Bryan Jameson).

In 1871, Louis R. Boyd, John L. Mason (the original patent holder and inventor of the Mason jar, and two others formed the Consolidated Fruit Jar Company in order to renew the patents and retain control of the production of Mason canning jars. The company’s glass liner, trademarked “BOYD’S PORCELAIN LINED”, was registered on September 10, 1878 by the Consolidated Fruit Jar Company. Boyd’s compound canning jar closure consisted of a “porcelain” (opal glass, milk glass) liner, a rubber O-ring, and a threaded zinc lid. This would seal the jar and prevented the contents from coming into direct contact with the metal lid. Several different styles of these “porcelain” liners were produced by Boyd and other companies (Beaupré 2021). In 1883, Consolidated sold the canning jar rights to Hero Glass Works who incorporated its trademark, the Hero Cross, onto its products (Lockhart, et al. 2014:435-437, 464-466; Lockhart, et al. 2016c:228, 232; Toulouse 1971:124).

Six additional canning jar liners are represented by rim fragments of opaque and semi-translucent milk glass. The first is embossed around the rim with “...BOYD’S...”, the second with “...BOY...”,

the third with "...NE PORC...", and the fourth with "...RCELAIN...". The remaining two rim fragments are embossed with "...CAP / BOY..." and "...CAP...". These represent liners embossed with "BOYD'S GENUINE PORCELAIN LINED CAP" (Glass Bottle Marks 2023b).

One of the canning jar liner shards is embossed with "...ATE..." possibly for "PATENT". Examples of a porcelain liner embossed with the word "PATENT" could not be found, only "PAT'D" (Glass Bottle Marks 2023b). This liner may have been manufactured by the Hazel Glass Company, which was founded in 1885 to make opal glass liners for the zinc lids of Mason jars. Hazel Glass Company was producing a colorless-glass canning jar embossed with "MASCOT TRADEMARK PATENT". This trademark which includes the word "PATENT" may have also been used on its opal liners. By 1902, when its name was changed to Hazel-Atlas, the company was a leader in canning jars, liners, and many other commercial glass products (Lockhart, Schriever, Lindsey, Serr, and Hawkins 2016:70).

The assemblage also includes rim fragments that represent five additional milk glass liners with no visible embossing represented.

Summary

Over a period of 50 years, the Sladkys purchased a number of canning jars to process and preserve their garden produce, and during the process, a number of their canning jars fractured and were disposed of in the midden. These jars were manufactured by Ball Brothers Glass Manufacturing Company, Hero Glass Works, and Kerr Glass Manufacturing Company, and may have been purchased at the general store in Buckner. The earliest jars, exhibiting the attributes of mouth-

blown bottles, were made of aqua-colored and solarized glass. A majority of the jars represented in the assemblage were manufactured in press-and-blow semi-automatic machines and these came in a variety of colors – aqua, solarized, Ball blue, green, and colorless. Two sizes were noted, quart and two-quart canning jars. The assemblage also includes "porcelain" canning jar lids, embossed with various styles of the Boyd trademark, first manufactured by the Consolidated Fruit Jar Company and later by Hero Glass Works. A number of zinc internally threaded lids were also recovered from the midden and most likely were used on these jars. It is possible that during the late 1910s through the 1930s, Victoria Sladky participated in canning demonstrations hosted by the Parker County home demonstration agents.

HOUSEHOLD AND FARM USE

The MNV count for Household and Farm Use is nine. Household and farm-related bottles without embossing are the hardest to identify and are likely underrepresented. Ink bottles have an identifiable shape and are generally small. Cleaning and other household items, unless they are embossed, could easily be classified as food or pharmaceutical bottles due to the wide variety of shapes they came in. However, two farm products were identified: Gombault's Caustic Balsam and Old Reliable Japanese Oil. These were purchased by the Sladky family and used to heal wounds and injuries on their farm animals. This category also includes a laundry product, Mrs. Stewart's Liquid Bluing.

Gombault's Caustic Balsam

Six aqua-colored glass panel shards and one base shard represent five Gombault's Caustic Balsam bottles (see example in Figure 47). If these bottles were complete,

they would have been embossed with “J.E. GOMBAULT’S / CAUSTIC BALSAM” on the back panel and “THE LAWRENCE-WILLIAMS CO. / SOLE PROP FOR U.S. AND CANADA” on a side panel (Figure 47). An example of a paper label glued to the bottle is also depicted in Figure 47. As the label states, Gombault’s Caustic Balsam, a French remedy, was manufactured by the Lawrence-Williams Company of Cleveland, Ohio and this company was the sole proprietor and distributor in the United States and Canada.



Figure 47. Gombault’s Caustic Balsam, (top) aqua-colored glass panel and base shards recovered from the midden (Photograph by Bryan Jameson); (bottom left) representative aqua-colored glass panel bottle of Gombault’s Caustic Balsam (eBay 2022d); (bottom right) Caustic Balsam paper label partially intact (eBay 2023b).

These products contained a balm used to treat blisters and wounds on horses and barnyard animals. It was also advertised to treat rheumatism and sprains in humans. It was caustic because it contained silver

nitrate (Knoppix.net 2022). Figure 48 depicts an 1896 advertisement of Gombault’s Caustic Balsam. Another advertisement, dated 1948, stated, “The safe, reliable liniment, counter-irritant or blister used by horsemen, breeders and veterinarians for over 71 years. Also remarkably effective for the relief of human strains and pains” (Fike 1987:24).



Figure 48. 1896 advertisement for Gombault’s Caustic Balsam (Period Paper Historic Art, LLC. 2022a).

National Remedy Company

An aqua-colored glass bottle, embossed on the indented front panel with “NATIONAL REMEDY / COMPANY / NEW YORK”, most likely contained Old Reliable Japanese Oil (Figure 49).



Figure 49. National Remedy Company medicine bottle recovered from the midden (Photograph by Bryan Jameson).

An additional aqua-colored glass bottle is represented by a finish and neck shard exhibiting a tooled patent finish and a front indented panel embossed with “NATIONAL R... / COMPANY / NEW YORK”. This shard refits with a base shard and a back panel shard. National Remedy was established in 1884 and later changed its name to EN-AR-CO in 1912. The company printed a four-page circular (Figure 50), of which three pages were devoted to testimonials ranging from curing chicken cholera and screw worms affecting livestock to lock jaw and snake bites (eBay 2022c; Fike 1987:210).

The first page of the circular:

Attention! Farmers and Owners of Valuable Stock.

If you own a Horse, a Cow, Sheep, Hogs, a lot of Chickens, or other Animals, or Fowls, you will be interested and benefited by reading this Circular.

The Wonderful Japanese Oil is not only the best remedy in the world for all Human Aliments; but is also as effective in Diseases of Animals and Poultry. It is but natural to assume that the causes and effects of disease in Animals are similar to those in the human subject. Therefore, What is Good for Man is Good for Beast.



Figure 50. First page of circular advertising National Remedy Company's Wonderful Japanese Oil (eBay 2022c).

A testimonial from Gibson, Texas [northeastern Texas] entitled:

“One Hundred Dollars for Fifty Cents”

Dear Sirs: A friend of mine, Mr. W.F. Kemp of Bogota, Tex., brought a bottle of Japanese Oil from me (price fifty cents), and he says it saved over one hundred dollars worth of stock for him.

Gibson, Tex.

A. L. England.

Japanese Oil could be purchased from a traveling salesman or through the mail. Single bottles would be sent prepaid through the mail for 50 cents, or for five dollars, one would receive a dozen bottles (\$155 in 2023 dollars; CPI Inflation Calculator).

Mrs. Stewart's Bluing

A colorless-glass cylindrical machine-made bottle (Figure 51) embossed on the front shoulder with “THIS CONTAINS” and on the back shoulder with “MRS. STEWART’S BLUING”, was recovered from the midden. The bottle exhibits a double ring finish, has an Owens scar and the “Diamond-O” trademark of the Owens-Illinois Glass Co. embossed on its base, suggesting a post-1929 date. Figure 51 provides a photograph of a similar bottle with its paper label intact.



Figure 51. Mrs. Stewart’s Liquid Bluing, (left) aqua-colored glass bottle of Mrs. Stewart’s Liquid Bluing recovered from the midden (Photograph by Bryan Jameson); (right) complete bottle containing a paper label (eBay 2022e).

In the late 1870s, Al Stewart, a traveling salesman for a Chicago wholesale grocer, also peddled his home-made product – Mrs. Stewart’s Bluing. He met another traveling salesman, Luther Ford, and together they made plans to expand distribution and soon opened a factory in Minneapolis. In the late 1880s, they began producing their product, first bottled in mouth-blown bottles. By the 1910s, they were using machine-made bottles. By 1918, the product was sold nationally to wholesale grocery brokers. Bluing includes a pigment called Prussian blue (ferric ferrocyanide) which imparts a slight blue undertone to white fabrics by

reducing yellowing and making whites appear whiter (BrandlandUSA 2022; Mrs. Stewart’s Concentrated Liquid Bluing 2022). Mrs. Stewart’s Bluing is still produced today.

One Gallon Jug

A machine-made, one-gallon solarized glass jug is represented by 17 large finish, body and base shards. Figure 52 depicts a sample of these shards. The base of the jug has an Owens scar. The finish exhibits a stacked ring finish, with the lower ring larger than the top ring. Below the rings are two finger handles. A cork would have been used to seal the contents of the jug. One gallon jugs often contained cleaning products.



Figure 52. Solarized-glass shards representing a one-gallon jug, recovered from the midden (Photograph by Bryan Jameson).

Glassware

GLASS CHIMNEY GLOBES

Chimney glass is manufactured from thin colorless glass and fashioned into a globe that was placed on top of an oil lamp to contain the flame and direct smoke and rising gasses upwards. All but one of the 74 shards in this group was colorless; it exhibited an aqua tint. The shards were sorted by thickness, the thinnest shards were 0.77 mm and the thickest were 2.16 mm, representing five chimney globes.

GLASS TABLEWARE

The glass tableware assemblage includes glass items that were used to serve food and drink or used as decorative items such as vases and candlesticks on dining and living room tables. The assemblage consists of shards representing tumblers, bowls, stemware, teacups, plates, a custard cup, and a vase. Table 2 depicts the MNV count

of 25 sorted by glass color and vessel type. The descriptive nomenclature used to describe the characteristics of the shards follows *The Parks Canada Glass Glossary* (Jones and Sullivan 1989:58) and is summarized in Table 3. Figure 53 depicts a plate diagram and the nomenclature used in this report. These terms are also used in describing ceramic plates.

Table 2. Glass Tableware: Minimum Number of Vessels by Glass Color and Vessel Type. Shard Weight by Color Is Also Included.

Type	Aqua	Solarized	Amber	Colorless	Milk	Jadeite	Milk w/ Blue-Rim	Total
Tumbler	-	-	-	3	-	-	-	3
Stemware	-	1	-	-	-	-	-	1
Bowl	-	1	1	1	-	-	-	3
Tea cup	-	-	-	-	1	-	1	2
Plate	-	-	-	-	1	1	2	4
Custard cup	-	-	-	-	1	-	-	1
Vase	-	-	-	-	1	-	-	1
Undetermined	1	-	-	8	-	1	-	10
Total Number	1	2	1	12	4	2	3	25
Percent	4%	8%	4%	48%	16%	8%	12%	
Weight (g)	11	196	54	398	121	53	34	867
Percent	1%	23%	6%	46%	14%	6%	4%	

Table 3. Terms used to describe the decorative characteristics of glass tableware in the assemblage (Jones and Sullivan 1989:58).

Cross-hatching	A series of lines crossing over each other.
Embossed	Raised letters and symbols created on the glass through use of full size molds, blown, pressed, or machine-made.
Facet	A hollow or flat cut of a particular shape (round, oval, ovoid, rectangular) and generally small.
Flutes	Repeating pattern of distinct, concave units parallel to each other, either adjacent to each other or at short intervals.
Mitre	A V-shaped groove.
Panels	Flat spaces on sides of vessels of consistent or repeating sizes.
Ribs	Repeating pattern of convex units parallel to each other.
Starburst	Rays radiating from common center point.
Stippling	A series of small dots.
Sunburst	Rays radiating from an open facet.

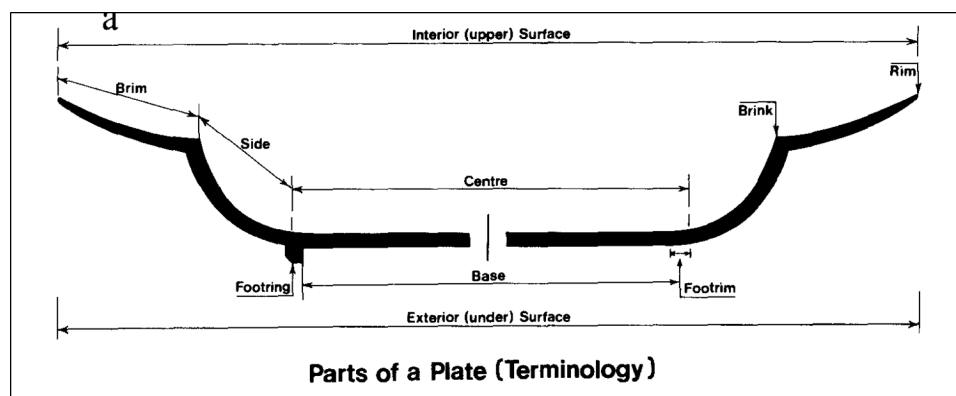


Figure 53. Plate nomenclature (Jones and Sullivan 1989:135).

The greater part (48 percent by count, 46 percent by weight) of the pressed-glass tableware assemblage was made from colorless glass. These items were described as “imitation cut glass” in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:521) and in the 1902 Sears, Roebuck & Co. catalogue (Sears, Roebuck & Co. 1969 [1902]:799). In the 1908 Sears, Roebuck & Co. catalogue (Schroeder 1971 [1908]:361), “OUR SUPERB PRESSED CUT GLASS ASSORTMENT... of cut pressed glassware is considered more nearly like genuine cut glass than any other set of glassware. No one will be able to say positively when they see it or handle it, whether it is genuine cut glass or not” (Schroeder 1971 [1908]:361). Pressed glass was produced by mechanically pressing molten glass into a plain or engraved mold by means of a plunger. Pressed glass can generally be distinguished from hand-cut glass because of its blunt-edged facets, mold seams (which are sometimes removed by polishing), and precise, regular faceting. In the 1820s, a number of New England companies developed patents for glass-pressing machines. The invention quickly led to the mass production of glassware at a greatly reduced cost, making it affordable for everyday use. By the 1880s, glasshouses had increased in size and began producing many kinds of pressed-glass items. At the turn of

the twentieth century, mail-order companies were selling pressed-glass tableware ranging from individual pieces such as candy dishes and pitchers, to various sized sets. Examples include four-piece sets which include a sugar bowl, a creamer, a butter dish, and a spoon holder, eight-piece sets which include a pitcher, six tumblers and a tray. One set includes 39 pieces (Britannica 2022; Schroeder 1970 [1895]:520-527; Scoville 1944; Sears, Roebuck & Co. 1969[1902]:799-800).

Glass tableware manufactured from opaque or translucent milk glass and opaque green glass represents 36 percent by count (24 percent by weight) of the assemblage. Today, opaque-white glass is referred to as milk glass, but a hundred years ago, it was called opal glass. Opaque milk glass has been described as “dead white,” showing absolute opaqueness with no trace of translucency. Opaque green glass was and is referred to as Jade, Jadite, Jadeite, or Jade Ite. The high point in popularity of milk and Jadeite glass was the late-1880s through the first decade of the twentieth century. Like colorless glass, milk glass and Jadite were made into a wide variety of items such as goblets, milk pitchers, creamers, sugar bowls, spoon holders, salt, pepper and sugar shakers, candlesticks, cake plates, serving bowls, vases, perfume bottles, and dresser sets. During the 1910s-1950s, milk glass was

also used for packaging commercial products such cold cream, salves, cosmetics, hair products, and medicines (Glass Bottle Marks 2021; Gronniger 2016:17).

Tumblers

The glass-tableware assemblage includes representative shards of three colorless-glass tumblers (drinking glasses) depicting different designs. The most complete tumbler includes three refitted base shards exhibiting a starburst design and body shards with alternating panels and mitres surrounding the circumference of the vessel. This style is referred to as the Gothic Pattern and it was popular in the 1880s-1890s (Gronniger 2016:17, 60). The second tumbler is represented by 10 body shards with tightly spaced flutes on the interior surface of the vessel. The third is represented by two body shards exhibiting distinct vertical panels.

Stemware

A stemware vessel, manufactured from solarized glass, is represented by a stem which includes the bottom portion of the bowl. It was embossed with a starburst design radiating up the interior sides of the bowl (Figure 54). Stemware vessels consist of a foot, a stem, and a bowl. The bowl of the vessel appears to be ovoid in shape while the stem has a “true balaster” form (Jones

and Sullivan 1989:138-140). The foot section of the stem is missing.



Figure 54. Stem of a pressed-glass stemware bowl recovered from the midden (Photograph by Bryan Jameson).

Bowls

The pressed-glass tableware assemblage includes shards representing three bowls. The first bowl was manufactured from amber-colored glass and was decorated with wide ribbing (Figure 55). The second is represented by four lightly solarized body shards exhibiting a design consisting of delicate ferns, small starbursts, enclosed spaces with cross-hatching, and large scrolls (Figure 55). The third shard was manufactured from colorless glass and was decorated with botanical patterns surrounding the rim.



Figure 55. Pressed-glass tablewares recovered from the midden, (left) amber-colored glass bowl exhibiting a wide-ribbed design; (right) slightly-solarized glass shards of a bowl, decorated with ferns, starbursts, crossing hatching and scrolls (Photograph by Bryan Jameson).

Plates and Tea Cups

The most interesting glass-tableware vessels in the assemblage were made from three different color formulas but exhibit the same “Alice” pattern. They consist of shards representing four plates and two teacups manufactured by Anchor Hocking Fire-King from 1945 through 1949. One teacup and plate were made from “dead white” milk glass (Figure 56), two plates and a teacup were made from slightly translucent milk

glass with a bluish tint applied to the rim (Figure 57), and a plate was made from Jadeite (Figure 57). Representative examples of the latter two tableware vessels are depicted in Figures 58 and 59, respectively. The Jadeite glass pattern was called “Alice Jade It.” Nine-inch plates are smaller than a dinner plate and were traditionally used at luncheons where food portions were smaller, such as sandwiches and finger foods (Sophistiplate 2023).



Figure 56. “Dead white” milk glass shards recovered from the midden, (left) plate; (right) tea cup (Photograph by Bryan Jameson).



Figure 57. Shards embossed with the “Alice” pattern recovered from the midden, (left) translucent milk glass with a bluish tint applied to the rim of the vessel; (right) jadeite glass samples (Photograph by Bryan Jameson).



Figure 58. Anchor Hocking Fire-King “Alice” Vitrock milk glass teacups with blue tinting (WorthPoint Corporation 2022a).



Figure 59. “Alice Jade It” pattern embossed on a dinner plate (Replacements Ltd. 2022a).

The “Alice” pattern consisted of small raised slanted lines that alternate as forward to backward slants along the plate rim. Below the lines on the plate brim are clusters of flowers and leaves. The flowers, both small and large, have six pedals and resemble daisies and are surrounded by leaves that are lancelet in shape. Below the brim on the plate sides are ribs that end at the center. These ribs are also found on the back side of the plate sides and continue to the base. The underside of the base consists of concentric circles of ribbing. The “Alice” pattern on the teacups is similar. Below the slanted lines along the teacup exterior rim are clusters of

flowers and leaves. Below them, the ribbed pattern extends to the base of the teacup.

Custard Cup

A small undecorated bowl is represented by a shard exhibiting vertical walls and manufactured from milk glass. The size and shape of this shard resembles that of custard cups manufactured by Anchor Hocking in the 1930s-1940s. An example of one was found on the Replacements Ltd. website (Figure 60).



Figure 60. Anchor Hocking milk glass custard cup (Replacements Ltd. 2022b).

Vase

A small milk glass body shard embossed with a leaf-frond design and exhibiting a narrow oval circumference suggests that it may have been a part of a flower vase.

Undetermined Glass Tableware

Included in the glass-tableware assemblage are aqua, colorless and Jadeite glass shards, exhibiting fluting, ribbing, stippling, cross-hatching, and diamond etching and represent ten vessels. These shards were too small to place within a tableware category. One of these is represented by a stem of a small colorless-glass vessel.

The pressed-glass tableware assemblage includes colorless-glass tumblers, solarized, amber, and colorless-glass bowls, most

likely used as candy or fruit bowls. None of the tableware discussed above appear to have belonged to matching sets, except for the Anchor Hocking Fire-King “Alice” tableware, manufactured from “dead white” milk glass, translucent milk glass, and Jadeite. These shards represent teacup and plate sets. It is possible that the Sladkys obtained their pressed-glass items from other outlets besides general stores and mail-order catalogues. One of these outlets that emerged in the early twentieth century and continues to this day is “gifting.” Food manufacturers would fill glass tumblers with jelly, preserves, peanut butter, baking soda, and other products and when the consumer purchased these items, they had the option of reusing the glass container as a tumbler (Gronniger 2016:60). Another outlet for mass-produced glass tableware that appeared in the 1920s and prevailed until the 1960s, took the form of “free” promotional “gifts.” Companies selling laundry soap, oatmeal, flour, and even seeds would place glassware items such as teacups, saucers, plates, and bowls in their products as “gifts,” thus encouraging the consumer to purchase more of its products for the purpose of completing a set. Banks, gas stations, and grocery stores did the same. Even moviegoers could take home glassware on “dish nights.” This was also popular during the Depression years (Ward 2018).

An example of this promotional “gifting” was carried out by Crystal Wedding Oats. This company packaged various types of Anchor Hocking glass tableware – 8 oz. tumblers, 5 oz. juice glasses, teacups, saucers, and fruit bowls – in their cartons (In the Bluffs 2022). Written on the front of an early twentieth-century Crystal Wedding Oats carton is: “A Beautiful Piece of Glassware in Each Package” (Figure 61). In the 1930s, the company placed Jadeite cups and saucers in their cartons (WorthPoint

2022e). This could explain how the Sladkys obtained the teacups and plates.



Figure 61. A Crystal Wedding Oats carton with “A Beautiful Piece of Glassware in Each Package” (WorthPoint Corporation 2022e).

Ceramics

The ceramic assemblage consists of three types of wares – stoneware, ironstone, and porcelain. Sherds representing each of these types will be described, as well as their decorative treatments.

STONEWARE

The stoneware sherds recovered from the midden have been classified by their surface treatments. The MNV of this assemblage is 20. Three types of surface treatments have been identified: Albany slip/glaze on the exterior and interior of the vessel; Albany slip/glaze on the interior of the vessel and Bristol glaze on the exterior of the vessel; and Bristol glaze on both faces. After the stoneware sherds were sorted, their colors were recorded using a Munsell Color Chart. Their thicknesses were measured, and their volumes were determined when possible. Table 4 provides the MNV counts of each stoneware type based on its surface treatment.

Table 4. Stoneware: Minimum Number of Vessels and Percent of the Total Assemblage. Weights in Grams Also Provided.

Type	Albany	Albany-Bristol	Bristol	MNV	Weight (g)
Dates	1880s-1900s	1900s-1910s	1910s-1950s	-	-
Lid	1	-	-	1	700
Jar	-	2	6	8	2,803
Bowl	5	2	3	10	710
Jug	1	-	-	1	35
MNV	7	4	9	20	-
Percent	35%	20%	45%	-	-
Weight (g)	866	1,259	2,103	-	4,248

Stoneware is a type of ceramic fired at a high temperature (over 1,200°C / 2,200°F) in order to make it resistant to liquids. It gets its name from its stone-like qualities. Paste colors vary but buff and grays are common. Stonewares may or may not be glazed (Shelton 2015; Sunset Hills Stoneware 2020). Stoneware vessels were and are used for food preparation and serving (e.g., bowls, churns, and pitchers), storage and preservation (e.g., preserve, pickle, and fermentation jars; storage jars; and water coolers), containers for farm and household items (e.g., poultry feeders and ink wells), and toiletry items (e.g., spittoons and chamber pots). Over the course of the nineteenth century, vessels shapes changed from ovoid or globular forms to vessels with straight walls and cylindrical profiles (Greer 1981:16, 55).

Albany slip/glaze is a chocolate-brown color, produced from the high content of iron in the clay. The colors of the slips/glazes on the sherds vary from a dark brown to a reddish brown, while some have a slightly olive-green color. According to Greer (1981:38), this variation is based on various firing factors, such as the degree of oxidization, or yellowish bleaching caused by deposits of wood ash within the kiln. Originally created from alluvial clays mined near Albany, New York in the first quarter of the nineteenth century, the term has come

to refer to any dark-brown firing clay (Greer 1981:194, 265).

Bristol-glazed stoneware was developed in Bristol, England in 1835. The smooth, opaque, white Bristol glaze was developed to cover the drab buff body of stoneware. It was composed of feldspathic materials used in porcelain glazes, but it also contained a combination of china clay and zinc oxide to give it an opaque white color. It is a thick and very shiny surface glaze, producing colors that can be off-white, gray, and slightly yellow, as noted in the assemblage. American potters began using Bristol glaze in the 1890s. It was often used in combination with Albany slip through the 1910s. After 1920, it was most often used alone and it sometimes was embellished with sponging, stamping, painting, and decal application (Florida Museum 2022; Greer 1981:210, 212, 264-265; Maryland Archaeological Conservation Laboratory 2015b).

The stoneware vessels that the Sladkys obtained followed the trends beginning with their arrival in Texas in the 1890s. One of their first purchases must have included an Albany-glazed jar with lid, between four and five gallons in size. The size of this jar is based on the 14-inch diameter lid (Figure 62) that would have rested on the top of the jar (volume and dimensions are taken from page 3 of the Ohio Stoneware 2020

Products Catalog). They also purchased a jug, and five mixing bowls, sizes of which could not be determined. These vessels make up 35 percent of the assemblage.



Figure 62. Albany-glazed lid of a four- to five-gallon jar recovered from the midden (Photograph by Bryan Jameson).

Around the turn of the twentieth century, the family obtained two jars and two bowls exhibiting Albany slip/glaze on the vessels' interiors and Bristol glaze on the vessels' exteriors. The sizes of the bowls could not be determined but appear to have a similar body contour to two and three quart-sized bowls. One of the jars is represented by a number of refitted base and body sherds, estimated to hold two quarts (Figure 63). The second jar is represented by a rim sherd with an interior shelf, estimated to have been one gallon in size. As a transitional type, it represents 20 percent of the assemblage.

Stoneware vessel sherds exhibiting Bristol glaze on both faces make up 45 percent of the assemblage and represents three bowls and six jars. Sherds representing two mixing bowls with rim diameters of 8 inches and 8½ inches could hold between two and three quarts. As for the jars, the sizes of four

were determined, based on the diameter of their bases and their rims. These include a four-gallon, a two-gallon with lid, and two one-gallon jars.



Figure 63. Partially refitted Albany-glazed and Bristol-glazed sherds representing a two-quart jar recovered from the midden (Photograph by Bryan Jameson).

Like many rural farmers who preserved and prepared their own foods, stoneware vessels would have been used daily by the Sladky family. Bowls were used to make bread dough, mix ingredients for cakes, muffins, and pancakes, as well as to mix other ingredients. Stoneware jars were also used extensively by the family. Today, these jars are often referred to as fermentation crocks (the vernacular term “crocks” is often used to describe this type of pottery, even though the term is not seen in period documents describing the ware). Not only were they used for fermentation, but also for pickling and for food storage. The most common size was half-gallon (two quarts) (This is My Garden 2022).

Pickled vegetables, especially cucumbers, were sliced and placed in stoneware jars where they were submerged in hot vinegar

brine. The acidic environment discouraged spoilage and turned the vegetables sour. The heat destroyed enzymes in the vegetables, making them less nutritious than if they were eaten raw. Before refrigeration, it was necessary to consume pickled vegetables within a few weeks. Fermentation, however, increases vitamins and promotes intestinal wellness (Cox 2022). Stoneware jars that were used to ferment vegetables were left open to prevent pressure from building up during the fermenting process. Vegetables would have been chopped and placed in a stoneware jar along with salty brine. Water was added to keep the vegetables submerged. Often a small plate, weighed down with a rock was placed on top of the plate to keep the vegetables submerged so that mold could not grow. Within a few days, bacteria would turn the sugars in the vegetables into lactic acid and a range of other nutritious compounds. The more lactic acid the bacteria produced, the more spoilage organisms were eliminated (Cox 2022).

Presented here is Jeanine Roediger's (2011) account of her grandmother using stoneware "crops." It is possible that the Sladkys followed much of the same procedures.

From mid to late summer, farm women would pickle cucumbers, cauliflower, carrots, squash, green beans and green tomatoes. The vegetables were placed in large jars and covered with salt water and left for a few days. A plate would have been laid on top and forced into the water by a clean, smooth rock, and then covered with a clean towel [to keep any gnats or pests from flying into the brine]. The top was skimmed daily of scum to prevent any mold from growing. On canning day, a mix of apple cider vinegar, spices and sugar were boiled and poured over the rinsed pickles. After a few days, the pickles were placed in

canning jars and put through a water bath [canning] procedure.

Other summer produce also found its way into stoneware jars. Cabbage was shredded and put into a salt water bath and left to ferment into sauerkraut. Again the cabbage was weighed down with a plate and a rock, and then covered with a towel. Once the fermentation process was complete after 10 or 12 days, the sauerkraut was kept in the jar and covered with a towel; or, a lid or plate was sealed with paraffin.

Fruit preserves were also stored in stoneware jars for the winter. Fruits were first washed, placed in a large pot with honey or sugar and slowly stirred on the stove until it reached the proper consistency. The preserves could be canned in glass jars or kept in sealed stoneware jars in a cellar during the winter. Apple butter was made and stored the same way.

Large jars, at least 20-gallon, were reserved for brining or curing meat after butchering. A brine solution was made of sugar, salt, and a small amount of salt peter or sodium nitrate, which was mixed into gallons of water. This was poured over the meat which was weighed down in the large jar to keep it in the curing solution. It was kept cold for up to 60 days. After the curing process, the meat was removed from the brine, soaked in water for a couple of days, dried, and then hung up in a smoke house to be smoked which gave it more flavor. Usually these hams and cured meats were left hanging in a cellar.

Jars were also used to store fried foods, such as sausages and pork steaks. The meat was fried, placed in the crock and with each layer, a layer of lard was poured over to cover it completely, then another layer of meat, then lard until the top was reached. The lard completely

covered the meat and kept it over winter.

CERAMIC TABLEWARE

The MNV for Ceramic Tableware is 37. The ceramic tableware vessels that the Sladky family used consisted of two types of white-bodied wares, ironstone (often referred to as whiteware) and porcelain. Ironstone represents 84 percent of the assemblage and porcelain, 16 percent. The sherds representing ceramic tableware exhibit a number of different types of surface decorations: undecorated, relief-molded, transfer-printed, flow blue patterns, and applied decals. Base sherds representing eight plates/platters and two bowls were stamped with identifiable makers marks. Five makers marks were identified, four of which represent English companies producing ceramics for the American market. This section will first present an overview of the companies whose makers marks were identified; followed by an examination of how these companies and others fared in the American market by examining the product lines offered in mail-order catalogues from 1894 through 1908.

Second, it will describe the two types of ceramics found – ironstone and porcelain – and the different types of decorative techniques used on these vessels.

Makers Marks

Five base sherds were stamped with the makers mark of J. & C. Meakin (1851-1970), two sherds with the mark of Alfred Meakin (1875-1913), one sherd with the mark of Johnson Brothers (1883-1913), and one sherd with the mark of W.T.H. Smith & Co. (1898-1905) (Kowalsky and Kowalsky 1999:246, 275-277). Three of these four English companies represented belong to the Meakin family lineage, related by blood and by marriage (J. & C. Meakin, Alfred Meakin, and Johnson Brothers). The makers mark of an American company was also identified – Etruria and Mellow & Co. (1863-1893) (Kowalsky and Kowalsky 1999:35). Figure 64 is a photograph of the marks of J. & C. Meakin and Alfred Meakin and Figure 65 is a photograph of the makers marks of Johnson Brothers and the Etruria and Mellow & Co. The makers mark of W.T.H. Smith & Co. is depicted in Figure 66.



Figure 64. Bases sherds printed with the makers marks of J. & C. Meakin and Alfred Meakin (Photograph by Bryan Jameson).



Figure 65. Base sherds printed with the makers marks of the Johnson Brothers and the Etruria and Mellow & Co. (Photograph by Bryan Jameson).



Figure 66. Dewey Cable pattern - green transfer-printed motif exhibiting ribbons, sprigs of leaves, flowers and scrolls which are loosely spaced on (from left to right) rim and brim sherds of the plate; on the interior rim/body of a bowl; and on the interior and exterior body of a teacup; (far right) W.T.H. Smith & Co. makers mark, 1899 (Photograph by Bryan Jameson).

The firm J. & G. Meakin was founded in 1851 when James and George joined their father's company. After their father's death, the business was moved to Hanley, England. James remained in England and managed the pottery works while his brother went to America to establish the sales market. The five ironstone base shards were stamped with the makers mark of the J. & G. Meakin Co. and date after 1890 (Kowalsky and Kowalsky 1999:275; The Potteries 2022d).

Three patterns of dinner and tea sets produced by J. & G. Meakin were advertised in the 1897 Sears Roebuck & Co. catalogue. All three were ironstone, but were advertised as semi-porcelain, a marketing ploy used to enhance their value. Two were

transfer-printed with gold trim and the third was relief-molded (Israel 1976 [1897]; Majewski and O'Brien 1987:112, 123).

Alfred Meakin Ltd. was established in 1875 in Tunstall, England by Alfred Meakin, the brother of James and George Meakin. Like his brothers' company, he was also manufacturing ironstone for the American market (Kowalsky and Kowalsky 1999:276-277; The Potteries 2022a). Two ironstone base sherds were stamped with the Alfred Meakin Ltd. makers mark and date to 1891-1897 (Kowalsky and Kowalsky 1999:276-277).

Alfred Meakin Ltd. sold its wares through mail-order catalogues. One of their transfer-

printed dinner and tea set patterns was available for sale in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:509), two transfer-printed sets advertised in the 1897 Sears Roebuck & Co. catalogue (Israel 1976 [1897]), and one decal-decorated set in the 1902 Sears Roebuck & Co. catalogue (Sears, Roebuck & Co. 1969 [1902]:794). Alfred Meakin died in 1904 and was succeeded by his son Alfred James. When Alfred James died four years later, the Johnson family bought the company. Prior to this transaction, Alfred Meakin's daughter had married Robert Johnson Sr. Johnson Brothers derived its name from the company's founders – Alfred and Frederick Johnson, maternal grandsons of Alfred Meakin. In 1883, they began producing a tableware which they called “White Granite.” The success of this venture led to the company's rapid expansion. In 1888, brother Henry Johnson joined them, followed later by a fourth brother, Robert Johnson, Jr. The company was known for its transfer-printed tableware. In 1898, Robert Johnson, Jr. moved to New York City to manage Johnson Brothers' rapidly expanding American market. Johnson Brothers tableware became very popular in America because it was inexpensive, well finished, and durable (Eley 2019; The Potteries 2022e). The words “ROYAL IRONSTONE CHINA” (marked on one of the ironstone base sherds) was added to the makers mark in 1913 (Kowalsky and Kowalsky 1999:246). Six different Johnson Brothers' patterns were advertised in the 1894-1895 Montgomery Ward & Co. catalogue – three transfer-printed dinner and tea sets, one transfer-printed set with gold trim, two relief-molded, and one with gold trim (Schroeder 1970 [1895]:508-512).

The fourth English makers mark represented in the assemblage is that of W.T.H. Smith & Co. (Figure 66). The

company operated a pottery that produced tableware and ceramic tiles at Cable Pottery in Longport, England near Burslem in the Stoke-on-Trent area from 1898 to 1905 (The Potteries 2023).

Most ceramic tableware sold in the United States was imported from England from companies like the Meakins and the Johnsons. However, in the 1870s and 1880s, several American companies began producing ironstone ceramics, situated in Trenton, New Jersey and East Liverpool, Ohio. In an attempt to sell more of their wares, most American companies did not originally mark their wares (as noted in the late nineteenth century mail-order catalogues) or if they did so, they used a variation of the British Royal Arms. They used words such as Royal China, Royal Semi-Granite, and Imperial China in their advertisements for the purpose of capitalizing on the popularity of English ironstone (Majewski and O'Brien 1987:103, 123, 178; Stelle 2020; The Potteries 2022b).

One American company is represented in the assemblage – Etruria and Mellor & Co. of Trenton, New Jersey. In 1863, William Bloor established a company which he named “Etruria Works,” after the Etruria Works of Josiah Wedgwood in Stoke-on-Trent, England. The company used various styles of the British Royal Arms in its trademark. In 1894, Cook Pottery Company took over the company and one of its lines included Mellor & Co. The name “Etruria” was used in its mark (Barber 1904:54; The Potteries 2022c). The base sherd was stamped with the company's makers mark and dates after 1894 (Barber 1904:54).

Catalogue Sales

The growth of the American ceramic industry is reflected in the “crockery” sections of the 1894-1894 Montgomery Ward & Co. catalogue and the 1897, 1902,

and 1908 Sears Roebuck & Co. catalogues. It should be noted that pages are missing in the republished editions of the 1902 and 1908 Sears, Roebuck & Co. catalogues and therefore, may not truly reflect the trend discussed here. English wares dominated the ceramic tableware market throughout the nineteenth century, but it began to change during the last decade of the nineteenth century (Majewski and O'Brian 1987:103, 178). In the 1894-1895 Montgomery Ward & Co. catalogue, 13 English patterns and five French patterns were represented with only three American patterns listed. It is interesting to note that three years later, British firms were feeling the impact of American competition. An advertisement by W.H. Wetherby & Son in the 1897 Sears Roebuck & Co. catalogue

described its dinnerware as “This genuine English semi-porcelain ware, not first or second grade American, but the genuine English...” (Israel 1976 [1897]). In 1902, six American patterns, five English patterns, and one French pattern were available for sale in the Sears Roebuck & Co. catalogue (Sears, Roebuck & Co. 1969 [1902]:788-797). In 1908, Sears Roebuck & Co. only sold American-made dinner and tea sets. These included four decal-decorated patterns, two of which had gold trim, one pattern with gold trim only, and one relief-molded pattern (Schroeder 1971 [1908]:349-350, 359). This trend is depicted in Figure 67. Particularly notable is how English-made transfer-printed tableware gave way to American-made decal-decorated tableware.

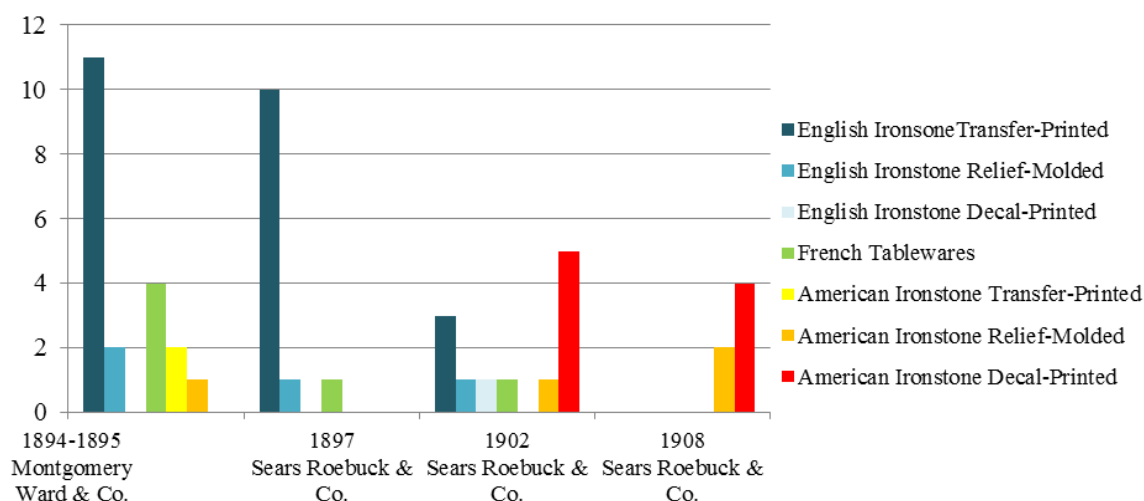


Figure 67. Survey of dinner and teas sets available for sale in mail order catalogues from 1894-1895 through 1908.

If one was to order “crockery” from either the Sears Roebuck & Co. or Montgomery Ward & Co. catalogues; one could order a complete set or individual pieces. If they wished to splurge on a complete set, they had many patterns to choose from. The patterns that were available in 1894-1895 were mostly transfer-printed “semi-porcelain” (ironstone) tableware imported from England. By 1908, the patterns that were available were all American-made and

most were decal-decorated ironstones. Complete sets varied. One could purchase a six-piece or a 12-piece place setting. It could include serving vessels such as platters and pitchers of various sizes, a soup tureen, a casserole, a couple of vegetable dishes, a covered butter dish, a sauce bowl, and a pickle dish. Also available were tea sets. One could purchase a tea set for six or twelve, which included teacups, saucers, a creamer, a sugar bowl and a slop bowl. Flatwares

came in various sizes, such as the 12- to 14-inch dinner “platter” (what we call a plate today), and it could also include 8- to 10-inch platters that were used to serve breakfast and lunch. The set could include plates ranging in size from 3 to 7 inches in diameter. These were used at the dinner table to hold bread, fruit (sometimes referred to as a nappy bowl), slices of pie, and individual pats of butter. Sets could also include “bakers” which were vertically sided individual casseroles. Bowls came in two sizes, a pint or a quart (Schroeder 1970 [1895]:508-513; Sears, Roebuck & Co. 1969 [1902]:788-790, 794, 797; Schroeder 1971 [1908]:349-350, 359).

IRONSTONE

A MNV count for ironstone vessels is 18. Ironstone, the ceramic tableware that dominated the market during the last decades of the nineteenth century, had technologically developed from whiteware, a non-vitreous, white-bodied earthenware first produced in the 1820s. Whiteware vessels began replacing pearlwares for two reasons – pearlwares had a distinctly blue tint and the high-end, white bone china was becoming more popular. (Bone china, first marketed in England by Josiah Spode during the 1790s, was an intermediate between hard-paste and soft-paste porcelain.) The term “ironstone” denotes a specific refined earthenware patented in 1813 by Charles James Mason. He described it as an English Porcelain and marketed it as Mason’s “Ironstone China” in order to compete with Chinese porcelain. Ironstone is a semi-vitreous ware intermediate in hardness between earthenware and porcelain. Its formula included iron slag, flint, and china stone (petunse) in the paste.

(Petunse is used also in the manufacture of porcelain.) Ironstone went by many names including Stone China, Opaque Granite China, Pearl Stoneware, Pearl Ironstone China, Improved Stone China, Opaque Porcelain, Warranted Ironstone China, Quartz China, and White Granite. One distinction that can be used in determining whether a white-bodied ware is whiteware or ironstone is that whiteware was almost always decorated with hand-painting and transfer-printed designs beneath the glaze (Majewski and O’Brien 1987:119-122; Maryland Archaeological Conservation Laboratory 2015d; Rochester Museum and Science Center 2003; Shelton 2015; Stelle 2020; Wetherbee 1996:17-18).

During the Centennial Year Celebration of 1876, several American potters displayed their semi-vitreous white-bodied wares, calling them “White Granite” to imitate English ironstones. This helped start a “Buy American” phase in the United States. To encourage consumers to buy American, the government imposed the Tariff of 1883, which taxed imported ceramics as high as 50 percent. This high tariff may have encouraged many Americans to purchase domestically produced ironstone. American-made ironstone began to flourish in the last decade of the nineteenth century, as noted in the increasing availability in mail-order catalogues (Kirkley 2008:7-8, 13; Majewski and O’Brien 1987:115; Neumann 2018:7; Wetherbee 1996:166).

Tables 5-7 provide the MNV counts of ironstone teacups, bowls, and plates/platters organized by surface decoration that were recovered from the midden. Surface decoration and MNV of each type will be discussed below.

Table 5. Decorative Motifs of Ironstone Teacups and Minimum Number of Vessels Counts.

Teacups	Rim	Body	Base	Handle	MNV
Ironstone Undecorated	3	1	1	2	3
Ironstone Green Transfer-Printed	1	-	-	-	1
Ironstone Decal-Printed	-	1	-	-	1
Total	4	2	1	2	5

Table 6. Decorative Motifs of Bowls and Minimum Number of Vessels Counts.

Bowls	Rim	Body	Base	MNV
Ironstone Undecorated	2	3	1*	5**
Ironstone Botanical Relief-Molded	1	-	-	1
Ironstone Green Transfer-Printed	1	-	-	1
Total	4	3	1	7

*Johnson Bros. makers mark (1913+).

**The rim and body sherds were distinct enough and did not appear to belong together. The base sherd may belong to one of the bowls represented by the rim and body sherds.

Table 7. Decorative Motifs on Plates (3-7 inches in diameter) and Platters (8-16 inches in diameter) and Minimum Number of Vessels Count.

Plates/Platters	Rim/Brim	Side/Center	Base	MNV
Ironstone Bases	-	-	19	19
Ironstone Undecorated	7	1*	-	7
Ironstone Relief-Molded Botanical	2	-	-	2
Ironstone Relief-Molded Geometric	-	2	-	2
Ironstone Green Transfer-Printed	2	-	-	2
Ironstone Flow Blue	1	-	-	1
Ironstone Decal-Printed	2	-	-	2
Total	14	3	19	19**

*Undecorated side sherd may be part of the plate/platter represented by a rim/brim sherd.

**This count includes four of the base sherds that were stamped with the makers marks of J. & G. Meakin, two with Alfred Meakin, one with W.T.H. Smith & Co., and one with Etruria and Mellow & Co. Two additional makers marks were unidentified. The footrings and footrims of the remaining nine ironstone base sherds were undecorated and did not appear to be associated with each other or with the marked base sherds. The MNV count of 19 was assigned to the plate/platter assemblage.

Undecorated Ironstone

The MNV count for undecorated ironstone tableware is 31. Undecorated ironstone tableware with little or no molding was popular from the 1880s through the early decades of the twentieth century. The clean, pure look of undecorated ironstone was probably a reaction to the elaborate patterns of transfer-printed wares, hand-painted wares, scalloped and relief-molded wares that were popular in the decades before. Undecorated tableware was also produced in square or rectangular body forms (Majewski and O'Brien 1987:123; Wetherbee 1985:130).

Sherds representing three undecorated teacups consist of three different rim designs – flat, tapered, and scalloped. Two sherds representing teacup handles were also recovered, as were an undecorated teacup body and base sherd. Determining the MNV of undecorated bowls was based on sorting sherds by their shape and thickness, from which five bowls were determined. Similarly, undecorated flatware rim sherds were grouped, representing five undecorated plates/platters. Base sherds with distinct footrings and footrims represent 19 ironstone platters (8-16 inches in diameter) and ironstone plates (3-7 inches in diameter). These base sherds may belong to the undecorated, relief-molded,

transfer-printed, and decal-printed plates/platters identified by their rims and brims.

Relief-Molded Ironstone

The MNV count for relief-molded ironstone is five. In the 1840s and 1850s, English companies began adding geometric and paneled motifs to their tableware vessels. The earliest were produced with flat panels on hexagonal- and octagonal-shaped vessels. Plates and platters usually exhibited six or eight flat panels along the brim. The term “Gothic” was used to describe these patterns. Arches, scallops, and loops, used in conjunction with vertical panels, became common as did ribbed motifs and bands of thin ribbing encircling the vessel. From the 1860s through the turn of the century, fruits such as plums, pears, berries, flowers such as roses, daisies and lilies, and leaves were popular motifs, as were agricultural motifs, such as wheat, grapes, corn, and clover. These patterns became known as “farmers’ china” or “threshers’ china.” By 1880, relief-molded ironstones were still being produced, but began to decline in popularity

(Majewski and O’Brien 1987:123; Maryland Archaeological Conservation Laboratory 2015d; Miller 1980:18; Stelle 2020; Wetherbee 1996:81; Wetherbee 1985:77, 87, 120).

Four of the ironstone plates/platters are represented by rim sherds with relief-molding.

One of the platters (9 inches in diameter) exhibits a scalloped rim and a line of raised dots along the rim and below the dots are raised curvilinear designs (Figure 68). The second is molded around the rim with a “bead,” similar to that found on bottle finishes. Below the “beaded” rim are two types of flower clusters, one with flowers with six and seven pedals, a stem and leaves, and the other appears as a circular mass of pedals (Figure 68). The third is molded along the brim with a pattern of three widely spaced flattened ribs, followed by a flat space, and more widely spaced flattened ribs. The relief-molding on the fourth plate/platter exhibits heavy ribbing around the brim of the plate.



Figure 68. Relief-molded ironstone sherds recovered from the midden, (left) sherds of a nine-inch platter decorated with a scalloped rim and a line of raised dots along the rim, below the dots are raised curvilinear designs; (right) plate/platter rim sherds molded around the rim with a “bead” (similar to a bead finish on a bottle), below the “beaded” rim are two types of flower clusters, one with flowers with six and seven pedals, a stem and leaves, and the other appears as a circular mass of pedals (Photograph by Bryan Jameson).

A relief-molded bowl is represented by a rim with a scalloped edge and beneath the rim on the interior surface are relief-molded loops that surround the circumference of the vessel.

Transfer-Printed Ironstone

The MNV for transfer-printed ironstone is five. The technique of transferring printed patterns under the glaze was first developed on English porcelain around 1783 and it revolutionized the ceramic industry. This process, which used tissue paper to transfer a design from an engraved and inked copper plate to a ceramic vessel, allowed potters to quickly apply complex decorations to pottery. Printed wares remained popular until the mid-nineteenth century, when they gave way to undecorated or minimally decorated tableware. Beginning around 1870, transfer-printed wares enjoyed a brief revival that lasted until the use of decals became popular in the early 1900s (Majewski and O'Brien 1986:145, 147). This trend is noted in the "crochery" sections of mail order catalogues dating to this time period.

The ceramic assemblage includes a teacup, a bowl, and a 13- to 14-inch platter decorated with the same green transfer-print design and may represent a purchased set. The motif exhibits ribbons, sprigs of leaves,

flowers and scrolls which are loosely spaced on the rim and brim of the plate, on the interior rim of the bowl, and on both the interior and exterior of the teacup. This pattern was identified as Dewey Cable, manufactured by W.T.H. Smith & Co. in 1899 (Figure 66) (The Potteries 2023). Similar botanical designs were produced from 1820 through 1843, but after examining the Sears, Roebuck & Co. and Montgomery Ward & Co. catalogues that date to the turn of the century; the loosely spaced botanical design appears to have regained popularity at that time. These designs have been referred to as "revival" transferware designs. They were less complex and tended to occupy less and less of a vessel surface (Majewski and O'Brien 1987:145; Maryland Archaeological Conservation Laboratory 2015c; Pierce 1979:19). These vessels also include relief-molded dots and scroll-like designs along the rims, another trend of this time period.

An additional green transfer-printed plate/platter is represented by rim, brim, and center (top surface of base) sherds exhibiting a dense, continuous, green transfer-printed botanical design with relief-molded dots and scrolls along the rim (Figure 69). This pattern is different than the one described above and may be older than the Dewey Cable pattern.



Figure 69. Sherds exhibiting a dense, continuous, green transfer-printed botanical design with relief-molded dots and scrolls along the rim (Photograph by Bryan Jameson).

The assemblage also includes rim, brim, and center/base sherds of a 12- to 13-inch platter exhibiting a flow blue transfer-print design (Figure 70). Flow blue designs were created when chemicals were placed in the kiln during the glaze firing, causing the printed colors to flow beyond the original engraved pattern lines. Blue was the most common color used. Flow blue decorated ceramics became available in the United States in 1844 and remained popular through 1870. They became popular once again in the late-nineteenth and early-twentieth centuries (Maryland Archaeological Conservation Laboratory 2015c; Monet 2021).



Figure 70. Sherds of a twelve- to thirteen-inch platter exhibiting a flow blue transfer-print design (Photograph by Bryan Jameson).

Decal-Printed Ironstone

The MNV count for decal-decorated ironstone is three. Decalware (also known as decalmania, lithographic, or chromolithographic decorated wares) involves the production of a pattern on paper from which the design is transferred onto a ceramic vessel. Similar to the transfer-printing technique, it provided a way for manufacturers to create multi-colored designs in a one-step process. Since decals were applied by unskilled labor, decal-decorated tableware was less expensive than transfer-printed tableware.

The drawback was that most decals were applied over the glaze and affixed through a lower firing temperature in the decorating kiln. This meant that they were easily damaged through use. Decal-decorated tableware first appeared in France during the late 1870s. Attempts to copy this technology were made without success in Trenton, New Jersey at about the same time (Błaszczuk 1994:145, 148; Majewski and O'Brien 1987:146). Perfected enough by the 1890s to be commercially viable, decal-printed ceramics first appeared in the Sears, Roebuck & Co. catalogue in 1902 (Sears, Roebuck & Co, 1969 [1902]:788). The popularity of decal-decoration rose rapidly in the early twentieth century and remained the most common technique for decorating ceramics well into the 1950s (Majewski and O'Brien 1987:147).

Botanical, geometric, and linear decals were applied around the rims of vessels (Majewski and O'Brien 1987:147; Maryland Archaeological Conservation Laboratory 2015a). The assemblage includes sherds of an ironstone plate/platter and a teacup decorated with a similar botanical motif of pink flowers and green leaves and stems. The decals are partially worn away, especially on the sherds of the plate/platter. Another rim of an ironstone plate (9 inches in diameter) is decorated with a decal of two green lines of different widths encircling the rim (Figure 71).

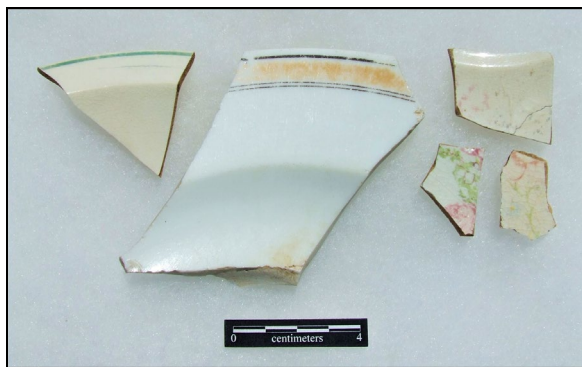


Figure 71. Decal-decorated ironstone and porcelain, (left) sherd of an ironstone plate/platter decorated with two green lines of different widths encircling the rim; (center) sherd of a 13-inch porcelain platter exhibiting an over-glaze decal consisting of a thick black line, a band of gold, and two thin black lines; and (right) an over-glazed decal pattern of pink flowers and green stems and leaves decorating a teacup interior rim and a plate/platter's brim, brink, and side (Photograph by Bryan Jameson).

PORCELAIN

The MNV count for porcelain is six. Sixteen percent of the MNV counts in the ceramic tableware assemblage has been typed as porcelain wares. There are two main types of porcelain, hard paste and soft paste. Hard-paste porcelain was originally made in China and is composed of kaolin clays and petunse. The paste is highly compact, and the glaze is usually fused to the paste, making it nearly indistinguishable from the paste. It also has a translucent quality. Hard-paste porcelain is usually fired twice; the first (biscuit) firing is at a low temperature (815-900° C) to give the body enough strength to handle the glazing. The body is extremely porous and absorbs a large amount of the glaze. The feldspathic glazes typically used on hard-paste porcelains normally are translucent and are fused with the underlying body when fired again at very high temperatures (1,350-1,550° C). Aided by the absorbed glaze, the body completely vitrifies (Majewski and O'Brien 1987:125, 128).

Soft-paste porcelain is composed of a variety of different clays, ground glass, salt, soapstone, and calcium phosphate in the form of bone ash; consequently, referred to as "bone china." The resulting vessel has an impermeable white paste but lacks the translucent quality of hard-paste porcelain. English soft-paste porcelain is less compact, and the glaze is distinguishable from the paste. Soft-paste porcelain is sometimes referred to as semi-porcelain, just as ironstone incorrectly is, especially in American mail-order catalogues (Hoffman 2016; Majewski and O'Brien 1987:126-128, 155; Shelton 2015; Stelle 2020). All of the porcelain sherds in the assemblage, with the possible exception of one (a small fragment of a porcelain rim may represent a very thin-bodied hard-paste porcelain teacup), have a distinguishable glaze, assigning them to the soft-paste category. Table 8 provides the MNV counts of porcelain tableware by surface decoration.

Table 8. MNV of Porcelain Tableware by Vessel Type.

Porcelain	Teacup	Bowl	Plate/ Platter	MNV
Undecorated	1	1*	-	2
Relief-Molded	3	-	-	3
Decal-Printed	-	-	1	1
Total	4	1	1	6

*J. & G. Meakin makers mark (1890+)

The porcelain assemblage includes sherds representing four soft-paste porcelain teacups, one bowl, and one platter. Sherds representing teacups consist of four different rim designs – flat, scalloped, tapered with a relief-molded ribbed pattern on the exterior body, and a relief-molded pattern of dots and scrolls on the interior rim. A porcelain bowl is represented by a base sherd stamped with the J. & G. Meakin makers mark and dates from 1890. Also included in the assemblage is a sherd of a 13-inch platter exhibiting an over-glaze

decal consisting of a thick black line, a band of gold, and two thin black lines (Figure 71).

SUMMARY

The sherds that represent ceramic tableware vessels that were recovered from the midden reveal that the Sladkys purchased a wide variety over the course of their residency at the farm. These may have been purchased at a general store, through a mail-order catalogue, or they may have received them as gifts. The decorative types that they owned were all popular during the late nineteenth and early twentieth centuries. The MNV counts of the tableware assemblage is depicted in Figure 72. These include undecorated, relief-molded geometric and botanical patterns, a “revival” transfer-printed pattern, and a flow blue pattern. The “revival” transfer-printed patterns of the late nineteenth century began to be replaced with decal-printed botanical and geometric designs later in the twentieth century. The matching “revival” green transfer-printed teacup, bowl, and platter suggest that the Sladkys may have purchased these pieces as a set. Over the course of 50 years, the Sladkys may have wanted something new and purchased new tableware sets, which some of the sherds, especially the decal-decorated botanical sherds, may represent. The fact that a number of differently decorated tableware appears in the assemblage suggests a few things: the Sladkys had a number of differently decorated tableware sets that they took good care of, they had no qualms about purchasing unmatched tableware pieces, they may have acquired pieces from gatherings where food was brought and the dishes were not returned, or these pieces may represent gifts. The assemblage also includes porcelain tableware – four differently decorated teacups, a bowl, and a decal-printed dinner platter; suggesting that the family owned a number of tea sets, both

ironstone and porcelain, or that they acquired individual pieces over time. It is interesting that sherds representing serving vessels such as large platters or vegetable dishes, pitchers, tea pots, sugar bowls, or creamers, were not recovered. Apparently, they took care not to damage these pieces that they no doubt owned and used.

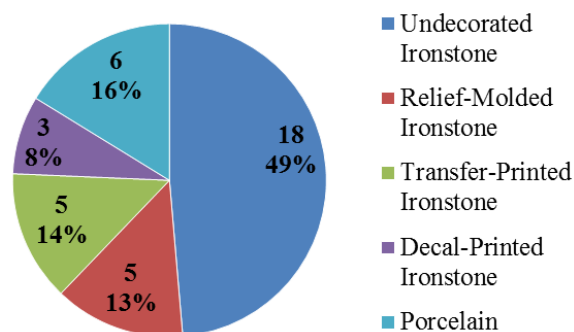


Figure 72. MNV counts based on decorative types of ironstone and porcelain.

Personal Items

This category of artifacts includes clothing fasteners, fashion accessories, ceramic doll parts, and a harmonica reed. After each is described, information gathered from turn-of-the-century mail-order catalogues will provide additional information about each of these items.

CLOTHING FASTENERS

Five buttons were recovered from the midden (Figure 73). The type of material, the shape and size, and the method of attachment of each will be discussed. The button assemblage includes two Prosser (porcelain or china) buttons, two pearl (mollusk shell) buttons, and one metal button. All of the buttons are disk-shaped except for one, which is square with rounded corners. Two types of attachments are represented – sew-through and shank. Sew-through (also referred to as sew-thru) buttons exhibit two or four holes in the center and are attached with thread (Luscomb 2006:176). Two of the buttons

were attached to garments with shanks. The most common shank is a loop made of flat, twisted, or round wire that was attached to the back of a button in a number of ways. The most common way was to punch it through the back of a two-piece button and solder it into place between the two pieces

(Aultman and Grillo 2012:7-8; Claassen 1994:75-76; Luscomb 2006:176-177). A shank provides space between the button and the garment which allows the garment to hang and drape nicely (Wikipedia 2022h).



Figure 73. Five buttons recovered from the midden, (left to right) 22L Prosser button; 20L Prosser button; 20L freshwater mussel shell button; square marine shell shank button; and 22L metal two-piece shank button (Photograph by Bryan Jameson).

Sizes were determined by the diameters of the buttons. Diameters are measured in milligrams and converted to the French system known as *lignes* (L) or lines. The English scale has 40 lines to an inch (a 40L button has a diameter of one inch). Mail-order catalogues offered measures in lines and in inches. Small buttons (12L-14L) were used on men's shirt collars, women's dresses, children's clothing, or as decoration, 15L buttons were used on shirt cuffs, and 16L to 20L were used on shirt plackets, dresses, sweaters, pajamas, and undergarments. Men's suits usually have a 24L button on a jacket cuff and trouser, and a 32L button is used to fasten a jacket (Claassen 1994:78; Lining Company 2018; Luscomb 2006:121; Sprague 2002:122; Schroeder, 1908 Sears, Roebuck & Co. Catalogue 1971:1004).

In the mid-1800s the ready-made clothing industry had little to offer women. After 1885, the women's ready-made clothing industry grew exponentially (Claassen 1994:66). Examples of this are reflected in the ready-made clothing that was available

for purchase in mail-order catalogues. The only clothing offerings for women in the 1894-1895 Montgomery Ward & Co. catalogue were cloaks, jackets, bonnets, corsets, undergarments, and hosiery (Schroeder 1970 [1895]:121-129, 275-279, 285-290, 304-307). However, within a few years, catalogues offered more options as noted in the 1897 Sears, Roebuck & Co. catalogue "Ladies Ready-to-Wear Clothing" section (Israel 1976 [1897]). At this time, the "New Woman" look came into fashion and continued into the early decades of the twentieth century. Women were now in the workplace, the classroom, taking part in sporting events, and sunbathing at the beach. They needed to dress appropriately. Garments became simpler in form, with the shirtwaist (blouse) and skirt taking center stage, as depicted in a photograph obtained from an antique store and from the 1902 Sears, Roebuck & Co. catalogue (Figure 74). By 1910, every article of female clothing could be purchased ready-made in stores or through mail-order catalogues (Claassen 1994:66).



Figure 74. Late nineteenth-century women's fashion, (left) antique store photograph; (right) 1902 Sears, Roebuck & Co. catalogue depicting "Ladies' Waists". Note the head-shot photographs added to the drawings in this catalogue (Sears, Roebuck & Co. 1969 [1902]:1112).

For men, prior to the late 1890s, dress shirts were pulled on over the head and were referred to as overshirts. Dress shirts had a plaited or plain bosom (bib) with small buttons along the front placket (Figure 75). Bosom dress shirts could also be purchased with an open back that was closed with buttons. Shirt collars and cuffs had to be purchased separately, as depicted in the 1894-1895 Montgomery Ward & Co. catalogue (Figure 75). Another type of shirt that was advertised in the 1894-1895 Montgomery Ward Co., 1897, and in the 1902 Sears, Roebuck & Co. catalogues was

the negligee shirt, another type of overshirt. The difference being that the negligee shirt had an attached collar and cuffs (Figure 75). It was advertised to working men, tennis players, cyclists, and tourists (Schroeder 1970 [1895]:273-275). In 1908, the collarless bosom dress overshirt and negligee were still in fashion, but the negligee was now referred to as an overshirt (Schroeder 1971[1908]:963, 968). Shirts with buttons extending to the hem on the front of the shirt had not yet come into fashion.

Pyjamas.

Men's White Shirts.

32478 Men's White Shirts, laundered, reinforced front and back. Each....\$0.75 Per doz.. 8.10

32480 Men's White Shirts, laundered, reinforced front and back, made of New York Mills cotton. Each....\$0.95 Per doz..10.25

32482 Men's White Shirts, laundered, reinforced front and back, continuous facing on back and cuff, butcher's linen back on bosom. One of the best made. Each.....\$1.25 Per dozen.....13.50

32484 Men's White Shirt, laundered, open front. Each...\$1.00 Per doz.10.80

32486 Men's White Shirts, full dress, plaited front made of Wamsutta muslin, reinforced front. Each...\$1.25 Per doz.13.50

32488 Men's White Dress Shirts, full linen bosom, open front and back, single front plait, hand-somely embroidered in white. Each.....\$1.00

SHIRTS.

Men's Negligee Overshirts.

WORKING, BOATING, TENNIS, CYCLISTS', TOURISTS' FINE MEN'S AND SLIP PLANNED SHIRTS. Weight of men's overshirts average as follows: light summer weight, 7 to 10 ounces; medium weights, 10 to 15 ounces; heavy weights, 18 to 25 ounces. Sizes, 14 1/2 to 17 only. Always give neck measure. N. B.—We do not sample overshirts.

32281 Men's Overshirts, fancy stripe cotton, medium colors, no pocket. Each.....\$0.25 Per doz.....2.70

32283 Men's Overshirts, neat stripes, heavy twill cotton working shirt, handkerchief pocket. Each.....\$0.42 Per doz.....5.04

32284 Men's Overshirts, neat stripes, domette flannel, medium colors, handkerchief pocket. Each.....\$0.50 Per doz.....6.00

32286 Men's Overshirts, striped moleskin, medium dark colors, handkerchief pocket. Each.....\$0.50 Per doz.....6.00

32288 Men's Overshirts, heavy twilled cotton buckskin cloth with nap on the inside, yoke back, handkerchief pocket. 32281 to 32302. Pearl buttons. Each, \$0.75 Per doz.....\$8.10

32290 Men's Overshirts, striped cassimere shirt-ing, medium colors, yoke back, handkerchief pocket, pearl buttons. Each, \$0.75 Per doz..... 8.10

32292 Men's Overshirts, neat stripe heavy moleskin, yoke back, handkerchief pocket, pearl buttons. Each, \$0.75 Per doz..... 8.10

32294 Men's Overshirts, fancy stripes, wool mixed, twilled cassimere, dark colors, handkerchief pocket. Each, \$0.80 Per doz..... 8.64

32296 Men's Overshirts, fancy stripes, twilled union cassimere, yoke back, handkerchief pocket, pearl buttons. Each, \$0.85 Per doz..... 9.18

32298 Men's Overshirts, heavy wool cassimere, with fine cotton warp to keep from shrinking, handkerchief pocket, pearl buttons, neat stripes, medium colors. Each, \$1.50 Per doz.....16.20

32300 Men's Overshirts, extra fine wool flannel, in neat stripes, good weight, yoke back, handkerchief pockets. Each.....\$2.00 Per doz.....\$21.60

32302 Men's Overshirts, pure silk, neat stripes, beautiful colorings, French yoke back, watch and handkerchief pockets, pearl buttons. Each.....\$3.50

32304 Men's Overshirts, plaid domette flannel, medium dark colors, handkerchief pocket. Each.....\$0.40 Per doz..... 4.32

32306 Men's Overshirts, neat plaid, heavy twilled cotton buckskin cloth, with nap on inside, yoke back, handkerchief pockets, pearl buttons. Each, \$0.75 Per doz.....\$8.10

32308 Men's Overshirts, fancy silk mixed plaid, twilled union cassimere, yoke back, handkerchief pockets, pearl buttons. Each.....\$1.26 Per doz.....13.50

Men's Li

DISBURS

11000 Men's 4-PLY L (Disburser), Size 10 to 11 1/2 inch large.....\$1.50

11002 Men's 4-PLY L (Disburser), Size 10 to 11 1/2 inch large.....\$1.50

ST. LEON

11004 Men's 4-PLY L (St. Leon), Size 10 to 11 1/2 inch large.....\$1.50

11006 Men's 4-PLY L (St. Leon), Size 10 to 11 1/2 inch large.....\$1.50

GLANWOOD

11008 Men's 4-PLY L (Glanwood), Size 10 to 11 1/2 inch large.....\$1.50

11010 Men's 4-PLY L (Glanwood), Size 10 to 11 1/2 inch large.....\$1.50

—WE HAVE CUSTOM T

FALSTAFF

11004 Men's 4-PLY L (Falstaff), Size 14 to 18 inch.....\$0.14

11006 Men's 4-PLY L (Falstaff), Size 14 to 18 inch.....\$0.14

MONTEREY

11004 Men's 4-PLY L (Monterey), Size 14 to 17 1/2 inch.....\$1.50

11006 Men's 4-PLY L (Monterey), Size 14 to 17 1/2 inch.....\$1.50

CARLOW

11004 Men's 4-PLY L (Carlow), Size 14 to 15 inch.....\$1.50

11006 Men's 4-PLY L (Carlow), Size 14 to 15 inch.....\$1.50

TUDOR

11004 Men's 4-PLY L (Tudor), Size 14 to 17 1/2 inch.....\$0.14

11006 Men's 4-PLY L (Tudor), Size 14 to 17 1/2 inch.....\$0.14

ASCOT

11004 Men's 4-PLY L (Ascot), Size 14 to 18 inch.....\$1.50

11006 Men's 4-PLY L (Ascot), Size 14 to 18 inch.....\$1.50

NEW YORKER

11004 Men's 4-PLY L (New Yorker), Size 14 to 18 inch.....\$0.14

11006 Men's 4-PLY L (New Yorker), Size 14 to 18 inch.....\$0.14

PALMETTO

11004 Men's 4-PLY L (Palmetto), Size 14 to 18 inch.....\$1.50

11006 Men's 4-PLY L (Palmetto), Size 14 to 18 inch.....\$1.50

AMSDEN

11004 Men's 4-PLY L (Amsden), Size 14 to 18 1/2 inch.....\$0.14

11006 Men's 4-PLY L (Amsden), Size 14 to 18 1/2 inch.....\$0.14

EUGENE

11004 Men's 4-PLY L (Eugene), Size 14 to 18 1/2 inch.....\$0.14

11006 Men's 4-PLY L (Eugene), Size 14 to 18 1/2 inch.....\$0.14

FUTURITY

11004 Men's 4-PLY L (Futurity), Size 14 to 18 1/2 inch.....\$0.14

11006 Men's 4-PLY L (Futurity), Size 14 to 18 1/2 inch.....\$0.14

NORDECK

11004 Men's 4-PLY L (Nordeck), Size 14 to 18 1/2 inch.....\$0.14

11006 Men's 4-PLY L (Nordeck), Size 14 to 18 1/2 inch.....\$0.14

Figure 75. Men's shirts, (left) bosom dress shirts; (center) collars and cuffs; (right) negligee shirts with collar and cuffs, note that the placket only extends about one-third the length of the front of the shirt (Schroeder 1970 [1895]:275, 87, 273).

Because of the growing ready-to-wear industry, buttons were now in demand (Claassen 1994:66-67). The first boom in the production of freshwater pearl buttons came in the 1890s and enjoyed steady growth until the Depression. By then, clothing required fewer buttons not only because of style changes, but also, because of the availability of alternative closures such as zippers, metal clasps, and cheaply made synthetic buttons (Claassen 1994:67-72).

Prosser (Agate or China) Buttons

Two Prosser buttons, often referred to as "agate" or "china" buttons were recovered from the midden. Both the 20L (1/2-inch or 1.27-cm) button and the 22L (9/16-inch or 1.43-cm) button exhibit a four-hole sew-

through design (Figure 73). The top and bottom of both of the buttons are smooth and have indented circular areas in the center, which are referred to as dishes. Twenty-L buttons were commonly used on shirt plackets, dresses, sweaters, undergarments, and children's clothing and 22L buttons were used on shirt plackets, dresses, undergarments, and sweaters, but were also used on sleeve cuffs, waistcoats, jackets and coats (Claassen 1994:78; Schroeder 1971 [1908]:1004; Sprague 2002:123).

In 1840, Richard Prosser of Birmingham, England, invented a process involving the compaction of ceramic powder between metal dies, which produced a white ceramic button, similar in appearance to porcelain, which he referred to as agate. Prosser

buttons have a top side that is smooth, and the back side often exhibits an “orange peel” surface. A noticeable seam surrounds the circumference edge. The following year, his brother, Thomas Prosser, patented an improved method of manufacturing these buttons with the United States patent office, thus opening the door for the manufacture of Prosser ceramic buttons in the United States. In 1844, Jean-Felix Bapterosses of France patented an improved version of the Prosser process, using milk instead of water as the wetting agent (Sprague 2002:111-115; Venovcevs 2013:4-5).

Pearl (Shell) Buttons

Two pearl buttons made from mollusk shells were also recovered (Figure 73). One has been identified as a freshwater shell, two-hole sew-through 20L button and the other as a marine shell 22L shank button, both of which are from nacreous shell species. Nacreous shells have a crystalline structure which is lustrous and fluorescent. Nacreous species produce pearls. Freshwater mollusk species of the Mississippi watershed are nacreous, and buttons made from their shells as well as from nacreous marine species were usually referred to as “pearl buttons.” Buttons that were made from marine shells were referred to as “ocean pearl” or “Mother-of-Pearl” buttons in mail-order catalogues (Claassen 1994:4, 80). In the “Button Department” of the 1908 Sears, Roebuck & Co. catalogue, pearl buttons were described as either Mother-of-Pearl or as freshwater pearl buttons (Schroeder 1971[1908]:1004).

From 1825 until about 1855, millions of utilitarian pearl buttons were turned out by hand in England and Germany. The manufacture of utilitarian marine pearl buttons began in the United States around 1852 but had a hard time competing with the European product. In 1891, John Boepple, an immigrant master button

turner, revived the United States industry when he began producing pearl buttons in Muscatine, Iowa, using shells from the Mississippi River. Soon, dozens of pearl button manufacturing plants opened in the Midwest and the Upland South. Over the next four decades, pearl button manufacturing became more and more automated (Claassen 1994:1, 7, 59-61, 67, 80, 83, 85-100).

The first pearl button (Figure 73) is a two-hole 20L (1/2-inch or 1.27-cm) button with a French bevel on the top face. French bevels slope down to an inner circle in which sits the sewing perforations. Pearl buttons are not as iridescent as Mother-of-Pearl buttons described below (Claassen 1994: 76, 78). Commonly, 20L pearl buttons were used on men’s dress and work shirts, women’s garments, such as shirtwaists (blouses), children’s clothing, pajamas, undergarments, and used as decorative trim. As noted in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:273), men’s negligee overshirts were described as having pearl buttons. In the 1902 Sears, Roebuck & Co. catalogue (1969 [1902]:959-966, 978-979, 1084, 1091), men’s plain and plaited bosom dress shirts, open-front collared percale, madras, Oxford, and flannel shirts, union suits, pajamas, undershirts, and waistcoats were fitted with pearl buttons as were women’s and children’s clothing. In the 1908 Sears, Roebuck & Co. catalogue, men’s blue madras and plain white muslin bosom shirts were fitted with the more iridescent ocean pearl buttons while collared work shirts were fitted with pearl buttons (Schroeder 1971 [1908]:963, 968).

Ocean pearl or Mother-of-Pearl buttons are highly iridescent, and their crystalline structure is conducive to exfoliation in layers (Claassen 1994:1, 4, 74). The top and sides of the shanked square button

recovered from the midden exhibits exfoliation and the underneath side is highly iridescent, suggesting that it was an ocean pearl or Mother-of-Pearl button (Figure 73). The button exhibits a shank plate, which is comprised of a piece of metal (in this case, a disk shape) that was inserted into the back of the button from which a metal loop would have been attached. Claassen (1994:61) noted that in 1948, a mechanic patented a hand-operated squaring machine that ground shell blanks into squares and cut a recessed hole in the bottom of the button, for seating a shank plate. This button could date to that time period, or it could have been made by hand before this machine was patented. Since the button was the size of a 22L (9/16-inch or 1.43-cm) button and shanked, it may have been used on a “street costume,” jacket, sweater, or dress (Claassen 1994:78; Schroeder 1971 [1908]:1004). In the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:285), one cloak stands out among the others in that it is fitted with “large fancy pearl buttons” rather than cloth-covered metal shank buttons.

The price per dozen of agate (Prosser) and pearl buttons advertised in 1894-1895, 1902 and 1908 mail-order catalogues are compared in Table 9. In 1894-1895, Prosser and pearl buttons were evenly priced, with the 24L Prosser button costing a penny less per dozen. In 1902, Prosser buttons were twice as expensive as pearl buttons, but in 1908, this was reversed, the price dropped to a third to a half of what pearl buttons would have cost. It is also possible that these mail-order companies were taking advantage of the popularity of pearl buttons and charged more for them (Schroeder 1970 [1895]:79-81; Schroeder 1971 [1908]:1004; Sears, Roebuck & Co. 1969 [1902]:940).

Table 9. Comparison of the Prices per Dozen of Prosser and Pearl Buttons.

Button Line	16	18	20	22	24
1894-95 Montgomery Ward & Co. catalogue					
Prosser	-	-	16¢	-	9¢
Pearl	-	8¢	-	9¢	10¢
1902 Sears, Roebuck & Co. catalogue					
Prosser	4¢	7¢	9¢	10¢	11¢
Pearl	2½¢	3¢	4¢	4¢	5¢
1908 Sears, Roebuck & Co. catalogue					
Prosser	4¢	-	7¢	-	9¢
Pearl	8¢	9¢	11¢	12¢	13¢

Venovecs (2013:5) noted that Prosser buttons were the least expensive buttons on the market in the late nineteenth century and were used primarily on work clothing. By the twentieth century, as noted in the 1902 and 1908 Sears, Roebuck & Co. catalogues, most of the buttons advertised were pearl buttons, but buttons made from brass, gilded metal, vegetable ivory, horn, and fabric over metal were also available.

Metal Button

One rusted, two-piece disk-shaped, 22L (9/16-inch or 1.43-cm) metal button was recovered from the midden (Figure 73). It appears that the top surface was flat; the base/back was beveled towards a circular depression which may have had a wire shank. Most metal buttons consist of two pieces that were crimped together and stamped with the garment maker’s name, slogans or designs. Large-scale production began in the late nineteenth century and these buttons were sold to manufacturers of work clothing – jumpers (jackets), work pants, and overalls. Metal buttons could also be purchased by the dozen from mail-order catalogues. They came in a variety of sizes and styles; some were gilded; some incised with decorative designs; while some were covered with lace, silk, or mohair

(Luscomb 2006:224; Marcel 1994:9; Schroeder 1970 [1895]:79-81; Schroeder 1971 [1908]:1004; Sears, Roebuck & Co 1969 [1902]:940).

Metal Rivet

A 22L (9/16-inch or 1.43-cm) copper alloy, slightly domed and hollow rivet, stamped with “BRONCHO,” was also recovered from the midden (Figure 76). It appears to be constructed from two pieces of metal that were crimped around the circumference. A rivet is a permanent mechanical fastener consisting of a smooth cylindrical shaft with a head on one end and a tail on the other. The tail of the rivet is saw-toothed, and its teeth are bent outward, as it should be when attached to a garment. No cloth remnants remained on the rivet. On installation, the rivet is hammered through multiple layers of fabric and the tail is bucked (deformed) outward so that it expands to about 1.5 times the original shaft diameter, holding the rivet in place (Wikipedia 2022g). Rivets are commonly placed near the openings of pockets on work clothing that received a lot of pull or wear (Buttoncare 2022).



Figure 76. Brass rivet stamped with “BRONCHO” recovered from the midden (Photograph by Bryan Jameson).

Rivets were invented in 1872 by Jacob Davis of Reno, Nevada. He shared his invention with Levi Strauss in exchange for Strauss funding his patent on rivets, but Strauss submitted the patent on riveted buttons in

his own name (A&E Television Networks 2021). This rivet differs from those used on jeans today in that jean rivets consist of two parts, the base/post and the top. The design of the top is either a ring rivet or a nipple rivet. Setting both of these types requires a perforation in the fabric layers in which the rivet will be set (Liss 2018). In the “Overalls, Jumpers, and Duck Coats” section of the 1897 Sears, Roebuck & Co. catalogue (Israel 1976 [1897]), “The Very Best 50¢ Overalls Ever Made” were riveted, as were the York Blue Denim overalls. The description of the Black Crook overalls states that the front, hip and rule pockets have the “best riveted buttons.” The Black Duck coats have “patent riveted buttons” on the two outside flap pockets and on the inside pocket. Like the metal buttons, rivets were sometimes stamped with the garment maker’s name, logo, or design. The stamped name “BRONCHO” could not be identified.

The fact that only five buttons were recovered from the midden that was used for trash disposal over a 50-year period, suggests that the Sladkys removed and reused their buttons after their garments were no longer usable. Two 20L buttons (Prosser and pearl) and one 22L Prosser button, both of which were commonly used on a number of different garments, were intact. This suggests that these buttons were accidentally lost in the vicinity of the midden. Or possibly, the Sladkys had saved enough buttons of these sizes for reuse and did not care if one or two ended up in the trash. As for the shanked Mother-of-Pearl button, its shank had been broken off and it no longer served its purpose. The same may be suggested for the shanked metal button.

Women’s Sash Belt Buckle

One-half of a women’s metal sash belt buckle was recovered from the midden (Figure 77). It is approximately 2 1/8 inches (5.47 cm) wide by 1 11/16 inches (4.3 cm)

tall and $\frac{1}{4}$ inch (0.63-cm) thick. It exhibits a filigree design of five-petaled flowers, leaves, and scrolls surrounding a circular design (diameter approximately 1 inch, 2.35 cm) which is divided into 16 pie-shaped pieces that radiate from a small, concave circle (diameter $\frac{1}{4}$ inch or 0.63 cm). Around the circumference of the circle are 16 “beads” that are evenly spaced. At one end of the back side of the buckle is a raised bar approximately $1\frac{1}{2}$ inches (3.73 cm) in length through which a cloth belt would have been drawn. On the opposite end is a circular ring with a diameter of approximately 1 inch (2.6 cm). This ring would have been latched with a hook that would have been found on the back side of the missing half of the belt buckle. Figure 78 depicts the back side of a woman’s belt buckle with a similar configuration, except that this buckle has a square-shaped ring instead of a circular one. Similar belt buckles were advertised in the 1897, 1902 and 1908 Sears, Roebuck & Co. catalogues. The 1897 example is described as “fine plated belt buckle in gilt or silver, complete with slide” (Israel 1976 [1897]). Over a dozen sash belt buckles were advertised for sale in 1902 (depicted in Figure 79). One such belt is described in the 1908 catalogue as a “cloth embroidered changeable belt, closes in front with a large pure white ocean pearl buckle, $1\frac{1}{3}$ inches wide, with patent underclasp. The buckle and underclasp can be removed for laundering purposes” (Schroeder 1971 [1908]:999). Silk belting was also sold by the yard (Israel 1976 [1897]).



Figure 77. Women’s sash belt buckle recovered from the midden, front view (Photograph by Bryan Jameson).



Figure 78. Back side of a lady’s sash belt buckle (WorthPoint Corporation 2022c).

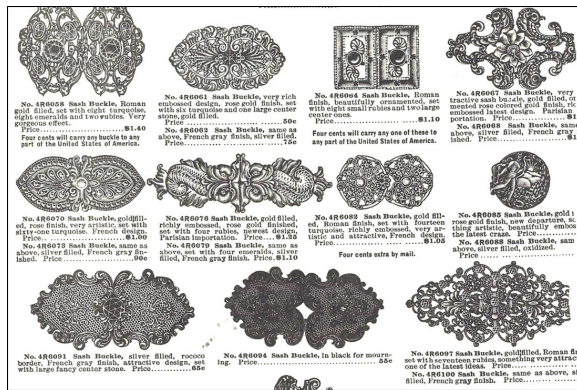


Figure 79. Sash belt buckles for sale in the 1902 Sears, Roebuck & Co. catalogue (1969 [1902]:96).

Lace Pin

A 1 10/16 inch (4 cm) long lace pin topped with a turquoise-glass pear-shaped bead was recovered from the midden (Figure 80). It is similar to those that were sold in the 1908 Sears, Roebuck & Co. catalogue (Figure 80): “Indestructible Lace Pins - round or pear-shaped beads, convenient and handy. Regular size, length 1½ inch. Colors pearl, pink, lavender or turquoise” (Schroeder 1971:1006). It is assumed that a seamstress used lace pins to position lace onto a garment before she attached it with a needle and thread.

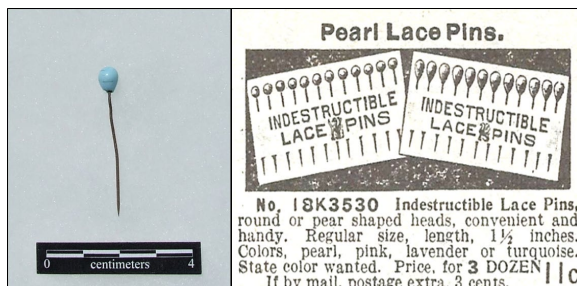


Figure 80. Lace pin, (left) lace pin recovered from the midden (Photograph by Bryan Jameson); (right) lace pins featured in the 1908 Sears, Roebuck & Co. catalogue (Schroeder 1971 [1908]:1006).

DOLL PARTS

A bisque doll forearm and a china (porcelain) doll forearm were recovered from the midden (Figure 81). Both

appendages had binding flanges on their proximal ends, a characteristic of dolls with nankeen (cloth), or kid-leather bodies. The appendage is attached to the body by wrapping string or wire around the indented ring located just below the flange (Schroeder 1970 [1895]:229-230; Verderame 2022). This forearm would have been attached to the doll at the elbow. Figure 82 depicts a complete doll forearm that is similar in shape and size to the bisque doll forearm fragment that was recovered from the midden.



Figure 81. Doll forearms recovered from the midden, (left) bisque forearm of an adult doll; (right) china forearm and hand of a child-like doll (Photograph by Bryan Jameson).

Bisque dolls are characterized by their realistic, skin-like matte finish. Between 1860 and 1890, French and German doll companies made bisque fashion dolls, representing grown-up women. During the 1890s, the doll-making industry began making more childlike and baby dolls dressed in contemporary children's clothing. German doll makers led this trend well into the 1930s. Dolls with cloth or leather bodies, bisque heads, and bisque flanged appendages were gradually replaced

with “indestructible” and “unbreakable” dolls made from materials such as celluloid, plastic, and rubber (Invaluable 2018; Schroeder 1971[1908]:1048-1049; Sears, Roebuck & Co. 1969[1902]:914; Wikipedia 2022c).



Figure 82. Child-related artifacts from a late nineteenth- to early twentieth-century site in Virginia City, note how the shape of the arm narrows slightly beneath the flange and indentation, this trait is similar to the bisque doll forearm fragment recovered from the midden (Baxter 2005:45 Figure 2).

The bisque arm fragment is approximately 1 3/4 in (4.45 cm) long by 6/16 in (1 cm) wide and was stamped with Roman numerals ‘LV’ beneath the indented binding ring. This mark has not been identified. Below the flange and binding indentation, the shape of the appendage narrows before widening to form the forearm, similar to the examples of adult dolls depicted in Figures 82 and 83. Given the width and length of the arm, proportionally, it may represent a doll that is no more than 10 inches tall. Size determination was also made by comparing the appendage to that of dolls in antique stores.

A flanged forearm with hand (middle fingers are chipped) of a china (porcelain) doll was also recovered. Its length is 1 6/16 in (3.49 cm) long and 9/16 in (1.3 cm) wide. The number ‘2’ is stamped beneath the

flange indentation on the interior portion of the arm. Given the size of the forearm, it belongs to a small doll, estimated to be 8 inches tall. Since the hand is not slender as the one depicted in Figures 83 and 84, it may represent a baby doll.



Figure 83. A 9 1/4-inch German porcelain adult doll with a cloth body and flanged appendages (Etsy 2022a).

Catalogues published by Sears, Roebuck & Co. in 1897, 1902, and 1908, did not offer china dolls for sale. As stated in the Preface of the 1897 catalogue (Israel 1976 [1897]), “The items displayed represent artifacts that people really wanted and bought,” suggesting that china dolls were no longer desired by consumers who sought to purchase more realistic dolls (bisque) for

their children. The china doll represented by the forearm and child-like hand may represent a late nineteenth-century baby doll, possibly belonging to ten-year-old Mary, brought with her from Austria.

HARMONICA

A brass harmonica reed plate fragment, 2½ inches long by 1 inch wide, exhibiting six slots (of the ten) at the higher-pitched end, was recovered from the midden. It represents either a blow reed or a draw reed plate (Figure 84).



Figure 84. Harmonica reed plate recovered from the midden (Photograph by Bryan Jameson).

The harmonica was developed in Europe in the early part of the nineteenth century. Christian Friedrich Buschmann and Joseph Richter are two of many who are cited as the inventors of the harmonica. Richter's instrument had five main parts: two outer cover plates, two brass reed plates with slots, each holding 10 reeds, and a 10-hole wooden comb (see Figure 85). Each hole on the Richter harmonica was associated with an upper and a lower reed. Reeds were flat, elongated springs, typically made of brass and secured at the ends of the slots. When air is blown into the hole, the air passes through the chamber over the blow reed, causing it to vibrate. The same thing happens when air is drawn from the hole

over the draw reed. The sound of the harmonica is created when the reeds vibrate, creating sound waves in the air. The longer and heavier reeds produce deeper, lower sounds and the shorter and lighter reeds make higher-pitched sounds (Eyers 2021; Wikipedia 2017; Word Press 2013).

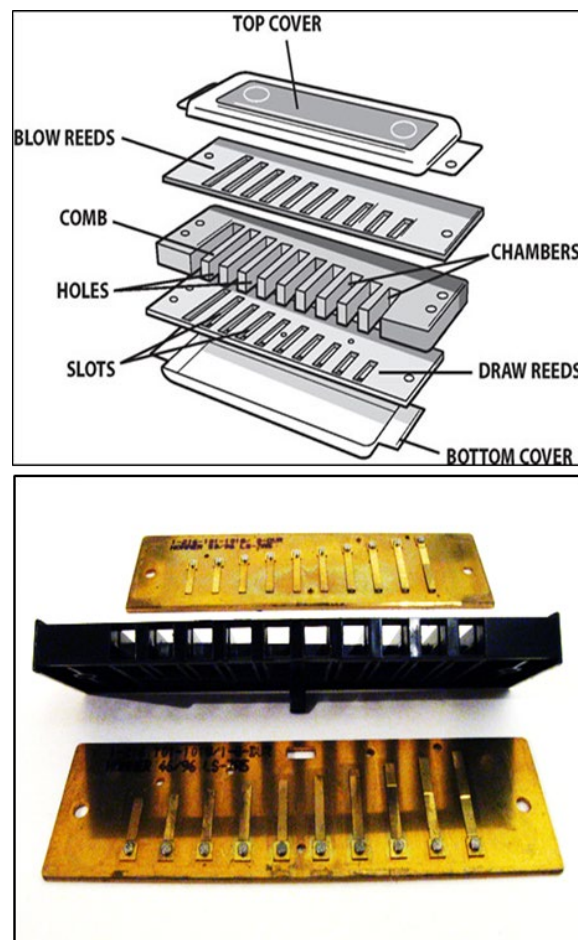


Figure 85. 10-hole harmonica, (top) harmonica schematic (Word Press 2013); (bottom) harmonica comb with ten holes, two brass reed plates with attached reeds (Wikipedia 2017).

In 1857, Matthias Hohner, a German clockmaker started producing harmonicas and within ten years, he began exporting them to the United States. Figure 86 provides a photograph of a Matthias Hohner's 10-hole "OLD STANDBY" harmonica. New designs continued to be developed, some with 12 and 14 holes, others with 29 holes (14 top, 15 base). The

popularity of the harmonica grew at the end of the nineteenth century (Eyers 2021; Israel 1976 [1897]; Wikipedia 2017). This is evident in the number of harmonicas offered for sale in the 1897 Sears, Roebuck & Co. catalogue. The “Brass Band Harmonica Extra Full Tone,” advertised as the “finest instrument of its kind in the World” had 20 holes and 40 reeds and sold for \$0.50 (today, it would have sold for \$18.00; CPI Calculator 2023). However, the majority of harmonicas advertised for sale had 10 holes and 20 reeds, similar to Hohner’s Old Standby and the one recovered from the midden. Two “Genuine Richter Harmonicas” were available for sale, one with 10 holes and the other, with 20 holes. The 10-hole harmonica sold for \$0.05, and the 20-hole harmonica sold for \$0.10. The price for these harmonicas in 2023 is \$1.83 and \$3.65 respectively (CPI Calculator 2023; Israel 1976 [1897]).

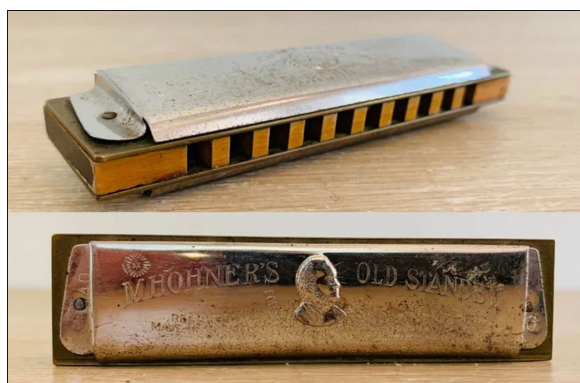


Figure 86. Antique Matthias Hohner “Old Standby” 10-hole harmonica, 4 in long by 1 in wide (Etsy 2022b).

Descriptions of harmonicas in the 1897 Sears, Roebuck & Co. catalogue include the number of holes and reeds, as well as, the materials used in the assembly, including the cover which could be nickel, celluloid, or silver. The reed plate was usually made of brass and individual reeds were made of brass or German silver. Reed plates on older harmonicas were nailed to the wooden comb whereas on more modern

harmonicas, reed plates were screwed or bolted to the comb. This was useful because the reeds eventually fall out of tune and could be replaced (Israel 1976 [1897]; Wikipedia 2017).

The harmonica to which the reed plate was attached may have been worn out and thrown away. Often, the wooden comb absorbs moisture from the player’s breath and contact with his tongue, causing the comb to expand and contract, forming small cracks, which would have compromised the quality of the sound it produced (Wikipedia 2017).

SUMMARY

The artifacts assigned to the Personal Items category bring a new dimension to the Sladky family. The Prosser buttons and one of the pearl buttons could have been part of any number of garments worn by either the male or female members of the family. The rivet could have been used on a pair of overalls, work pants, or jacket worn by Joseph, John, or Virgil. The large Mother-of-Pearl button may have belonged to a coat or jacket worn by Francis, or possibly later by Victoria. Its unique design most likely made it hard to replace after its shank had broken. Victoria may have used lace pins to apply trim to her blouses which she paired with a skirt and sash belt, fashionable at the time. The dolls most likely belonged to Mary, Victoria, or Annie when they were little girls. One may have been purchased in Austria, and the other in Texas. It is not too hard to imagine a family member sitting on the porch in the evening playing a harmonica.

Window Glass

Window-pane glass shards, weighing 399 g, were recovered from across the midden. The thickness of each shard was measured with digital calipers in millimeters and assigned

to a range of dates established by Moir's thickness index for north-central Texas (Weiland 2009:31). Figure 87 depicts the weight/date proportions of the window-pane glass assemblage. The largest proportion (46 percent) of shards were greater than 2.35 mm in thickness and date from 1910 onward. Thirty-seven percent of the shards were less than 2.156 mm and date prior to 1893. This suggests that over the course of 50 years of occupation, the Sladkys had to replace broken window-pane glass that was installed when the house was built in the mid-1890s, but also, throughout the first half of the twentieth century.

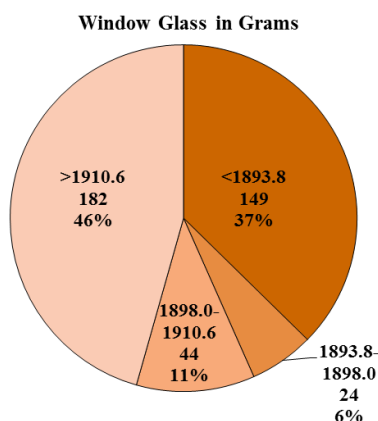


Figure 87. Proportion of shards of window-pane glass by weight and date range.

Also included in the assemblage were four slightly tinted aqua-glass shards of a thick (0.74 cm) beveled glass, possibly representing a small window on a front door or a French door glass insert.

Metal Artifacts

Metal artifacts recovered from the midden consist of items related to food, household use, and farm activities. Farm-activity related artifacts include barn fixtures, farm equipment, tools, horse-related gear, hand-forged iron objects, nails, staples, wire, and ammunition.

FOOD

The category Food includes zinc canning jar lid fragments, fragments of tin-plated cans, and crown caps from soda and beer bottles.

Zinc Lids

Four zinc canning jar lid fragments, most likely used on the canning jars discussed earlier, were recovered from the midden. Zinc screw-top canning jar lids were first patented by John. L. Mason in 1858 for the "Improvement In Screw-Neck Bottles." These early lids left a metallic taste to the canned product until the problem was solved with Lewis Boyd's 1869 patent for a "porcelain" (milk glass) liner that was inserted into the zinc lid. Mason continued to improve upon the lid and secured another patent in 1871, calling it the "Improvement In Screw-Caps and Rings for Fruit-Jars." Shards representing 14 milk glass canning jar liners were recovered from the midden. Zinc lids were produced until World War II when the shortage of zinc forced the complete conversion to tin-plate bands that are still used today (Lindsey 2021e; Mason Jars 2022).

Crown-finish Bottle Caps

Two heavily rusted crown-finish bottle caps were recovered from the midden. The crown cap was invented by William Painter in 1892. He changed the name of his company from the Bottle Seal Company to the Crown Cork and Seal Company. A crown cap consisted of a simple metal cap with a corrugated skirt or flange and a compressible liner, originally made of cork and linoleum-soaked discs (1909-1915) that prevented direct contact between the liquid and the metal cap. It was not an immediate success because it required a new bottle design and uniformity in bottle manufacturing. Mouth-blown crown-finish soda bottles were made in the 1890s, but

were surpassed by machine-made crown-finish bottle production after 1905 when the first license for soda and beer bottles was issued to the Owens Automatic Bottle Machine. Most soda and beer bottles produced by Owens post-date 1910 (Lindsey 2021e). Only three bottle shards exhibiting the crown finish were recovered from the midden. This suggests that the Sladkys were moderate consumers of bottled beer or soda.

Tin Cans

Over a hundred fragments of metal cans, weighing 675 g were recovered from the midden. Metal cans were made from tinplate – sheets of steel coated with a thin layer of tin. Some of the fragments exhibit double-rolled side seams with no solder. This type of can was first invented by Charles Ams in 1888 which he continued to improve over the next decade. In 1898, the Ams “solderless” cans were tested by the Cobb Preserving Company in which they canned pears successfully. The “solderless can” was also known as the “sanitary can.” It had no internal solder, and its top, bottom, and side seams were closed by double-seaming. The interior of the cans were coated with various compounds to prevent the chemical reaction of the product with the metal. These coatings were made from shinawood oil and natural resins, referred to as oleoresins (Rock 1987:23-24). In the “Grocery Department” of the 1897 Sears, Roebuck & Co. catalogue, a number of canned products were advertised, these include baking powder, coffee, canned fruit and vegetables (Israel 1971 [1897]).

The proximal end of a wind key used to open small cans was also recovered from the midden. The key-wind can opening was introduced in the mid-1860s and was used by the meat-packing industry in the 1890s. The key-wind method of opening cans involved a “key” that was easily removed

from the top or bottom of the can and used to wind off the can’s top panel. Cans of this type were used for corned and roast beef in the early 1890s, nuts, candy, and shortening in the 1910s, sardines around 1919, and Maxwell House Coffee in the 1920s-1930s (Rock 1987:41, 55, 58, 107).

HOUSEHOLD

Artifacts in the Household category include a three-tined fork, a stove flue damper and key, and an oil lamp burner knob.

Three-Tined Fork

The fragment of a three-tined composite fork consisting of tines and a metal handle was recovered from the midden (Figure 88). If the tips of the tines had not broken off, the fork would have been 6 inches long, suggesting that it may have been a child’s fork, since full-size forks range from 7 to 7½ inches long. Three-tined composite forks for children were available for sale in the 1894-1895 Montgomery Ward & Co. catalogue (Figure 89). In the 1902 Sears, Roebuck & Co. catalogue (Figure 90), three-tined fork and knife sets, sold in sets of six, were available for sale. The handles were made of wood, “white bone,” and cocobolo (a tropical hardwood of Central American trees belonging to the genus *Dalbergia*). Silver and silver-plated flatware, including forks, spoons, and knives were sold in mail-order catalogues at the turn of the century and all of these forks had four tines. The four-tined design was attributed to the fact that a four-tined fork was better suited for gathering food than a three-tined fork (Cookist 2022).



Figure 88. Three-tined fork recovered from the midden (Photograph by Bryan Jameson).

Children's Knives and Forks.
Made just as fine as the large knives
Postage per set, 5 cents.



46363 Child's Set, one knife, one fork, cocoa Per set.
wood handle, single bolster, best steel.....\$0.15



46364 Child's Set, one knife, one fork, white bone
handles, single bolster, best steel.....\$0.20



Extra, by mail, 6 cents.
46365 Child's Set, one knife, one fork, white bone
handles, double bolster, scimitar-shaped blades,
finest quality. Per set.....\$0.27

Figure 89. Children's fork and knife sets for sale in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:434).

Stove Parts

Two fragments of a heavily rusted 6-inch diameter cast-iron stove flue damper and a damper handle were recovered from the midden (Figure 91). The Sladky house did

not have a fireplace, so it must have been heated with one or more stoves. A wood-burning stove is considered to be a more efficient heat source than a traditional fireplace. Each stove was equipped with a flue or stovepipe that drew away gases and smoke from the stove. A damper is a metal insert that is usually located approximately 12 to 18 inches from the stove and acts as a valve to regulate the passage of air needed to ignite a fire in the stove, as well as, to retain heat from escaping up the flue. It allows heat to dissipate into the area being heated by the stove. A damper handle, also known as a knob, is the piece of the damper assembly that is used to control the opening and closing of the damper. Dampers can warp, break, or become unseated and will need to be replaced (Perdue 2013). Six-inch dampers were available for sale in all of the catalogues that date to the turn of the century. An example taken from the 1894-1895 Montgomery Ward & Co. catalogue is depicted in Figure 92.

CUTLERY DEPARTMENT.
TABLE CUTLERY. Our Table Cutlery is made by the most reliable and well known factories in this country. Our goods are of the latest and best patterns possible to obtain. They are made of only the best steel, are fully warranted, and the workmanship cannot be excelled. We do not handle inferior grades known as seconds.

PRICE OF KNIVES ONLY. We will furnish KNIVES ONLY in any of the patterns quoted (except as noted). The price of one dozen knives only is 15 cents more than the price of the set of same style knives and forks. Six knives and six forks constitute a set. If by mail, 25 to 40 cents per set extra for postage. Note our reduced prices.

ALL ORDERS WILL BE FILLED AT PRICES PRINTED IN LATEST EDITION OF OUR CATALOGUE.

<p>No. 28R100 Iron Handle Knives and Forks. Price, per set, 6 knives and 6 forks.....\$0.37c No. 28R101 Iron Handle Knives only. Per doz. 49c</p> <p>No. 28R112 Cocobolo Handle Knives and Forks, no bolster. Per set, 6 knives and 6 forks.....\$0.38c No. 28R113 Cocobolo Handle Knives only. Price, per dozen.....\$0.60c</p> <p>No. 28R114 White Bone Handle Knives and Forks, no bolster. Per set, 6 knives and 6 forks.....\$0.68c No. 28R115 White Bone Handle Knives only. Price, per dozen.....\$0.80c</p> <p>No. 28R125 Cocobolo Handle Knives and Forks, single bolster. Per set, 6 knives and 6 forks.....\$0.60c No. 28R126 Ebony Handle Knives and Forks, single bolster. Same pattern as No. 28R125. Price, per set, 6 knives and 6 forks.....\$0.72c</p> <p>No. 28R127 White Bone Handle Knives and Forks, single bolster. Per set, 6 knives and 6 forks.....\$0.80c</p>	<p>No. 28R134 Fancy Ring Pattern, Cocobolo Handle Knives and Forks, swaged scimitar blades. Price, per set, 6 knives and 6 forks.....\$0.88c No. 28R135 Same as No. 28R134, with ebony handles. Per set, 6 knives and 6 forks.....\$1.02c</p> <p>No. 28R136 Same as No. 28R134, with bone han- dles. Per set, 6 knives and 6 forks.....\$1.23c</p> <p>No. 28R143 Fancy Shape Cocobolo Handle Knives and Forks, with one cross pattern bolster. Swaged scimitar blades. Taper point handle. Price, per set, 6 knives and 6 forks.....\$1.00 No. 28R144 Same as No. 28R143, with ebony handles. Per set, 6 knives and 6 forks.....\$1.24c</p> <p>No. 28R145 Same as No. 28R143, with bone han- dles. Per set, 6 knives and 6 forks.....\$1.65c</p> <p>No. 28R152 Double Bolstered Cocobolo Handle Knives and Forks. Per set, 6 knives and 6 forks, 71c No. 28R153 Same as No. 28R152, with ebony handles. Per set, 6 knives and 6 forks.....\$0.92c</p>	<p>No. 28R154 Double Bolstered Bone Handle Knives and Forks. Per set, 6 knives and 6 forks.....\$0.98c</p> <p>No. 28R161 Double Bolstered Knives and Forks, cocobolo handles, scimitar blades. Price, per set, 6 knives and 6 forks.....\$0.77c No. 28R162 Same as No. 28R161, with ebony handles. Per set, 6 knives and 6 forks.....\$0.88c</p> <p>No. 28R163 Same as No. 28R161, with bone handles. Per set, 6 knives and 6 forks.....\$1.05c</p> <p>No. 28R170 Double Ring Pattern Knives and Forks, cocobolo handles. Price, per set, 6 knives and 6 forks.....\$0.90c No. 28R171 Same as No. 28R170, with ebony handles. Per set, 6 knives and 6 forks.....\$1.04c</p> <p>No. 28R172 Same as No. 28R170, with bone handles. Per set, 6 knives and 6 forks.....\$1.35c</p> <p>No. 28R179 German Style, Cocobolo Handle, Knives and Forks, swaged scimitar blades. Price, per set, 6 knives and 6 forks.....\$1.05c No. 28R180 German Style Knives and Forks. Same as No. 28R179, with ebony handle. Price, per set, 6 knives and 6 forks.....\$1.20c</p>
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Figure 90. Three-tined fork and knife sets advertised for sale in the 1902 Sears, Roebuck & Co. catalogue (1969 [1902]:481).



Figure 91. Wood stove parts recovered from the midden, (top) damper handle; (bottom) stove flue damper (Photograph by Bryan Jameson).

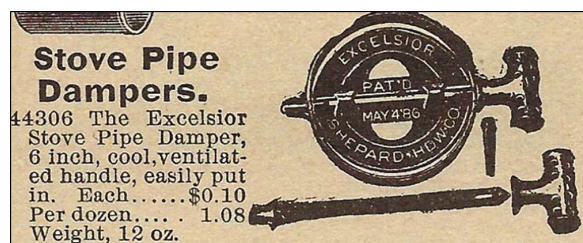


Figure 92. Cast-iron 6-inch flue damper advertised for sale in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:415).

Oil Lamp Burner Knob

A 2¾-inch brass oil lamp burner knob was recovered from the midden (Figure 93). It consists of a brass serrated disc knob, ½ inch in diameter, and a wire stem with three evenly spaced saw-tooth discs (each has seven claws) located 1¾ inches below the knob. These discs were evenly spaced over a span of 9/16 inches and served as gears to advance a ¾- to 7/8 inch wide cotton wick. Wicks of this size were used in No. 2 burners, one of the most common types available. The circumference of the knob was stamped with “PAT APRIL 10 1877,” the same as the example depicted in Figure 94.

No. 2 oil lamps are approximately 18 inches tall and have a 5- to 6-inch base (Lehman’s 2022; WorthPoint Corporation 2022b). Oil lamps, as well as the burner assemblies pictured in Figure 94 were widely available for sale at general stores and from mail-order catalogues.



Figure 93. Brass oil lamp burner knob with gears recovered from the midden (Photograph by Bryan Jameson).



Figure 94. Oil lamp burner assembly, (left) knob embossed with “PAT APRIL 10 1877” similar to that recovered from the midden; (right) knob gears would grab the wick and advance when turned (Jacks County Store 2022; WorthPoint Corporation 2022b).

FARM-RELATED – BARN FIXTURES

Four wrought-iron artifacts appear to have once been used as fixtures in the barn. These items may have been made by Joseph Sladky in his forge. These include two strap hinge fragments used on doors, a hand-wrought hook, and a hand-wrought cabinet or drawer handle. The first wrought-iron strap hinge fragment, 3¾ inches long by 1½ inches wide still has its two nails attached. The second hinge fragment is 2½ inches


long and 1¼ inches wide and exhibits a perforation in the center. Strap hinges were available for sale in the 1894-1895 Montgomery Ward & Co. catalogue (Figure 95). The third wrought-iron artifact is a hand-forged flattened iron hook, 2¾ inches long and 5/8 inches wide that was probably attached to a wall in the barn and used to hold rope or tack. The fourth wrought-iron artifact is a complete hand-forged iron cabinet or drawer handle 3¾ inches wide and 2 7/8 inches long with perforations on both ends (Figure 96). Handles that were placed on furniture used in a home were usually made of a copper-alloy metal, suggesting that this handle was used on a storage cabinet in the barn.

FARM-RELATED – EQUIPMENT

Artifacts that may have once been parts of farm equipment include a lever or valve mechanism, with dimensions of 2¼ inches long, 1¼ inches wide and 1½ inches thick, made from iron and brass (Figure 97). This item may have been part of a valve or cock mechanism. Beneath the handle/lever is a tightening screw used to possibly secure an iron pipe. It could have been part of a number of different types of farm equipment, such as a generator, a water hydrant, or water pump.

The second artifact is a 2¾-inch threaded iron bolt with a rectangular-shaped shaft. Similar objects are represented in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:368) and are depicted in Figure 98. These objects, referred to as tie and iron work bolt sets, were used on carriages and stoves.

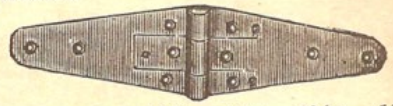
Strap Hinges.
Nearly everyone has screws that will fit these hinges. We do not furnish screws with hinges at prices quoted below. For screws see Index.



41255 Wrought Iron Strap Hinges, light.
Size..... 3 in. 4 in.
Weight, per pair..... 4 oz. 5 oz.
Size of Screws used..... 7 7
Price, per pair..... 3c. 4c.
Price, per 12 pair..... 17c. 33c.

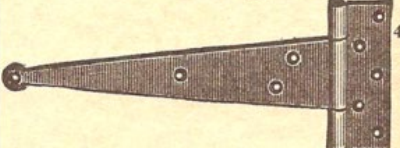
41256 Wrought Iron Strap Hinges, heavy.
Size..... 5 in.
Weight, per pair..... 12 oz.
Size of Screw used..... 10
Per pair..... 5c.
Per 12 pair..... 48c.

41257 Well's Patent Heavy Strap Hinges are superior to the common, from the fact that they are much stronger in the joint and will last much longer for that reason.



Size.....	6 in.	8 in.	10 in.	12 in.
Weight.....	31 oz.	3¼ lbs.	4 lbs.	7 lbs.
Per pair.....	\$0.12	\$0.19	\$0.28	\$0.40
Per 12 pair.....	1.20	1.80	2.65	3.80

T Hinges.



41258 T Hinges, wrought iron, light.

Sizes.....	3 in.	4 in.	6 in.
Weight, per pair.....	3½ oz.	5 oz.	8 oz.
Size of screw used.....	7	8	9
Price, per pair.....	\$0.03	\$0.04	\$0.05
Price, per 12 pair.....	.17	.33	.44

41259 T Hinges, wrought iron, extra heavy.
There is a grade made known as "Heavy," costing less than the extra heavy. These are ordinarily sold as extra heavy. Ours are the extra heavy quality and are so guaranteed.

Sizes.....	10 in.
Weight, per pair.....	4¼ lbs.
Size of screw used.....	16
Price, per pair.....	\$0.18
Price 12 pair.....	1.95

Figure 95. Wrought-iron strap hinges for sale in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:365).



Figure 96. Wrought-iron handle recovered from the midden (Photograph by Bryan Jameson).



Figure 97. Iron and brass assembly, possibly part of a handle/value used on a piece of farm equipment, recovered from the midden (Photograph by Bryan Jameson).

Bolts—Continued.

43350 Bolt ends, square nuts, very convenient when extra long bolts are required, as they may be welded to any length of round iron same size.

Diameter of iron.....	1/2	3/4	1	1 1/4	1 1/2
Length of ends.....	10	11	12	13	14
Price per doz.....	8	13	25	48	120
Av. weight per doz.....	8	13	25	48	120

Carriage Bolts.

43354 Patent Reverse Headed Agricultural Bolts. These bolts are something new, and are giving great satisfaction. The advantages over the ordinary kind are that having no square shoulder under the head avoids the necessity of mortising a square hole in the better grades of work, or bending the bolt to burn out the hole as is done in ordinary practice, and owing to the thread or ribs they will not turn when the nut is being screwed up. Besides giving them great strength, they are very symmetrical and nicely finished goods.

1/4 inch.	5-16 inch.	3/4 inch.
Per doz. Per 100	Per doz. Per 100	Per doz. Per 100
1 \$0.08 \$8.00	1 \$0.07 \$7.00	1 \$0.10 \$10.00
1 1/4 .07 7.00	1 1/4 .07 7.00	1 1/4 .07 7.00
1 1/2 .07 7.00	1 1/2 .07 7.00	1 1/2 .07 7.00
1 3/4 .07 7.00	1 3/4 .07 7.00	1 3/4 .07 7.00
2 .07 7.00	2 .07 7.00	2 .07 7.00
2 1/4 .07 7.00	2 1/4 .07 7.00	2 1/4 .07 7.00
2 1/2 .07 7.00	2 1/2 .07 7.00	2 1/2 .07 7.00
2 3/4 .07 7.00	2 3/4 .07 7.00	2 3/4 .07 7.00
3 .07 7.00	3 .07 7.00	3 .07 7.00
3 1/4 .07 7.00	3 1/4 .07 7.00	3 1/4 .07 7.00
3 1/2 .07 7.00	3 1/2 .07 7.00	3 1/2 .07 7.00
3 3/4 .07 7.00	3 3/4 .07 7.00	3 3/4 .07 7.00
4 .07 7.00	4 .07 7.00	4 .07 7.00

Carriage Bolts.

43356 Carriage Bolts. Oval heads. Forged nuts. These bolts are not a cheap, poorly made article. We guarantee them to be first class. They are made by one of the largest and best known manufacturers of this class of goods in the world.

WEIGHT OF CARRIAGE BOLTS PER 100.

Carriage bolts 1/4 inch from 1 1/4 to 6 inches in length, weigh from 2 lbs. to 9 1/2 lbs.; 1/2 inch from 1 1/4 to 12 inches in length, from 4 1/2 to 45 lbs.; 3/4 inch from 1 1/4 to 16 inches in length, from 6 1/2 to 20 lbs.; 1 inch from 2 to 16 inches, from 20 to 98 lbs. per 100.

1/4 inch.	5-16 inch.	3/4 inch.
Length.	Length.	Length.
Per 100.	Per 100.	Per 100.
1 1/4 6.05 60.50	1 1/4 5.00 50.00	1 1/4 5.00 50.00
1 1/2 6.05 60.50	1 1/2 5.00 50.00	1 1/2 5.00 50.00
1 3/4 6.05 60.50	1 3/4 5.00 50.00	1 3/4 5.00 50.00
2 6.05 60.50	2 5.00 50.00	2 5.00 50.00
2 1/4 6.05 60.50	2 1/4 5.00 50.00	2 1/4 5.00 50.00
2 1/2 6.05 60.50	2 1/2 5.00 50.00	2 1/2 5.00 50.00
2 3/4 6.05 60.50	2 3/4 5.00 50.00	2 3/4 5.00 50.00
3 6.05 60.50	3 5.00 50.00	3 5.00 50.00
3 1/4 6.05 60.50	3 1/4 5.00 50.00	3 1/4 5.00 50.00
3 1/2 6.05 60.50	3 1/2 5.00 50.00	3 1/2 5.00 50.00
3 3/4 6.05 60.50	3 3/4 5.00 50.00	3 3/4 5.00 50.00
4 6.05 60.50	4 5.00 50.00	4 5.00 50.00

Stove Bolts.

43374 Stove bolts. Stove bolts are very useful; a few used for a variety of repairing and manufacturing machinery, etc. Be sure and state whether round or flat head is wanted, if no kind is stated will send flat head.

1/4 INCH FLAT HEAD.

Length.....	1/4	3/4	1	1 1/4	1 1/2	2	2 1/4	3
Per doz.....	\$0.04	\$0.04	\$0.04	\$0.05	\$0.05	\$0.06	\$0.06	\$0.07
Per 100.....	4.00	4.00	4.00	5.00	5.00	6.00	6.00	7.00

1/4 INCH ROUND HEAD.

Length.....	1/4	3/4	1	1 1/4	1 1/2	2	2 1/4	3
Per doz.....	\$0.05	\$0.05	\$0.05	\$0.06	\$0.06	\$0.07	\$0.07	\$0.08
Per 100.....	5.00	5.00	5.00	6.00	6.00	7.00	7.00	8.00

1/2 INCH FLAT HEAD.

Length.....	1/2	3/4	1	1 1/4	1 1/2	2	2 1/4	3
Per doz.....	\$0.05	\$0.05	\$0.05	\$0.06	\$0.06	\$0.07	\$0.07	\$0.08
Per 100.....	5.00	5.00	5.00	6.00	6.00	7.00	7.00	8.00

1/2 INCH ROUND HEAD.

Length.....	1/2	3/4	1	1 1/4	1 1/2	2	2 1/4	3
Per doz.....	\$0.06	\$0.06	\$0.06	\$0.07	\$0.07	\$0.08	\$0.08	\$0.09
Per 100.....	6.00	6.00	6.00	7.00	7.00	8.00	8.00	9.00

Flat Head.

Per doz..... \$0.06 \$0.06 \$0.06 \$0.07 \$0.07 \$0.08 \$0.08 \$0.09

Per 100..... 6.00 6.00 6.00 7.00 7.00 8.00 8.00 9.00

We sell more Sewing Machines than any other house in

OUR REPAIRING DEPARTMENT

Figure 98. Carriage, stove, or tie and iron work bolt sets advertised for sale in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:398).

The third artifact is a saw-tooth clasp with a spring-loaded alligator clip which would have opened and released with thumb pressure (Figure 99). It is 4 1/4 inches long, 1 3/4 inches wide and approximately 1/2 inches thick. After a canvas strap was inserted and pulled through the clasp, the clip was pushed down upon the strap to cinch it tight. Clasps of this sort were used to bundle bulky items for easy transport and storage. A modern example is depicted in Figure 100.



Figure 99. Iron saw-tooth storage wrap clasp with a spring-loaded alligator clip buckle, recovered from the midden (Photograph by Bryan Jameson).

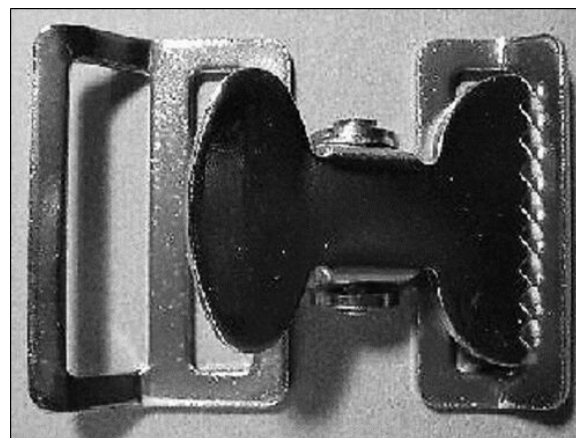


Figure 100. Modern saw-tooth storage wrap clasp with a spring-loaded alligator clip buckle (eBay 2022b).

Two iron cylindrically shaped weights were also recovered from the midden (Figure 101). The larger and heavier weight (3 1/2

pounds, 1,556 g) was 3½ inches long with a diameter of 2½ inches at its base. The top is recessed where a hook would have been attached. The second weight is approximately 2/3 pounds (308 g) and is 3 inches long with a base diameter of 1¾ inches; it too, is missing its hook. This weight had a ½ inch recessed cavity on its base. These weights most likely were used to weigh produce or harvested crops. They may have been part of a 40-pound pea weight scale, similar to the one depicted in Figure 102. These scales were used to weigh sacks of cotton. Cotton sacks came in a variety of sizes, from 6 foot to 9 foot in length. A 6-foot cotton sack could hold 40-45 pounds of cotton. After filling it with cotton, it would have been looped over the J-shaped end of the bar or attached to a hook. The “P” or pea weight would then be moved along the balance beam until balanced. The weight of the cotton sack was read from figures that were etched into the balance beam. The name “pea scale” is believed to have originated in New Orleans and came from the word “poids,” which is French for weight (Lydick 2018; Pence 2014).



Figure 101. Two iron cylindrically shaped pea weights recovered from the midden (Photograph by Bryan Jameson).



Figure 102. Antique 40-pound pea scale and a 4-pound pea weight (eBay 2022a).

Additional artifacts that were most likely parts of farm equipment include an o-ring or rivet burr, a copper-alloy gear-like disc, a small lead cap and two iron nuts, one is hexagon-shaped and is 1¼ inches across and the other is square, ¾ inches across.

FARM-RELATED – TOOLS

Four iron fragments that appear to be tools were recovered from the midden. These include two file fragments. Files of various sizes were available for sale from mail-order catalogues (Figure 103). The most common shape of file is rectangular in cross section, with an even thickness throughout its length. It may be either parallel-sided or tapered slightly in width from heel to end. The tip was used for smoothing inside holes and circular grooves, and for sharpening certain kinds of saws (Wikipedia 2022d). Both of the files appear to be parallel-sided and their teeth are no longer visible due to corrosion. One of the file fragments is 8 inches long and 1 inch wide and its pointed tip has been broken off. The other fragment is 4 inches long and ½ inches wide. Its tip has also been broken off, but was hammered over into a curve, suggesting that the file continued to be used after its tip had broken off.

40305 Mill Files, no handle:			
	Weight.	Each.	Per doz.
6 inch.....	6 oz.	\$0.07	\$0.70
8 inch.....	7 oz.	.10	.90
10 inch.....	10 oz.	.12	1.20
12 inch.....	16 oz.	.17	1.70
14 inch.....	31 ozs.	.25	2.45
16 inch.....	2 lbs.	.33	3.50
40306 Flat Bastard Files:			
4 inch.....	2 oz.	.07	.65
5 inch.....	4 oz.	.07	.70
6 inch.....	4 oz.	.08	.80
8 inch.....	7 oz.	.11	1.07
10 inch.....	12 oz.	.15	1.49
12 inch.....	1 1/4 lb.	.21	2.12
14 inch.....	29 oz.	.30	3.00
16 inch.....	39 oz.	.40	4.14
23—6th			

Figure 103. Various-sized iron files advertised for sale in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:353).

The third iron tool fragment consists of a 9³/₄-inch long and 1¹/₄-inch wide rod. Towards the center of the tool, the iron flattens out to a width of 1¹/₄ inches. The distal end appears to be broken. A small perforation is located at the center of the broken end of this tool. Its purpose is unknown, but it may have been used as a chisel or possibly as a pry-bar.

The fourth iron tool recovered is a medial-proximal section of a garden draw hoe (Figure 104). It consists of a rolled cone-shaped iron sheet (a wooden handle would have been inserted into it) and solid stem, but its blade is missing. The proximal section of the cone-shaped section is 1 1/8-inches in diameter. The curvature of the stem suggests that it was a garden draw hoe since the blade was set at a right angle to the shaft. Figure 104 provides an example of a garden draw hoe. The user chops into the ground and then pulls (draws) the blade towards him. A draw hoe can easily be used to cultivate soil to a depth of several centimeters (Peter Henderson & Co. 2002[1898]:39; Wikipedia 2022f).



Figure 104. Garden draw hoe, (left) medial-proximal section of a draw hoe recovered from the midden (Photograph by Bryan Jameson); (right) example of a complete draw hoe (Howell 2023).



Figure 105. Horse gear recovered from the midden, (top left) teeth from a mane comb; (bottom left) rivets used on leather strapping; (right) heel buckles used on leather strapping (Photographs by Bryan Jameson).

A deformed segment (1 9/16 inches long and 1 inch wide) of what appears to be teeth from a mane comb or combination mane-curry comb was recovered from the midden (Figure 105). Figure 106 depicts a horse mane comb and a combination mane-curry comb advertised for sale in the 1894-1895 Montgomery Ward & Co. catalogue.



Figure 106. Horse mane comb and combination mane-curry comb advertised for sale in the 1894-1895 Montgomery Ward & Co. catalogue (Schroeder 1970 [1895]:319).

Three single-cap copper-alloy rivets were recovered from the midden (Figure 105). Two of the rivets are $\frac{1}{2}$ inches in diameter and $\frac{1}{2}$ inches long. The third rivet was stamped with a 5-point star and has a slightly smaller diameter and a length of $\frac{3}{4}$ inches. A double-capped deformed rivet (diameter $\frac{7}{8}$ inches and $\frac{1}{2}$ inches long) was also recovered. These would have been used to bind together leather strapping.

In addition, three iron heel buckle frames, missing their prongs were recovered from the midden (Figure 105). Heel buckles have their connector bars on the end of the buckle, as compared to center-bar buckles that have their bars and prongs placed in the center (Weaver Leather Supply 2023). Figure 107 provides an example of each type. The larger buckle ($2\frac{1}{4}$ inches wide by $1\frac{3}{4}$ inches long) was wired to a smaller buckle ($1\frac{1}{2}$ inches wide by 1 inch long). An additional buckle was also found, but it was missing its bar. These buckles could have been used on leather strapping for reins or bridles, or used on a saddle; or they may have been used to tie cargo down on a wagon.



Figure 107. Examples of a heel buckle and a center-bar buckle (Weaver Leather Supply 2023).

FORGED IRON

Twelve forged-iron artifacts were recovered from the midden. These include slabs, bars, and a link of heavy chain.

Nails, Staples, and Wire

This assemblage consists of 25 wire nails, 10 fence staples, 2 fragments of barbed wire, and miscellaneous wire and nail fragments. The nails were sorted by size (Figure 108). All were heavily corroded and slightly bent, suggesting that they had all be removed from the wood in which they had been nailed. Ten of the nails were between $1\frac{1}{4}$ inches and $1\frac{3}{4}$ inches long, placing them in the 3d-5d category. Nails of this size are used on the finishing stages of carpentry, such as light framing, window framing, and interior finishes. Nine nails were $2\frac{1}{2}$ inches long, placing them in the 8d category. These nails could have been used on exterior trim, flooring, and interior finishing. Five 16d nails ($3\frac{1}{2}$ inches long) were recovered and could have been used for heavy framing. One large bent 50d nail (6 inches long) could have also been used on heavy framing, such as the framing of joists and roofs (Amrine 2010:24, 48-50, 53, 84). Recovering nails in the midden suggests that they had been removed while repairing or replacing exterior and interior framing and not wanting them to be underfoot in the yard, they were discarded in the midden.

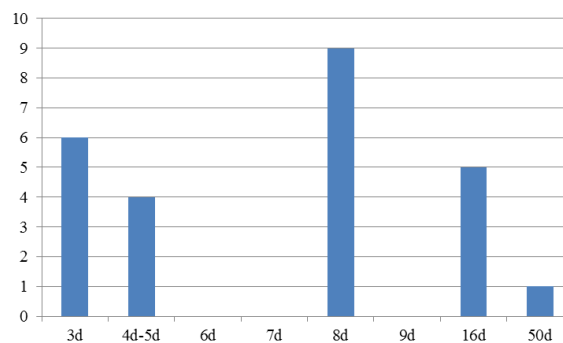


Figure 108. Distribution by size of wire nails recovered in the midden.

Ten barbless fence staples were recovered from the midden. Five were 1 inch long. Fence staples of this size were often used to attach netting to fencing or used to attach wire to posts made of dense wood such as

juniper (cedar). The remaining five fence staples were 1½ inches long. Staples of this length were used on posts made of softer wood, such as pine (Red Brand Post 2017).

Two loosely twisted, ribbon-cut barbed wire fragments with no barbs were recovered from the midden. Wire “armed with pieces of pointed or prickly iron” was patented by Louis F. Jannin in France in 1865, but barbed wire did not become widely available in the United States until the mid-1870s. By 1899, American Steel and Wire Company had a monopolization of 96 percent of all barbed wire manufacturing facilities in the United States (Tremblay 2022). Other fragments of wire were also recovered. One was a two-ply, tightly twisted, while the others were all single ply. Farmers used wire fencing to keep livestock out of their cultivated fields, gardens, and yards. Fencing was also used in the construction of chicken coops and used in other areas of the farm that needed to be enclosed.

AMMUNITION

One .22 short caliber shell, three 16-gauge shotgun shells, and a .410 caliber shotgun shell were recovered from the midden (Figure 109).



Figure 109. Ammunition recovered from the midden, (left to right) .22 short caliber shell; three 16-gauge shotgun shells; .410 caliber shotgun shell (Photograph by Bryan Jameson).

.22 Short Rim-Fire Shell Cartridge

The .22 caliber shell was made of brass and stamped with the letter “P” (Figure 109).

The .22 caliber rim-fire shell was a well-established ammunition type used in a wide range of rifles, pistols, and revolvers. The length of the shell casing is 0.42 inches, the length of a .22 Short. Figure 110 provides a photograph of a .22 Short bullet and a .22 Long Rifle bullet side-by-side for comparison. The .22 Short was first developed in 1857 for the Smith and Wesson revolver and it was also used in pocket pistols and mini-revolvers. In the American South, the .22 Short Hollow Point was used in hunting raccoons, which were “treed” at night with dogs. An animal shot with a Solid Point .22 would be wounded and in pain, but with a Hollow Point round, the animal would die on impact. For game hunting, the greater energy and wider ammunition selection of the .22 Long Rifle cartridges was preferred (EatingtheWild.com 2021; Wikipedia 2022a).

Mail-order catalogues dating to the turn of the century featured an extensive assortment of guns and ammunition in their “Gun Departments.” Figure 111 is a scanned image of three revolvers and rifles advertised for sale in the 1902 Sears, Roebuck & Co. catalogue which included an image of the type of ammunition to use, the .22 Short.



Figure 110. Examples of .22 shells, (left) .22 Short (casing length 0.421 inches); (right) .22 Long Rifle (0.613 inches) (Wikipedia 2022a).

Harrington & Richardson's Young America, Target Revolver.
Double Action, Reduced Size, 22-Caliber, Rim Fire, with 6-inch Rilled Barrel. \$2.40

Harrington & Richardson's New Model Premier 22-Caliber, 3-inch Barrel.
The "Premier" is an automatic shell ejecting, small frame, 7-shot, and is adapted to 22-caliber short or long rim fire cartridges. The working parts are drop forged. This is a fine 22-caliber automatic revolver. The frame, cylinder and barrel are steel, hammer rebounding, automatic shell ejector, rubber stocks. Full nickel plated or blued finish, rifled barrel. This is a good pocket size revolver. \$3.60

Harrington & Richardson's New Model Premier 22-Caliber, 5-inch Barrel.
It is automatic shell ejecting, small frame, 7-shot, and is adapted to 22-caliber short or long rim fire cartridges. The working parts are drop forged. This is a fine 22-caliber automatic revolver. The frame, cylinder and barrel are steel, hammer rebounding, automatic shell ejector, rubber stocks, rifled barrel. Full nickel plated or blued finish. \$3.60

Our \$2.25 Remington System Flobert Rifle.
Remington system, for 22-caliber short rim fire cartridge, polished octagon barrel, Remington action, trigger guard, light barrel, rifled, steel stock, dark mounting, blue checkered pistol grip. \$2.25

Warrant System Flobert Rifle.
22-CALIBER \$2.60 and \$2.80

THE NEW PIERCE RIFLE FOR \$2.55.
Patented 1897. THE BEST BOYS' RIFLE MADE FOR SQUIRRELS AND SMALL GAME.

THE STEVENS' CRACK SHOT TAKE DOWN RIFLE FOR \$2.95.
FOR \$2.95 we furnish you the STEVENS' CRACK SHOT RIFLE which is well worth \$3.00. This is a strictly American made rifle, smooth bore, and will afford all the sporting fun of steel and interchangeable and if any get broke we can furnish the another one to replace it. Why buy a hand made piece, which no one can make better, when you can get a better one for less money? It is made by one of the best rifle makers in the country. It will pay you in the end to buy a CRACK SHOT RIFLE. This rifle has in addition to its many good features, a safety catch on the frame behind the hammer, so that the rifle can't be accidentally discharged by children, or any one else, except the owner. It is a great point in favor of the STEVENS' CRACK SHOT RIFLE.

Figure 111. A selection of revolvers and rifles for sale in the 1902 Sears, Roebuck & Co. catalogue (1969 [1902]:318, 310).

The "P" stamp on the cartridge belonged to the Peters Cartridge Co., which was established by Gershom M. Peters in 1887 in Kings Mills, Ohio. He operated it independently until it was acquired by Remington Arms in 1934, which became a subsidiary of DuPont that year. In 1944, production at Peters plant in Ohio stopped. After that, Peters ammunition was made by Remington and was identical to the Remington product, except for the information printed on cartridge casings and boxes. Ammunition continued to be manufactured using the Peters name, but the branding on the boxes had changed – "Peters Cartridge Co., Cincinnati, O." and "Kings Mills," disappeared from the front of the cartridge box and was replaced with "Peters Cartridge Division." It is unknown how long the .22 caliber bullets continued to be manufactured, but the Peters brand shotgun shell cartridge, with its distinctive blue casing, continued to be sold separately until the late 1960s. In December, 2021, Remington Ammunition announced the

reintroduction of this shotgun shell (Hedeen 2022; The Truth About Guns 2021).

Shotgun Shells

Shotgun gauge is a measure related to 1) the diameter (hundredths of an inch) of the shotgun bore (Figure 112 provides a diagram of shotgun bore gauge sizes), 2) the size of the shell designed for that bore, and 3) weight of shot – specifically, one pound. For a 16-gauge shotgun, the shell would have been loaded with 16 lead ball shot of the same diameter and would weigh one pound, i.e., each ball of lead would weigh 1/16 pounds of lead. This measurement was derived from the time when early cannons were designated in a similar manner; a "Twelve Pounder" would be a cannon that fired a 12-pound cannonball. The 410 shotgun is the only exception to the gauge designation for shotguns. Its bore is .410 inch, which is approximately equivalent to a 67½ gauge (Hunter-Ed 2022; Maddox 2021; Wikipedia 2022i).

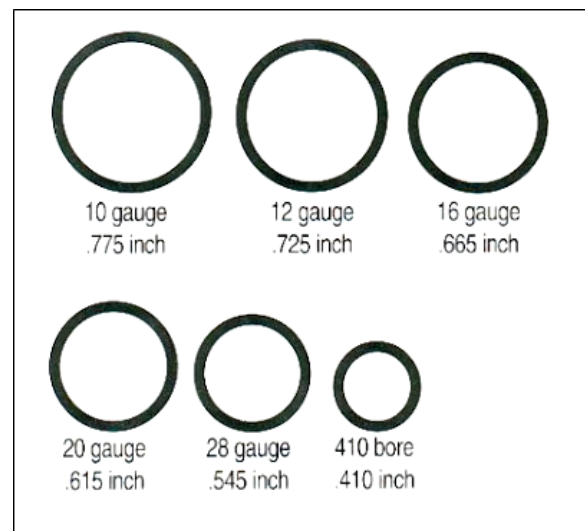


Figure 112. Shotgun bore sizes (Grigsby 2013).

Shotgun shells have a primer, powder, a wad column, shot (balls), pellets, or projectiles like slugs that are appropriate for the size of the cartridge. Figure 113 provides a cross-section of a shotgun shell.



Figure 113. Diagram of a shotgun shell cartridge (Instructables Craft 2022).

Empty shotgun shells, made of brass, were manufactured in America in the mid-1870s. Brass shells could be loaded and reused indefinitely. All-brass casings were popular among shooters who, either for cost or quality, preferred to load their own. From the 1880s, manufacturers like Union Metallic Cartridge Company (discussed below) sold primed but unloaded paper shells in boxes of 100. The problem with paper casings was that they would swell when wet, so manufacturers began impregnating them with wax, to make them water resistant (Farrar 2006; Standler 2006). Figure 114 depicts an advertisement for empty all-brass and paper shotgun shells available for sale in the 1908 Sears, Roebuck & Co. catalogue. These were sold in boxes of 25 and a box of 12-gauge all-brass shotgun shells cost \$1.08. Today, that box would

have cost \$35.82 (CPI Calculator 2023). A box of 100 paper shotgun shells for a 12-gauge shotgun cost \$0.63 (\$20.89 in 2023; CPI Calculator 2023).

Shotgun shells are/were loaded with different sizes of shot depending on the target. Shot is named for its size, or the diameter of the shot in hundredths of an inch. The smallest shot is No. 10 (.07 inches) and the numbering system continues up to No. 1 shot (.16 inches). The shot sizes increase to B, BB, BBB, T, TT, F, and FF. These names are designated for “birdshot” which is designed to be used for small- and medium-sized birds and waterfowl (Hunter-Ed 2022; Maddox 2021; Rinella, 2018; Wikipedia 2022i). An advertisement in the 1894-1895 Montgomery Ward & Co. catalogue provides a guide for purchasing the correct size of shot for a 12-gauge shotgun (Figure 115). This chart is compared to a 12-gauge shotgun chart posted on the North Dakota Game and Fish website (Figure 115). In 1894, the same size shot is recommended for small birds and clay pigeons; however other recommendations vary, such as for turkey and ducks. In 1894, sizes range from Nos. 7-2, the modern chart recommends Nos. 5-2.

740 SEARS, ROEBUCK & CO., CHIC

HIGHEST QUALITY EMPTY BRASS SHELLS.
 Not loaded. We cannot furnish brass shells loaded. These shells come in first quality only, are durable, serviceable shells and may be reloaded many times. These shells come put up 25 shells in a paper box and all use the No. 2 primer and cannot be used in the magazine of repeating shotguns.

BEST QUALITY BRASS SHELL

Catalogue Number	Gauge of Shell	Length of Shell	Weight Per Box of 25	Price Per Box of 25
6K2103	10	2 1/4 in.	1 1/4 lbs.	\$1.15
6K2104	12	2 1/4 in.	1 1/4 lbs.	1.08
6K2107	16	2 1/4 in.	1 1/4 lbs.	1.09
6K2108	20	2 1/4 in.	1 1/4 lbs.	1.10

Brass shells cannot be sent by mail.

OUR BLACK POWDER EMPTY PAPER SHELLS, SUITABLE FOR BLACK POWDER LOADING.
 These shells come packed 100 shells in a box and we cannot sell less than 100 shells of one size. All these shells take No. 2 primer. If you wish to shoot smokeless powder in these shells put 2 grains of black powder into the shell before you put in the smokeless powder. Two grains is about half as much as a 22-caliber rim fire cartridge shell will hold. This is called "priming the shell" with black powder. Empty shells cannot be sent by mail.

GUARANTEED TO BE AS GOOD AS ANY PAPER SHELLS MADE.

Catalogue No.	Gauge	Length of Shell	Weight per 100	Takes Primer	Price, per 100
6K2128	12	2 1/4 in.	3 lbs.	No. 2	63c
6K2129	10	2 1/4 in.	3 lbs.	No. 2	70c
6K2131	16	2 9-16 in.	2 1/2 lbs.	No. 2	60c
6K2132	20	2 1/2 in.	2 1/2 lbs.	No. 2	62c

PRICES—Our prices are ROCK BOTTOM. Positively no reduction made for quantity.

EMPTY PIN FIRE PAPER SHELLS.
 We cannot furnish these loaded. Order your ammunition and reloading tools from us and load your own shells to your own liking. These shells come 100 in a box and we cannot sell less than a box.

Catalogue Number	Gauge	Weight, per 100	Price, per 100
6K2150	20 Pin Fire	1 1/2 pounds	60c
6K2152	16 Pin Fire	1 1/2 pounds	60c
6K2153	12 Pin Fire	2 pounds	70c

Figure 114. All-brass and paper shotgun shells advertised for sale in the 1908 Sears, Roebuck & Co. catalogue (Schroeder 1971 [1908]:740).

Order No. 47315. 12 Gauge.
Black Powder.

Am't. of powder	Am't. of shot	Size of shot	Adapted to shooting.	Price per Box 25	Price per 100
701 3 dr.	1 oz.	10	Woodcock	\$0.34	\$1.22
703 3 1/4 dr.	1 1/2 oz.	9	Snipe .....	.35	1.29
705 3 1/2 dr.	1 oz.	8	Quail .....	.34	1.24
707 3 3/4 dr.	1 1/2 oz.	8	Quail & Prairie cks .	.36	1.29
709 3 1/2 dr.	1 1/2 oz.	8	Prairie chicken...	.37	1.31
711 3 dr.	1 1/2 oz.	8	Inanimate Targets	.37	1.31
713 3 1/4 dr.	1 1/2 oz.	8	Inanimate Targets	.38	1.34
715 3 3/4 dr.	1 1/2 oz.	8	Live Pigeons .....	.38	1.34
717 3 1/4 dr.	1 1/2 oz.	7	Clay Pigeons .....	.38	1.34
719 3 1/4 dr.	1 1/2 oz.	7	Ruffed Grouse .....	.36	1.29
721 3 1/2 dr.	1 1/2 oz.	7	Teal .....	.37	1.32
723 3 1/2 dr.	1 1/2 oz.	7	Live Pigeons .....	.39	1.37
725 3 1/4 dr.	1 1/2 oz.	6	Bluebill .....	.36	1.29
727 3 1/2 dr.	1 1/2 oz.	6	Pintail .....	.37	1.32
729 3 3/4 dr.	1 1/2 oz.	5	Mallard .....	.37	1.32
731 3 3/4 dr.	1 1/2 oz.	4	Red-head .....	.38	1.34
733 3 3/4 dr.	1 1/2 oz.	3	Canvas-back .....	.38	1.34
735 4 dr.	1 1/2 oz.	2	Turkey .....	.38	1.37
737 4 dr.	1 1/2 oz.	1	Brant .....	.38	1.37
739 4 dr.	1 1/2 oz.	BB	Goose .....	.45	1.54
741 3 dr.	1 oz.	9	.....	.34	1.22
743 3 dr.	1 oz.	8	.....	.34	1.23
745 3 dr.	1 1/2 oz.	8	.....	.36	1.27
747 3 dr.	1 oz.	7	.....	.34	1.22
749 3 dr.	1 oz.	6	.....	.34	1.22
751 3 1/4 dr.	1 1/2 oz.	5	.....	.36	1.29
752 3 dr.	1 1/2 oz.	7	.....	.35	1.27
753 3 dr.	1 1/2 oz.	7	.....	.35	1.30

8, 7 1/2, 7 shot
 Clay target shooting, doves, squirrels and other small game

6, 5 shot
 Pheasants, grouse, rabbit and other upland game

5, 4 shot
 Pheasants, turkeys, and ducks*

4, 3, 2, shot
 Ducks* and geese*

1, BB, BBB shot
 Geese*, cranes*, and swans*

* Non-toxic shot required

Figure 115. Shot size and designated targets for 12-gauge shotguns, (left) advertisement in the 1894-1895 Montgomery Ward & Co. catalogue listing the available sizes of shot and the designated targets (Schroeder 1970 [1895]:458); (right) 2023 chart entitled "Firearms – General Information – Ammunition" for 12-gauge shotguns (North Dakota Game & Fish 2023).

“Buckshot” is designed for bucks, or male deer. The design of the cartridge is the same as that for birdshot, but the size of the shot within the shell is comparatively larger. Buckshot are flat pellets that are stacked inside the casing rather than just poured in as is done with birdshot. Buckshot size is designated by a series of numbers and letters, with smaller numbers indicating larger shot. Picking up after FF at .23 inches, the scale ascends to No. 4 Buck to 0000 Buck. The most common size used in deer hunting is “00” buckshot; and it is used in a 12-gauge shotgun. 12-gauge cartridges that are 2¾ inches long hold 8 pellets and 3½ inch-long cartridges hold 18 pellets. Shotguns have an effective range of about 38 yards with buckshot, and 49 yards with birdshot (Draper 2020; Hunter-Ed 2022; Maddox 2021; Rinella 2018; Wikipedia 2022i).

“Umc Co. No. 16 New Club” Shotgun Shell Cartridge

Three brass shotgun shells were recovered (Figure 109); all stamped with “UMC CO. No. 16 NEW CLUB”. Two of the shells contain the wadding and the bores of all three vary slightly, at or near 0.665 inches. Sixteen-gauge shotguns were very popular during the first half of the twentieth century but fell out of favor later in the century. They were considered a good multipurpose shotgun, used primarily for hunting squirrels, quail, woodcocks, and grouse (Grigsby 2013; GRITR Sports 2023).

These shells were manufactured by the Union Metallic Cartridge Company (UMC) from 1891 through 1905. UMC was founded in 1867 by Marcellus Harley in Bridgeport, Connecticut. UMC was probably the first American company to produce and market all-brass shotgun shells in the late 1860s. In 1873, UMC acquired the patent rights to the C.D. Leet Company’s paper shotgun shells and began manufacturing primed but

unloaded paper shotgun shells in 10- and 12-gauge loads. Unloaded 8-, 14-, 16- and 20-gauge shells were added to the line in 1880. In 1888, it marketed its first factory-loaded CLUB shotgun shells. Around the turn of the century, UMC added other lines of shotgun shells including NEW CLUB. Many lines of shotgun shells were sold both loaded and unloaded. In 1888, UMC and Winchester purchased the E. Remington & Son’s Gun Company and Remington cartridge lines continued under its name. UMC bought Winchester’s interest in Remington in 1896, and the merger of UMC and Remington was completed in 1911 under the name Remington Arms-Union Metallic Cartridge Company. Beginning in 1910, Remington and UMC frequently shared advertising space noting the companies were: “Same Ownership - Same Standard of Quality - Same Management.” The companies continued to operate independently until 1916 when the Remington Arms-Union Metallic Cartridge Company incorporated (Farrar 2006).

“REMINGTON EXPRESS 410” Shell Cartridge

A brass, centerfire shell casing stamped with “REMINGTON EXPRESS 410” was recovered from the midden (Figure 109). The 410 shotgun shell is one of the smallest calibers of shotgun shells available with a diameter of .410 inches. It holds a much smaller payload of shot than 16- or 12-gauge shotgun shells. By the end of the 1870s centerfire shells of .410 bore size were manufactured in England and in Europe. The 410 arrived in the United States around 1900 and by 1920, major American manufacturers were producing .410 ammunition (SmallBoreShotgun.com 2022). The 410 shotgun was recommended as “suited to the requirements of naturalists, garden guns and for such weapons as walking-stick guns” (Wikipedia 2022b). A .410 bore shotgun loaded with shot shells is

well-suited for hunting small game such as rabbits, squirrels, and birds and for controlling pests within 25 yards. This cartridge may have been used in a Remington Model 11, introduced in 1905 (Chastain 2019; Krisko 2021; Taylor 2019; Wikipedia .410 bore 2022b; Wikipedia 2022i).

SUMMARY

The Sladkys not only used the midden for household and personal refuse, but also, for debris associated with their farm. Worn-out wrought-iron fixtures, such as door hinges, handles, and hooks were disposed in the midden, as were broken items such as oil lamp parts and a wood stove damper, used in their home. When repairs were made to the various structures on the property, old nails and window-pane shards were gathered up and thrown away. Fragments of tools used on the farm, such as a garden hoe, weights used to weigh farm produce, an iron saw-tooth clasp used to bundle bulky items, iron files, bolts, o-rings, horse tackle, fence staples, and wire were also disposed of in the midden. Spent cartridges reveal that the Sladkys had a number of guns, possibly a revolver and a 16-gauge and a 410 shotgun. They used these guns to kill vermin, hunt small game, turkeys and water fowl.

CONCLUSION

When the Sladky family designated an area behind their home as a place to discard broken and unserviceable items; they had no idea that someday, those items would be of great interest to another family who would later acquire their property. Would they have been surprised by this curiosity or would they have felt that such an interest was an invasion of their privacy, as it would be for us today? As the landowner, Art Tawater wanted to know more about the family who homesteaded his property in

1894. As an archeologist, he could not help but wonder about the artifacts that were eroding from a small mound along the driveway to his house. So, he began a systematic excavation of the mound, hoping to learn more about the family. With no living descendants, not much was known historically about them. No photographs or reports pertaining to the family were found in the local archives. Newspapers of the time period were queried and the Sladky name was not found. But the archeological record – those discarded items recovered from their midden – has indeed documented segments of their daily lives.

The discarded items that were recovered from the midden were not that different from those that have been found at other contemporaneous farmsteads in Texas. The Sladky family, like many other farm families of the time period, were active participants in the market economy. Embree's (2021) report examined the discarded items once belonging to two families who farmed the same property in Williamson County – the Williams family (ca. 1852-1901) and the Buck family (1901-1956). This report provided an in-depth analysis of the artifacts recovered at the Williams-Buck farmstead (41WM272) by the Texas Archeological Society's 2001-2002 field-school participants. It proved to be an invaluable resource in this analysis and was cited often. The discarded items of two families who had both emigrated from Arkansas to central Texas were strikingly similar to those of a farm family who had emigrated from Eastern Europe to north-central Texas.

Two large-scale archeological investigations of mid-nineteenth through mid-twentieth century farmsteads were conducted in north-central Texas during the 1980s – the Joe Pool Lake project in Dallas and Tarrant counties (Jurney, Lebo, and Green 1988)

and the Lewisville Lake project in Denton County (Lebo 1995). These reports were examined and a brief description of each is presented here.

Lebo's (1995) report presents the results of the excavations conducted in 1988 at the Lewisville Lake project area. Ninety-nine historic sites were recorded, 16 were tested and three were recommended for additional investigations based on their intact surface and subsurface features, well-preserved artifact deposits, and minimal disturbance (Lebo 1995:17-19). The sites examined were 41DN401 (1870s-1940s, 320 acres, multiple owners), 41DN404 (1870s-1930s, 90-250 acres, multiple owners), and 41DN429 (1870s-1950s, 133-44 acres, McCurley and Thurmond families). The artifacts recovered from these sites consisted of the same types of artifacts recovered from the Sladky midden – refined earthenware; stoneware; porcelain; bottle, table, and lamp glass; clothing items; toys and musical instruments; architectural items; household and farm-related products and tools – the exceptions being the presence of mid-nineteenth century ceramics (Lebo 1995:44, 64, 73); and machine-cut nails. At site 41DN404, a kitchen midden was identified and designated as Feature 2. It produced a large quantity of artifacts (Lebo 1995:63), similar to those recovered in the Sladky midden. In the conclusion, the researchers stated that despite the differences in farm size and whether or not the farm was owner-operated or tenant-farmed, the investigations did not find any major sociocultural, ethnic, or economic variability between the sites (Lebo 1995:i, 89).

Jurney, Lebo, and Green's (1988) report presents the results of excavations conducted in 1985-1986 at the Joe Pool Lake project area. Thirteen sites were selected, and historical and archival research was conducted as well as

interviews with former occupants. The archeological investigations focused on architectural features and sheet refuse middens. Sheet refuse middens, by definition, accumulate accidentally and intentionally within the active yard around wells, cisterns, and privies (Moir 1988a:6-8). The researchers provided a sketch of an "idealized" small farmstead dating to the turn of the twentieth century. It depicted a dump located at the edge of the active yard, approximately 6 to 18 meters from the house (Moir 1988b:218, 222). However, only two such dumps were identified. These were designated as Features 1 and 3 at site 41DL192, the Penn farmstead (Jurney, Lebo, and Hazel 1988:121). It was noted that the most common method of disposing of trash was through burning. Food scraps were fed to pigs and dogs and anything not burnable was usually thrown into ditches or gullies (Nunley 1988:360). It is interesting to note that both features at the site began as collapsed root cellars. Recalling the words of Dr. Donny Hamilton, Texas A&M University professor, "If there's a hole in the ground, it will soon be filled with trash."

The Penn farm was owned and operated by the same family for over 100 years, making its dumps comparable to the Sladky's midden. Feature 1 exhibited a mixture of late-nineteenth and early-twentieth century artifacts consisting of colorless, aqua, and amber glass shards, with colorless glass making up 81 percent of the assemblage. These shards were identified as belonging to patent medicine and liquor bottles. The ceramic assemblage consisted primarily of undecorated ironstone, followed by decal-decorated wares. These ceramic sherds provided a mean date of 1889. Also represented were shards of plain and pressed table glass and lamp globes. Personal items included buttons and metal clothing fasteners, shoe fragments, and parts of porcelain dolls. Metal artifacts

included stove and furniture parts, horse and stable artifacts, wagon and machine parts, tools, wire nails, and ammunition (Jurney, Lebo, and Hazel 1988:124-127). Artifacts recovered from Feature 3 consisted of the same types of artifacts found in Feature 1 with a few exceptions. This feature dated to the 1930s and it was dominated by colorless-glass bottle shards representing alcohol, soda, and patent medicine bottles, Ball and Kerr canning jars, as well as a large number of tin can fragments. Ceramic sherds were poorly represented (Jurney, Lebo, and Hazel 1988:121, 125-128).

One of the research hypotheses presented in this study proposed that “refuse distributions and spatial patterns of artifacts will reflect differences attributable to ethnic background and culture of birth” (Moir 1988a:10; Moir and Jurney 1988:377). The researchers found very little support that nationality or foreign place of birth exerted any effect on the architecture and archeological remains at the sites. They found that both the Holvecks (41DL183), who immigrated to the U.S. in 1872 from France, and the Hintzes (41DLI81), who emigrated from Germany in 1878, left behind artifacts that looked the same as those recovered from native-born households (Moir and Jurney 1988:379). From the informant interviews, the researchers noted that little socioeconomic differences were perceived, or at least not remembered, although informants were aware that some families were economically better off than others. The general perception was that everyone was struggling (Nunley 1988:360).

Almost certainly, life on small nineteenth and early twentieth century farms followed the same rhythms. Just as the farmers in Denton, Dallas, Tarrant, and Williamson counties began their day looking after their farm animals, so did a farm family in Parker

County. It is imagined that the Sladkys would rise before dawn, feed their chickens and livestock and milk their cows, carry out other barnyard chores, and return to the house for breakfast, most likely prepared by Victoria. After her mother’s death in the first decade of the twentieth century, she assumed the role of homemaker for the family. She managed the house and garden, assisted with farm work, prepared meals, did the laundry, and looked after her father and brothers. After breakfast, Victoria’s menfolk spent most of the day-light hours working the farm, planting, harvesting, and transporting crops to market, performing chores that were marked by the seasons of the year. When the Sladkys first arrived in 1894, Parker County farmers were planting cotton and corn. Acreage for these crops doubled from 1900 to 1910, the Sladky farm contributing to this trend. Like most of the farms in the county, theirs was small, cotton and corn being the main crops in those years. The family’s operation was successful; Joseph was able to purchase an additional 90 acres in 1903. As the decade waned, cotton production in the county declined by half, and the county lost 20 percent of its farms between 1910 and 1920. Those who survived had diversified their crops, as the Sladkys did. Artifacts attesting to farm activities include two pea weights used to weigh produce and cotton and a saw-tooth clasp used to bundle bulky items. Artifacts recovered from the midden include parts of machinery, possibly from a generator, bolts, and o-rings. Farm tools include a garden draw hoe, files, and a pry-bar. Multiple fragments of wire and fence staples reflect a farmyard that was sectioned off for various activities. The barn, shed, and privy were outfitted with wall hooks, the doors with wrought-iron strap hinges, and cabinets with handles most likely made by Joseph in his forge. Horse tackle included teeth from a mane comb, rivets and heel buckles used on leather strapping. The Sladkys purchased

two types of topical treatments to heal injuries afflicting their farm animals – Gombault’s Caustic Balsam and Old Reliable Japanese Oil. They kept vermin away with their 410 shotgun. They also owned a revolver and rifle, as well as a 16-gauge shotgun. These guns were most likely used to hunt waterfowl and small animals such as rabbits, raccoons, opossum, and armadillos considered to be nuisances (Jurney 1988:327-328). After a long day of work, one of the Sladkys entertained the family with a harmonica while others sipped whiskey.

The information gleaned from Tawater’s research and the artifacts that he recovered do hint that the Sladkys may have taken part in programs offered by the Cooperative Extension Service. This federal program was established in 1914 to assist rural people in improving their standard of living. Supported by federal, state, and local funds, the Extension Service employed agricultural and home demonstration agents to help farmers improve their agricultural output and to teach homemaking practices. Tawater (1991) reported that after the decline of cotton farming in the county, the Sladkys planted pecan and fruit trees, grapes, and raised bees. It is also possible that they did so at the advice of the county extension agent. The large amount of canning jar shards recovered from the midden suggests that Victoria may have participated in local canning demonstrations established for adult women and girls’ clubs.

The farmhouse was small, 30 feet by 30 feet in size (Tawater 1991). The recovery of nails and window-pane glass fragments suggest that the family repaired damaged woodwork, inside and out, and replaced windowpanes throughout their tenure. Their home was equipped with a wood-burning stove and lit with oil lamps. It was

decorated with flowers placed in vases, colored-glass serving bowls, one of them pedestaled; possibly used to hold candy, cookies, or fruit.

Located in the back yard, slightly northwest of the house, stood a root cellar and a trash disposal area. Toward the east stood a small building used as a forge. Tawater observed numerous depressions behind the house that might have served as locations of the privy. West of the house stood the barn and pens for chickens and other animals. A broken garden draw hoe is a reminder that the family maintained a kitchen garden.

Victoria, with the help of her brothers, planted a garden in the spring and fall, kept it hoed and watered, and harvested and canned its produce. A large number of canning jar shards, zinc lids, and milk-glass liners attest to this fact. The family purchased both mouth-blown and machine-made jars in one- and two-quart sizes representing three manufactures – Ball Brothers Glass Manufacturing Company, Hero Glass Works, and Kerr Glass Manufacturing Company – possibly at the general store in Buckner. As all canners do, Victoria must have experienced cracking and exploding canning jars in her kitchen. After canning was complete, she placed the canned produce in the root cellar. With the recovery of numerous fragments of stoneware – representing large and small jars, Victoria was involved in pickling and fermenting home-grown foods. She also used stoneware bowls to mix ingredients for bread and other foods.

The Sladkys acquired numerous ironstone and porcelain tableware pieces over the course of 50 years. It appears that they may have had two ironstone sets, one decorated in a “revival” transfer-printed design, popular at the end of the nineteenth century. These patterns were less complex

and tended to occupy less space on the vessel's surface. The green transfer-printed pattern – Dewey Cable – is represented by a teacup, a bowl, and a platter manufactured by the English firm, W.T.H. Smith & Co. The other set is represented by a floral decal-decorated teacup and plate/platter, a decorative style popular in the early twentieth century. The Sladkys also possessed an assortment of ironstone plates/platters, bowls, and teacups that were manufactured in England, some of which carry the makers marks of Johnson Brothers and Alfred Meakin. These were decorated with a flow-blue pattern, a dense green transfer-printed pattern, an over-glaze decal design, and botanical and geometric relief-molded designs. One of the makers marks belonged to an American company – Etruria and Mellor & Co. The Sladkys also owned a variety of porcelain pieces, most of which were teacups exhibiting different relief-molded designs. Other porcelain pieces include a bowl stamped with the English makers mark of J. & G. Meakin and a platter exhibiting an over-glaze decal consisting of black and gold lines.

The Sladkys possessed decorative tableware pieces made of amber-colored, solarized, and colorless glass. And, sometime in the mid-1940s; they acquired three teacup/plate sets embossed with the Alice floral pattern rendered in opaque milk glass, translucent milk glass, and Jadeite. These sets may have been promotional gifts packaged in food products or given away by general stores or gas stations. Early in the twentieth century, the Sladkys purchased a child's three-tined fork, possibly for Annie.

Like all farmers at this time, the Sladkys raised livestock – cattle, hogs, and chickens – to provide meat protein for their daily meals. They most likely smoked meat and made sausage. They flavored their meals

with store-bought condiments such as mustard, catsup, and horseradish sauce and supplemented their meals with fruits and vegetables packaged in “sanitary cans.” They may have also brought home from the general store relish, chow-chow, and pickles, and possibly a can of sardines. The family purchased bottles of beer and soda and ordered whiskey from the Hayner Whiskey Distillery in Ohio.

The clothing that the Sladky family wore may have first been home-made, but by the early twentieth century, all types of clothing were available for sale in general stores or from mail-order catalogues. Two Prosser buttons and one of the pearl buttons recovered may have been part of any number of garments worn by either the male or female members of the family. These garments include men's shirts, women's shirtwaists, dresses, sweaters, undergarments, and children's clothing. The large Mother-of-Pearl button may have been attached to a coat or jacket worn by Francis, Victoria, or Annie. Its unique design most likely made it hard to replace after its shank had broken. Victoria used lace pins to apply trim to her blouses which she paired with skirts and a gilded sash belt, fashionable at the time. A rivet, stamped with BRONCHO may have been used to reinforce pockets on work clothing such as overalls, work pants, or jackets worn by Joseph, John, or Virgil. The adult doll and the child-like doll most likely belonged to Mary, Victoria, or Annie when they were little girls. One may have been purchased in Austria, and the other in Texas.

During the first decade of the twentieth century, Francis died, and so did her daughter, Mary. At this time, 35 percent of the population died from tuberculosis and pneumonia (Jones et al. 2012:2336). Francis and Mary may have succumbed to these diseases. The causes of disease were

not well understood in America at the turn of the twentieth century and proprietary medicine companies fell back on traditional understandings of disease to explain how their remedies could prevent and treat diseases and illnesses (Young 1961). The most prevalent theory focused on unclean blood – “the curse of all your troubles” as explained on Dr. Fahrney and Sons Blood Revitalizer advertisements. The Sladky family most likely frequented the general store in Buckner to purchase pharmaceutical products. They even purchased products from traveling salesmen representing the Watkins and Rawleigh companies.

Like all Americans at this time, they were well aware of the types of patent medicines that were available on store shelves and through mail-order. Patent medicine advertisements and testimonials filled the daily newspapers and magazines; pamphlets, almanacs, and promotional products were distributed around town and displayed on the counters of retail establishments; billboards announced the latest miracle drugs; and mailboxes were filled with circulars introducing proprietors’ product lines (Young 1961).

One of the family’s favorite brands of patent medicine was manufactured by the W.F. Severa Company; possibly because the company printed an almanac-product line in the Czech language. The company had an extensive array of products advertised to treat any affliction. A few of these were Severa’s Armatic Compounds, Severa’s Baizol, and Severa’s Regulator. The most popular was Severa’s Stomach Bitters. Since the Sladkys had in their possession many differently sized bottles embossed with this proprietor’s name, they may have decided to give these remedies a try. They also purchased other patent medicines to relive stomach discomfort, such as George H.

Mayr’s Wonderful Stomach Remedy, and a product manufactured by the LAX FOS Medicine Company, advertised to treat constipation. These medicines were known as cathartics and were advertised to strengthen the fibrous coating of the stomach and aid in the removal of impurities. The Sladkys also purchased pectorals. These medicines were used to treat respiratory illnesses ranging from colds and coughs to grippe (influenza), pneumonia, and consumption (tuberculosis). Seven bottles of Chamberlain’s Medicine Company’s Cough Remedy were recovered, suggesting that the family found this medicine to be effective. They also purchased other cough medications and applied Vicks VapoRub to their chests. Someone in the family suffered from malaria and a bottle of Oxidine was purchased. Oxidine was advertised to treat the chills and fever associated with that disease. The family purchased liniments advertised to bring relief to sore muscles and joints. Two of their choices were Dr. J.H. McLean’s Volcanic Oil Liniment and Ballard’s Snow Liniment. Working a farm was a physically demanding occupation, and Virgil’s draft registration card attests to this fact. At the age of 30, he was found to be disabled (World War I Draft Registration Cards 1917-1918).

Within a few years after Joseph Sladky established his family’s farm, he expanded his property to 100 acres, carrying no mortgage on the acquisition. In an article published in the *Journal of Farm Economies*, the author noted that in 1920, 10 percent of white men engaged in agriculture were foreign-born and of these, 79.9 percent owned their farms, compared to 65.6 percent of native-born white farmers (Cance 1925:103). Joseph Sladky left his children with a sustainable farming operation in which they operated until their deaths in the 1950s. The items that they

once used and discarded in the midden reveal that their circumstances and experiences were not that different from that of other American farm families of the time. They came to America for the opportunity to better their lives, to a place where they could own their own land and make their own decisions as to how to manage their livelihoods, something that they could not have done back home. They were free and independent; and they took care of themselves on their own terms. They had become Americans.

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INTRODUCING THE TEXAS FOLSOM FLUTED POINT SURVEY (TFFPS) AND A CALL FOR DATA

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ABSTRACT

The principal researcher of the Texas Folsom Fluted Point Survey (TFFPS) requests your assistance to collect and update artifact information to be included in the inaugural edition of the Folsom fluted Point survey from Texas and its borderlands, which will complement the similar survey that documents Clovis (TCFPS).

BRIEF OUTLINE

After completing the 4th edition of the Texas Clovis Fluted Point Survey (TCFPS) in 2023 (Slade and Meltzer 2023; Slade 2023), a similar survey for documenting Folsom points from Texas (TFFPS) was set up. After the success of the Clovis survey, it was decided to implement a similar format of obtaining previously unrecorded and unreported occurrences of points. The 4th edition of the Clovis survey took the point tally to over 1,000. The increased records were largely due to the publication in regional and local Texas archeological societies and newsletters such as the North Texas Archeological Society.

To date there has been no official Folsom point survey, or an extensive overview of Folsom point occurrences for Texas. There was, however, an attempt to set up a similar Folsom database to that of Clovis in the early 1990s by Floyd Largent (Largent 1995; Largent et al. 1991), but nothing has been published since (but see Bousman et al. 2004). Before that, there were a few earlier accounts by Fischel (1939), Hester (1967), and Perttula (1993), but these were much

more localized and on a smaller scale. In the most recent Largent survey, there are 345 Folsom points documented from 102 localities in 63 of the 254 Texas counties (Largent 1995:Table 1). Moreover, 100 of these points came from one site, Chispa Creek in Culberson County (Seebach 2004). It is anticipated that these tallies will be significantly increased.

The TFFPS will eventually come under the control of and curation at TARL. Phase 1 of the survey was to carry out a comprehensive literature review and to reach out to colleagues, professional and avocational archeologists, collectors, and the public who may have information on Folsom fluted points from Texas and the Texas Borderlands. The first phase of the project is already in place, and it is hoped that the “call for data” will add to the dataset already in place, Phase 2. Phases 3 and 4 of the project will be to process the data and to build a dataset which can be used in presentations and papers, and to digitize the hard copies of the records and photographic record of each individual point. It is anticipated that a comprehensive study and a resulting public access database of Texas Folsom points (Phase 5) would be a valuable resource for Texas Paleoindian archeology. A study of Folsom point occurrences regionally, observations from the raw material used to produce these points, and the concentrations of the points within those regions, would make for an interesting comparative analysis with the Clovis survey (Slade and Meltzer 2023).

In order to report Folsom point occurrences and discoveries, fill out the accompanying survey form using the schematic as a guide to measurement, and return it to the address provided on the survey form. Alternatively complete the form electronically via the link on the form. Please provide images and/or an illustration of both faces of the point, if possible.

FUNDING

Funding for Phase 1 and Phase 2 was provided by the Summerlee Foundation and anonymous donors. Phase 3 and Phase 4 funding was provided by the Texas Archeological Society, and Phase 5 of the project will be partially funded by the Texas Historical Foundation. Anyone wishing to financially support Phase 5 of the project, and potentially beyond, should contact the project director at the address above. Funding will be administered by the Gault School of Archeological Research (GSAR) and they are tax exempt 501(c)(3) as a non-profit Texas organization.

ACKNOWLEDGEMENTS

The TFFPS project director would like to thank Michael B. Collins for his support and encouragement in providing funding for the initial five-year post-doctoral research position with the Prehistory Research Project based at the TARL at the University of Texas at Austin Research Campus. This funding enabled the completion of the Texas Clovis Fluted Point survey (TCFPS) 4th edition (Slade 2023; Slade and Meltzer 2023) and the inaugural Folsom survey. The project could not have been accomplished without the support of the staff and colleagues at TARL and the University of

Texas. It is with gratitude that aid, and support of the projects collaborative team was provided, and from the staff and board of the GSAR with administering funding. Finally, thanks to Becky Villarreal Campbell for everything.

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