Historic Artifact Guide

State of Utah

Utah Division of State History

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Historic Artifacts: A Primer

Archaeologists face several problems in dealing with artifacts from the historic-period, one of which is sheer volume and the other of which is tremendous varieties. This guide is not even a remote attempt to provide a guidebook to the major variations in historic artifact identification, as that guide is impossible to ever complete. Every day we learn more about our collective past from the objects left behind, and not a day goes by that an archaeologist uncovers an object of unknown identity from both the prehistoric and historic past. With this in mind, the guide and lessons provided here is an attempt to pull together the core identifiers of historic sites encountered on archaeological survey in Utah. It is hoped that this document will be used within that framework, and not as a standalone document, or the perceived focus of field documentation efforts.

Historic artifacts, whether the lowly can to the prettiest amethyst bottle provides information on the date of occupation, the function/association of the site, and a personal glimpse into the individuals that left these artifacts behind. While this guide is focused on understanding the temporal qualities of each artifact, this is not the end, merely the means. Too many archaeologists spend their time attempting to count every single artifact and to identify every single fragment without taking into account the larger perspective. An isolated can scatter might be that boring, but if you note that it contains mostly oil cans and blasting powder cans, then perhaps we can make a more nuanced interpretation as a mining camp or even further evidence of road building activities on the old Lincoln Highway. Artifacts are not the ends of analysis, they are the means. Context is the critical juncture between artifacts and history, and once we remove or ignore the context through looting or indifference, there is little value to any of the archaeological record.

A key concept in historic artifact identification is that when in doubt, ask a question. There are no experts in historic artifact identification, only people who have seen more of the variation than others. Experts at the Antiques Roadshow have the luxury of being experts, as they can focus their skills and knowledge on just one suite or class of artifacts such as early colonial furniture or tin toys from the 1930s. Ask that same toy expert about tin can chronologies and they would likely give you a blank expression. Historical archaeologists do not have the luxury of being an expert in any one arena, instead we must know a little of each, and when we do not have the answer we go to the books, articles, reports, and internet for answers. This guide helps to outline at least the basics of historic artifact identification to get us to the point of dates.
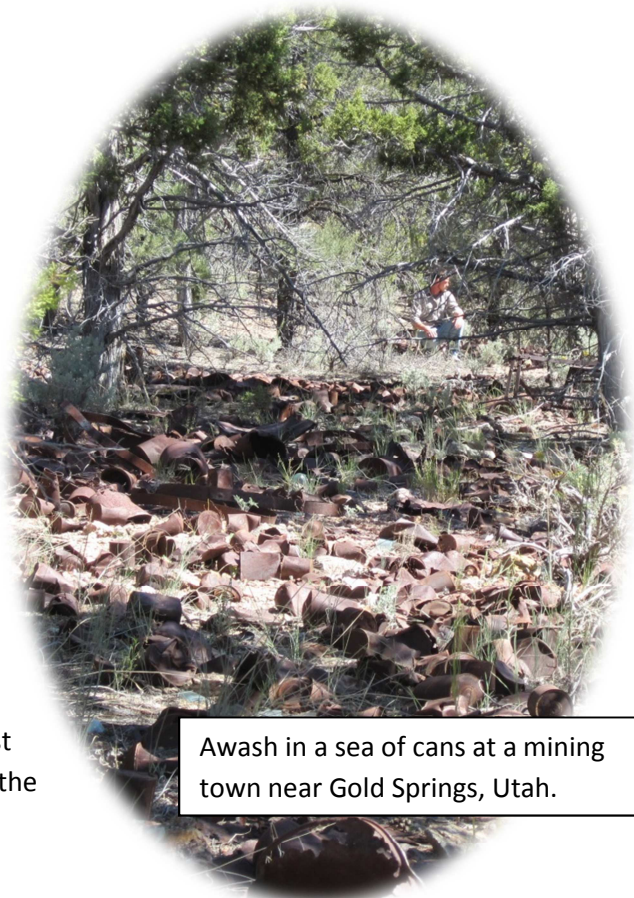
Awash in a sea of cans at a mining town near Gold Springs, Utah.

The Pesky Nail

In Utah, except in situations where there might be a local blacksmithing operation making their own nails (hand-wrought variety), there are really only three types of nails. Cut (or Square), Wire (or Round), and Horseshoe nails, and the first two types come in a variety of shapes and sizes. Before 1890, the extrusion of iron or steel into wire was not possible. Thus, almost all nails manufactured by corporations between 1850 and 1890 were made from sheets of iron, with a mechanical shear 'cutting' the nails. Hence the name "Cut" nails, but in cross-section they appear "square" as well. In comparison, invention of wire extruding machines in 1890, led to a more efficient production of nails that actually were easier to drive into wood and held their grip better than square varieties. In 1890, the majority of nail manufacturers still used the old "cut" nail machinery, but by 1900, the vast majority of nails produced in the United States were of the "wire" or round variety. From an archaeological perspective, nails provide us some of the simplest tools to date a site. If we have exclusively square nails on an archaeological site, it is a strong likelihood that the site dates before 1900 and after 1850. On the other hand, if the site only contains wire nails, then it is most likely to date after 1900.

On a more complicated analysis If the site has a mixture of wire and cut nails, it could mean the site dates to that transition period of 1890-1900, or perhaps those wire nails reflect repairs to an older structure. Wire nails introduced to sites for repairs most often appear in the roof, shingles, or door/window frames (places that required maintenance). When looking at a historic building, look at the internal framing or cornering to see if there are square nails which could actually indicate an earlier construction date than all those wire nails in the roof or door jambs.

Horseshoe nails are broader in date 1800s-present, but appear square in cross-section like a cut nail. But more importantly they exhibit a diamond shaped head that easily distinguishes it from other types.

Square or cut nails, 1850-1900

Round or wire nails, 1890-present

Horseshoe nails, 1800s-present

During archaeological survey, identification of nails by type (round/wire or square/cut) can provide a quick and easy way to date a site to the 19th or 20th century. During laboratory analysis of excavated materials, archaeologists must further determine the sub-type of nails (roofing, finish, panel, framing, etc.) and size the nails using the penny system. Using an old English system, nail manufactures continue to use the penny system to denote size. For instance, the 19th century English consumer could purchase 100 nails of 1" length for two (2) pennies (d), this translates to 2d. Amongst nail manufactures anything smaller than 3d in size is considered a brad.

Nail Size	Length	
	Inches	Cm
2d	1.00	2.54
3d	1.25	3.17
4d	1.50	3.81
5d	1.75	4.44
6d	2.00	5.08
7d	2.25	5.71
8d	2.50	6.35
9d	2.75	6.98
10d	3.00	7.62
12d	3.25	8.25
16d	3.50	8.89
20d	4.00	10.16
30d	4.50	11.43
40d	5.00	12.70
50d	5.50	13.97
60d	6.00	15.24
70d	7.00	17.78

The Much Maligned Tin Can

There is far too much variation in the tin can to describe in this shortened guide, but field identification of several types can provide an easy tool in determining the age of an archaeological site, and perhaps even the type of site (mining, ranching, railroad camp, domestic, etc.). While incredibly common, there is a lot of information within a scatter of tin cans including foodways (were the cans all potted meat? Evaporated milk cans? Baking goods?), ethnicity (imported food cans such as sardines? Chinese fuel or tea cans?), socioeconomics (high-grade brands versus generics), or even the associated function of the site (ranch or cowboy camp, household trash, mining or railroad camp, etc.).

There is a lot we, archaeologists and historians do not know about the tin can industry of the late 19th and even mid-20th century due to the lack of historical records. These maligned artifacts can be a major data source to understand the behavior of Utahns in this period. Busch (1981) and Rock (1984) are the two most widely accepted, and cited, references on the tin can and its variation within the archaeological world. For the majority of archaeological sites in Utah, the archaeologist will encounter five basic types. It is important to remember that from about 1904 to 1922, Hole-in-Cap, Hole-in-Top, and even Sanitary cans all overlap temporally, it is likely more a matter of proportions than presence/absence. On another note, it is important to look for variations and modifications to tin cans on archaeological sites, as these reflect individual adaptations to local environmental factors from miner's using picks to open tin cans, to cowboys punching holes in the bottom of cans to make colanders.

Hole-and-Cap (1810s-1850s): The first truly mass-produced can, was rolled and sealed with a two-part lid. An exterior donut-shaped piece of tin was around the outside, with a second piece of solid tin added later to the central part of the donut and adhered with lead solder. Food would be placed in the can through the large opening in the center of the lid, and once filled, and cooked to kill off bacteria, the second piece was added and sealed with lead.

Hole-and-Cap Can

Hole-in-Cap Can, 1910s logging camp

Hole-in-Cap (1840s-1920s): By far the most common type of tin can in Utah during the territorial and early Statehood period, is the Hole-in-Cap. This can was similar to the Hole-and-Cap, except the second piece of tin used to fill the hole in the 'donut' had a small pin-sized hole in the center. This hole, commonly known as a matchstick filler, or vent hole, would also be sealed with lead solder after the contents of the can were cooked. This was a marked improvement over the Hole-and-Cap can as it helped to remove even more impurities from the food.

Hole-in-Top (1885-1960s): Most commonly used for evaporated or condensed milk, this can was originally designed in the early 1850s, but did not become popular until 1885. In 1885, manufacturers introduced a can with two flat ends, but one had a small cap. After 1900, all evaporated milk cans moved towards the modern style with a single lid and one matchstick filler hole.

Hole-in-Top Can, from 1910s Logging Site, note the square puncture holes

Sanitary can, from 1910s Logging Site, knife opened

Sanitary Can (1904-Present): Throughout the history of tin cans, there was always a desire to move away from the use of lead solder in their manufacture, but technology had not yet caught up to the industry. In the late 1890s, however, a machine was invented that could easily crimp all the seams of a can for closure without use of solder. According to Rock (1984) the first truly solderless (sanitary can) was produced in 1898, with the Sanitary Can Company formed in 1904. After 1904, the sanitary can became the most commonly produced tin can in the United States, but not all manufacturers had the capital to transition to this expensive machinery, so hole-in-cap cans continued to be produced into the 1920s. It appears that the ribbing on sanitary cans that we are used to today did not appear until the 1930s for large, gallon sized fruit juice containers, with ribbing on non-juice cans appearing in the 1950s (Thompson and Baker 2012:9).

Hinged Pocket Tobacco Can (1907-1988): Perhaps as common on Utah archaeological sites as sanitary and hole-in-cap cans, are hinged pocket tobacco cans. Often called Prince Albert cans, due to one of the leading manufacturers of this design, the pocket tobacco can was designed to fit in a worker's pocket with a hinged lid to preserve the contents while allowing easy access. The first hinged tobacco can appears in the 1907/1908 period, and generally disappears by the late 1980s. Tobacco cans are often used at mining claim corners to put the mine claim paperwork within, so if there is one near a rock cairn its worth seeing if there is anything in it!

Prince Albert Pocket Tobacco Can, 1920s.

Blasting cap friction lid, 1890s-1910s.

Sanitary can lid used as window closure

General Cans		
1856	Condensed milk can first patented	
1875	Tapered meat can patented	Rock 1984:103
1883	Machine soldering invented	Rock 1984:103
1894	Ams Sanitary Can machine invented	Sutton and Arkush 2002:168
1895	Key-wind can popularized	Rock 1984:105
1897	Key-wind sardine can popularized	Rock 1984:58-59
1897-1940s	Log Cabin Syrup in Cabin Shaped Tins	
1900	Modern style evaporated milk can introduced	Rock 1984:104
1904	First true sanitary cans produced	Sutton and Arkush 2002:168
1907-1908 to 1988	Hinged Pocket Tobacco Can	
1911	Sanitary cans dominate west coast market	Rock 1984:106
1922	Most manufacturers switch to Sanitary Cans	
	First canned dog food, "Ol' Roy"	Sutton and Arkush 2002:169
1933	Quart sized motor oil cans introduced	Sutton and Arkush 2002:169
1934	Applied color label on cans	Kaplan 1982: 114
1945	Aerosol cans developed	Sacharow 1978: 17
1953	Flat-top can for soft drinks	Kaplan 1982: 114
1962	Pull tab opener appears	Kaplan1982: 117
1974	Non-removable pull tab introduced	Kaplan 1982: 120
1980	Modern pop top introduced	Petroski 1993: 203
Beer Cans		
1935	First Beer Cans (Pabst)	BCCN 1985:1, 5-6
1954	Introduction of 10, 11, 14, 15, and 16 oz. Cans	Cady 1976: 15
1963	Major manufacturers switch to aluminum cans	Wright 1976: 22
	Pull tabs used for beer cans	Bull, et al. 1984: 10
1969	For first time canned beer outsells bottles	Bull, et al. 1984: 10

Donald Simonis (Monticello BLM Office) established a basic rubric for dating evaporated milk cans in the 1980s. Ron Reno recently compiled another 30 years of data to refine Simonis' guide, and the results are below and can be used for rough dating of sites. (Reno 2012)

MILK CAN FIELD DATING GUIDE

This guide is a reorganization of information provided principally by Simonis (1997) and Kimball (2003) to facilitate type identification from field measurements -- Ron Reno, March 2010.

DIA	HEIGHT	CAP DIA	DATES*	TYPE**	SOURCE
			· Hole-in-Top		
2 8/16	2 8/16	~2/16	1914-1937+	Baby	Bitting 1937:751
		1	1903-1914	5	Simonis 1997
2 15/16	3 5/16	1 4/16	1903-1908	4	Simonis 1997
		1 9/16	1885-1903	2	Simonis 1997
	3 6/16	~2/16	1931-1937+	No. 1A	Bitting 1937:751
	4	~2/16	1931-1937+	No. 1B	Bitting 1937:751
	4 6/16	6-12/16	1908-1914	7	McCabe 2010; Simonis 1997
		1 1/16	1903-1914	6	Simonis 1997
		1 12/16	1885-1903	3	Simonis 1997
3	3 4/16	1 12/16	1875-1885	1	Simonis 1997
	3 5/16	?	1885-1910s	"Eagle Brand"	Rock 1987:42-46
		?	ca. 1900		Rock 1989:106, 110
	3 8/16	12/16?	ca. 1900		Rock 1989:106, 110
	4 6/16	~2/16	ca. 1914-1931	No. 1 Tall	Bitting 1937:751; Rock 1989:1
			Vent Hole (Matchstick Filler)		
2 7/16	2 7/16	NA	1931-1948	16	Simonis 1997
	2 8/16	NA	1920-1931	15	Simonis 1997
2 8/16	2 5/16	NA	1950-ca. 1985	20	Simonis 1997
	2 6/16	NA	1917-1930	13	Simonis 1997
		NA	1931-1948	17 (4 Rings)	Simonis 1997
	2 7/16	NA	1920-1930	14	Simonis 1997
	2 8/16	NA	1915-1925	8	Simonis 1997
2 14/16	3 15/16	NA	1900-		Rock 1984b:104
2 15/16	3 14/16	NA	1935-1950s	18 "Punch Here"	Simonis 1997; Leavitt 2001; McCabe 2010
	3 14/16- 4	NA	1917-ca. 1985	11/12/19/21 ***	Edwards et al. 1990:100-101; Furnis 2000; McCabe 2010; Simonis 1997
	4 4/16	NA	1917-1929	10	Simonis 1997
	4 6/16	NA	1915-1930	9	Simonis 1997
3	3 5/16	NA	1910s-1975	"Eagle Brand"	Jaynes 1990

*Treat ALL dates as provisional, requiring further field and archival verification.

Numbers without other modification are Simonis Types. Simonis Types are empirical, based on field observation -- sources for dates not cited. Some type numbers have changed since initial introduction of his system in the 1980s. The following concordance allows interpretation of earlier recording using the types that have changed. It is in the format **New Simonis Type / Old Simonis Type: 9/10   10/13   11/14   12/15   13/11   14/9   15/18   17/12   18/17   19/None   21/19

***These Simonis Types are combined since after an extensive analysis of discrete deposits Furnis (2000:9.6-10) found distinguishing types 11, 12, and 21 for dating purposes to be problematic. Type 19 did not exist at that time, but is included here

The Venerable Bottle

There is far too much to discuss in regards to historic bottles to fit within this shortened guide to artifacts. For all levels of detail it is important to visit the Historic Bottle Website at www.sha.org/bottle as the website contains thousands of pages and photos to help explain every facet of the material class. Also, the website has a step-by-step dating guide for historic bottles that prompts you with questions as you move through the dating process: http://www.sha.org/bottle/dating.htm. Furthermore, the website is organized by question theme, so if you are interested in colors or finishes, you could easily track down the correct answer. This being said, the purpose of this shortened guide is to identify certain key attributes that are the best for quickly dating an archaeological assemblage in the field.

Amethyst glass is by far the best attribute to quickly assess the age of a historic assemblage. Manganese oxide was first used in glass making as a decolorant (to make the glass clear) in 1885. However, changes in the market through dropping supplies from Germany during World War I, and a general shift in glass making technology, most manufacturers discontinued use of this decolorant by 1920. What is interesting with manganese oxide in glass is that when exposed to ultraviolet radiation (as sunlight), the bottle or glass will turn a hue of light to dark purple. The darkness of the purple is not a time sensitive indicator; it could merely indicate that the glass had more manganese oxide. Tableware such as pitchers, mugs, and tumblers appear to have used manganese oxide in their production slightly later than 1920, but only in small numbers.

Finish styles varied over time as well, but perhaps no better indicator in Utah is the arrival of the crown-top finish same as those on glass beer and soda bottles today. The crown top finish, and the crown top as well, were introduced into the market in 1892 and dominated the market for beverage closures by the 1920s-1930s.

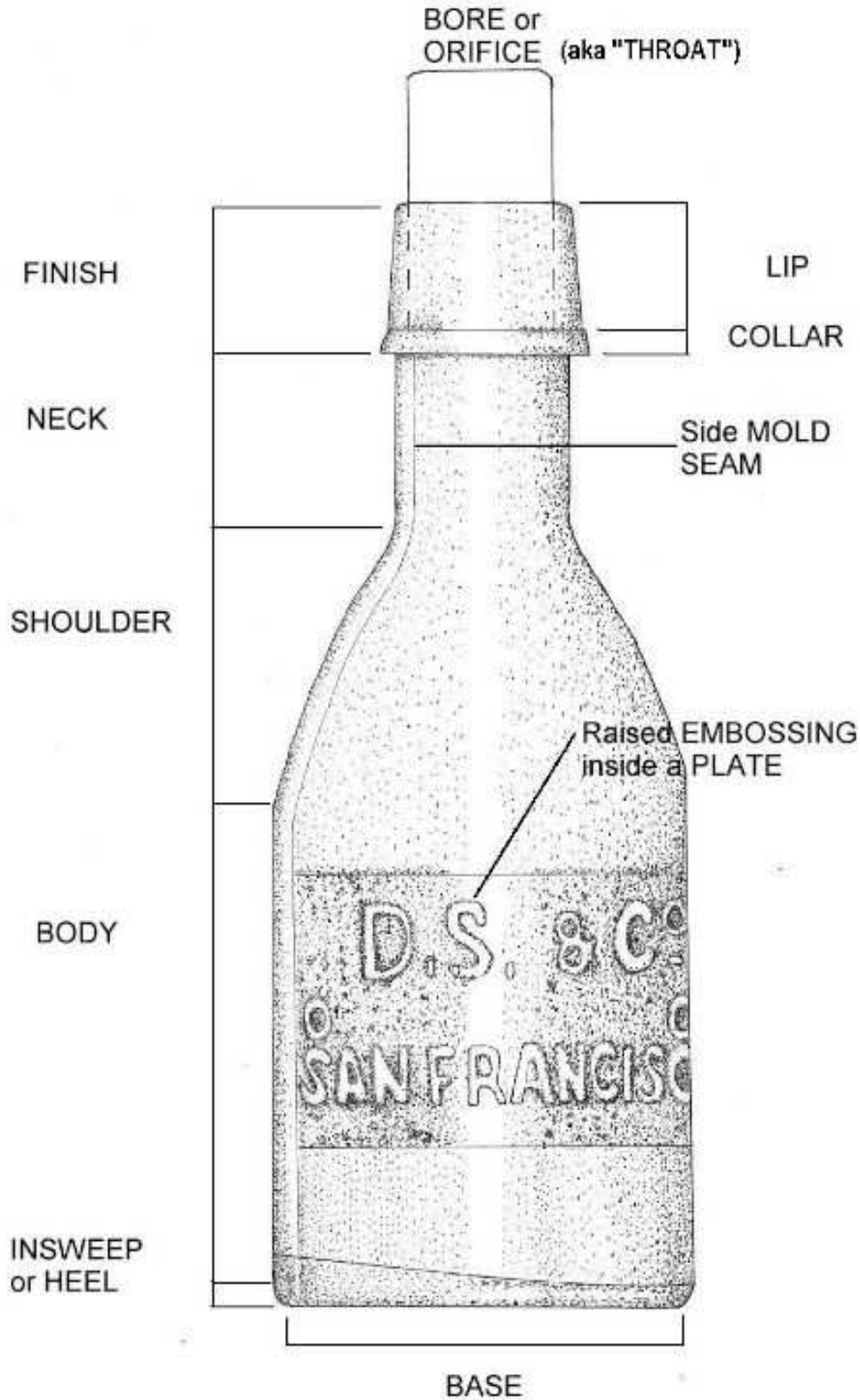Amethyst colored Curtice Bros. Ketchup Bottles, 1905-1920.

1" or 2.5 cm diameter
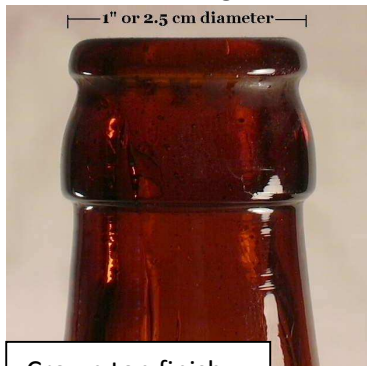
Crown top finish

=

Crown style bottle top

Proper Terminology for the Parts of a Bottle

Graphic from sha.org/bottle

FINISH

NECK

SHOULDER

BODY

INSWEEP
or HEEL

BORE or
ORIFICE (aka "THROAT")

LIP

COLLAR

Side MOLD
SEAM

Raised EMBOSSING
inside a PLATE

D.S. & Co.
SAN FRANCISCO

BASE

Seams on the sides, bases, and finishes of historic bottles are commonly used as a dating technique. However, the location of seams is remarkably variable from manufacturer to manufacturer and care should be used when trying to date bottles by the seam type.

- Generally, before the 1880s most bottles had an applied finish (meaning it was added to the bottle as a piece of finished glass) and left a rough edge under the finish where it adhered to the bottle. The side seam of an applied finish bottle will then just suddenly disappear where that transition occurs and provides a rough date of 1810s-1890s.


Applied finish showing sloppy glass at juncture
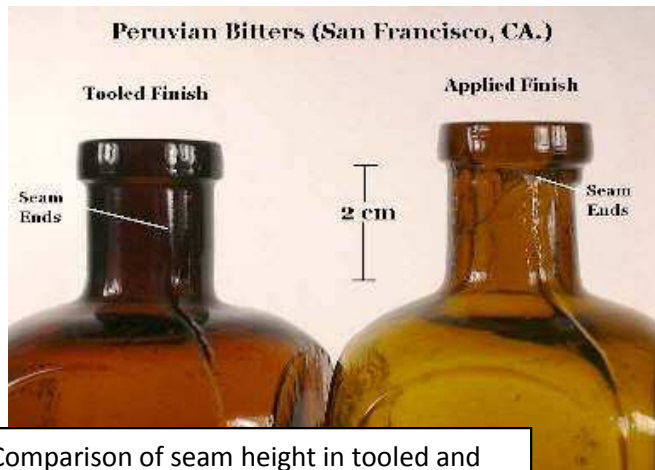
Comparison of seam height in tooled and applied finish bottles, from sha.org/bottle

- Introduction of the tooled finish in the 1880s led to a whole bottle being formed and then a specialized tool to form the finish from the molded glass while it was still hot. This tool, which was placed in the bore and then turned, would erase the side seam but make it appear to fade away versus being a harsh disappearance like the applied mold. A tooled finish dates largely to the 1890s to the late 1910s.

- Finally, the modern automatic bottle machine, introduced in 1906, will demonstrate a seam all the way through the entirety of the bottle and finish.
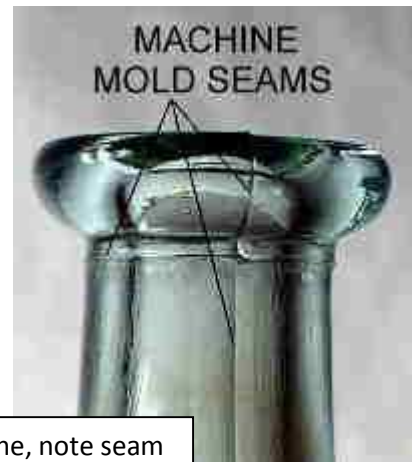
Automatic Bottle Machine, note seam goes through finish, from sha.org/bottle

Maker's marks and embossing are by far the easiest and most accurate way of dating historic bottles. However, there are thousands of different marks that each provides information on the 1) manufacturer, 2) date of manufacture, 3) legal requirements of the time, and 4) logos and advertising for the contents. Many of us still use the Julian Toulouse, Bottle Maker's and Their Marks for the standard reference guide but it has proven to be woefully out of date (as it is a 1960s original printing), and should not be used consistently. Instead, David Whitten's website which uses Toulouse as the foundation is by far the most accurate and heavily used resource on the internet and should be consulted in lieu of other resources: http://www.glassbottlemarks.com/bottlemarks/ One particularly important embossing found on bottles in the 20th century is the "FEDERAL LAW FORBIDS SALE OR REUSE OF THIS BOTTLE" mark found on the bottle shoulder or heel, and dates to 1935-1964. "Duraglas" embossing in script dates to 1940-1950s.

American Bottle Company, 1905-1929.

William Franzen & Sons, 1900-1929

Lindell Glass Company, 1875-1890

Owens-Illinois Glass Company. This is likely the most common bottle mark in the 20th century. Date code indicates 1941

The Cantankerous Ceramic

Similar to bottles there is so much variation in ceramics in the historic Utah environment that summarizing is difficult.

Transfer print comes in many colors and patterns, and the pattern is always under-glaze.

Decalware vessels have a colorful (usually flower) motif over the glaze.

Fiestaware is denoted by its brightly colored glazes such as yellow and red.

Earthenware: In Utah, most of the ceramics encountered on archaeological sites are earthenware, but even these have a significant variation including but not limited to pearlware, yellowware, white improved earthenware, and ironstone. By far, the most common types of ceramic found on archaeological sites in Utah will be White-Improved Earthenware or Ironstone. Both types tend to have a rich white 'paste' (or clay) and can have any variety of decorations including molded relief, transferprint (1850s-present), hand-painted over glaze, and decalware (1890s-present, peak popularity in the 1920s-1930s). Fiestaware, a brightly glazed earthenware, was produced between 1936-1969, and is common on Great Depression-era archaeological sites. The most unique part of Utah's history is the local earthenware industry that existed in the state between 1850 and the 1930s, with local LDS potters making their own wares for use in the farming communities around the state. Many of these Mormon vessels have styles reminiscent of European traditions given the Scandinavian background of many of these potters.

LDS-Produced pottery usually is a rough earthenware and red or yellow bodied past.

Stoneware: In Utah, and most other parts of the west, stoneware is generally associated with utilitarian storage vessels such as crockery, liquor (whiskey jugs), butter churns, tobacco jugs, and even mineral and soda bottles imported from England or Germany. Stoneware is a hard body ceramic, that when you look at it in cross-section the 'paste' appears stone-like with large areas of air bubbles. In addition to the common types of stoneware vessels used by Euro-Americans, Overseas Chinese residents of the state imported several varieties of stoneware vessels from China that are visually unique and easy to recognize.
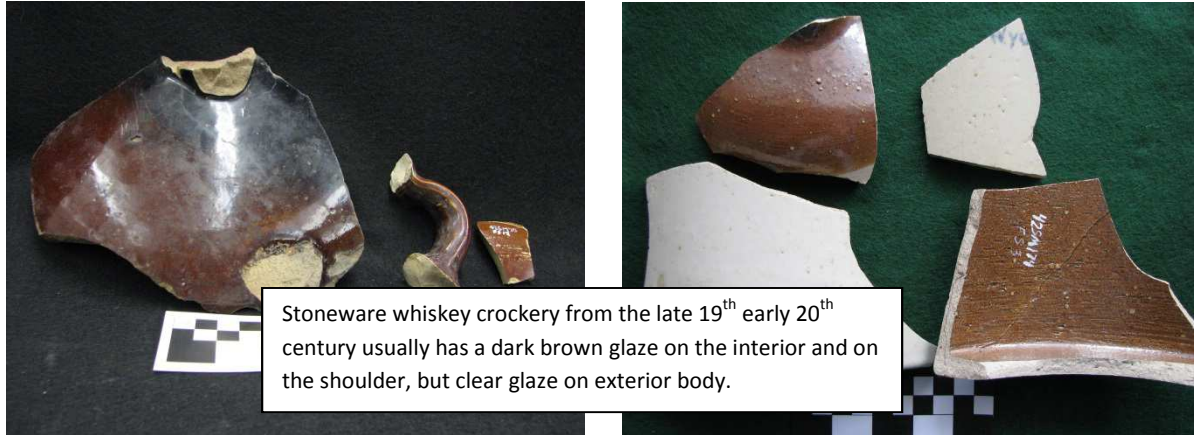

Stoneware whiskey crockery from the late 19th early 20th century usually has a dark brown glaze on the interior and on the shoulder, but clear glaze on exterior body.

Porcelain: Porcelain is common in Utah after the 1860s with the arrival of the railroad, and is a well-processed and refined ceramic that almost appears glassy to the eye even in cross-section. Usually porcelain vessels are thin-walled in comparison to the Earthenware vessels described above, but have similar types of decorations such as transferprint, gold leafing, decalware, and hand-painted. Children's dolls are almost always made out of porcelain in the 19th and early 20th century. Given its thin walls and fragile nature, porcelain is generally used for decorative pieces or for vessels with a high value in the 19th century but was more commonly used by the 20th century for a variety of goods. Porcelain also was used in electrical insulators for the home and transmission lines.

Creepy dolls from the 19th and early 20th century were made of porcelain heads, arms and legs.

Porcelain was used in a variety of forms, with decorations similar to that of earthenware.
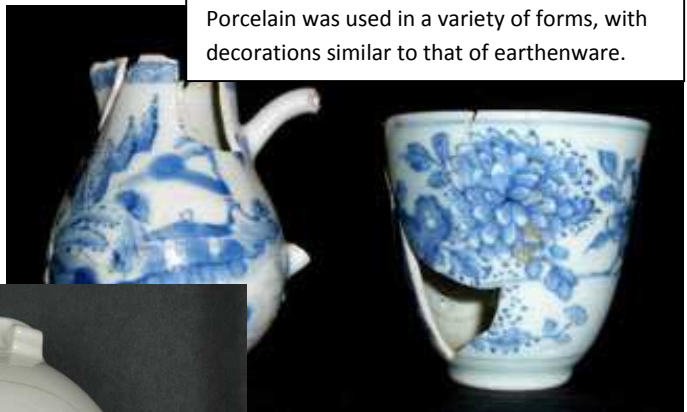
Porcelain served as a material for high-voltage electrical lines like this example from 1897-1899.

Maker's Marks: All types of ceramics have the possibility of demonstrating a maker's mark on the underneath part of the base. There are a number of excellent references to assist in identifying the maker's marks, including the Kovel's New Dictionary of Marks. Online resources are difficult to locate and are not as comprehensive as the books, but for mysterious marks the internet is your best bet for locating these.

ROYAL . PATENT.
IRONSTONE.
TURNER. GODDARD & C⁰

TURNER, GODDARD &
CO.
Tunstall, Staffordshire,
England
Earthenware
1867–1874 (1867–1874)

A fragment of ironstone from a mining site, but careful analysis provides a date of 1867-1874. Kovel's New Dictionary of Marks, 1990.

Overseas Chinese artifacts, while rare, exist in many rural areas of Utah in railroad and mining camps. In addition many Utah towns had large and robust Chinese communities such as Ogden and Salt Lake.

Top Row (L to R): Opium can, opium pipe bowl, and hand-blown medicine bottles.

Middle Row (L to R): Four Flowers liquor cup, Celadon soup bowl, Celadon bowl

Bottom Row (L to R): Four Flowers soup spoon, Four Flowers sauce plate, Four Flowers plate.

Brown-glazed earthenware spouted jar, or soy pot.

Brown-glazed earthenware liquor jar (missing base).

Brown-glazed earthenware wide-mouthed food jar.

Potpourri of Goodness

Difficulties with historic artifact identification encountered by archaeologists is the sheer number of objects produced by humans in the last three centuries, and that the archaeologist or historian might only get a single piece or fragment of an object or complex machinery. Daily we are exposed to new objects in new combinations that will forever be unable to be identified, but this document is an attempt to hit those core identifiers generally seen during survey or excavation. Books, articles, flea markets, antique shops, and the internet, provide the means of identifying everything else. There are a few more items that do not fit nicely into the sections above, and these items find a place in the potpourri of goodness below.

Partially adapted from the 20th Century Dating Guide by Catherine Spude, Posted on the Society for Historical Archaeology Website: http://www.sha.org/index.php/view/page/20thCent_artifacts

Aluminum Foil		
Ca. 1920	Beginning of Commercial Production of Foil (tea, candy, gum)	Sacharow 1978:111
1939	Foil used to wrap dried fruit, cheese, and beer labels	Sacharow 1978:111
1940-1945	Increased demand, thus production, of foil	Sacharow 1978:112
Plastics & Synthetics		
1908-present	Linoleum with colors	
1909	Bakelite invented	King 1991:5
1930	Introduction of cellophane for wrapping	King 1991:4
	Scotch tape invented	Allen 1995:51
1945	Tupperware invented	King 1991:7
Ca. 1950	Styrofoam/Thermofoam becomes popular	Sacharow 1978:93
1959	Women's pantyhose introduced	Rice 1958
Miscellaneous Artifacts		
1870s-1930s	Use of tobacco tags of various shapes and sizes	Springate 1997
1872	Introduction of Glidden-style Barbed Wire	
1878	Enameled graniteware vessels (on iron plate) popular	Booher 1977;
1892-1930s	Enameled graniteware on steel plate popular	Booher 1977; Fox 1995:80-82
1909	Edison-style threaded screw base for light bulbs introduced	Coe 2006:77
1917	Modern zipper invented	Friedel 1996:94
Ca. 1928	Toothpaste tubes developed	Sacharow 1978:154
Post-1930	Concrete slab foundations extremely popular	
1938	Ballpoint pen invented	VanDulken 2002:106
Ca. 1958	Commercial introduction of velcro	Freeman 1997:99-104
1959	Barbie Doll invented	Gerber 2008

Artifact Cross-Dating

With all the artifacts and their temporal data, it is important for the archaeologists to be careful when determining the age of a site. It is sadly not an uncommon occurrence to see people misunderstanding the concepts of *Terminus Post-Quem* (date after which) and *Terminus Ante-Quem* (Date before which), and also what types of artifacts should be used for a site. For instance, a site form actually received by the Utah Division of State History states that the site had "amber glass" so the official date on the site was 1850s-present. However, in the artifact description they included bottles with crown-top finishes, and hole-in-cap cans. From what we have learned in this guide that this site more firmly dates to between 1892-1922 given that additional information…and that is a sizable difference for site interpretation. In order to illustrate the range of datable artifacts, archaeologists create elaborate charts that help to visually represent the different artifacts and their associated date range. This is an artifact cross-dating chart and would appear similar to the one below:
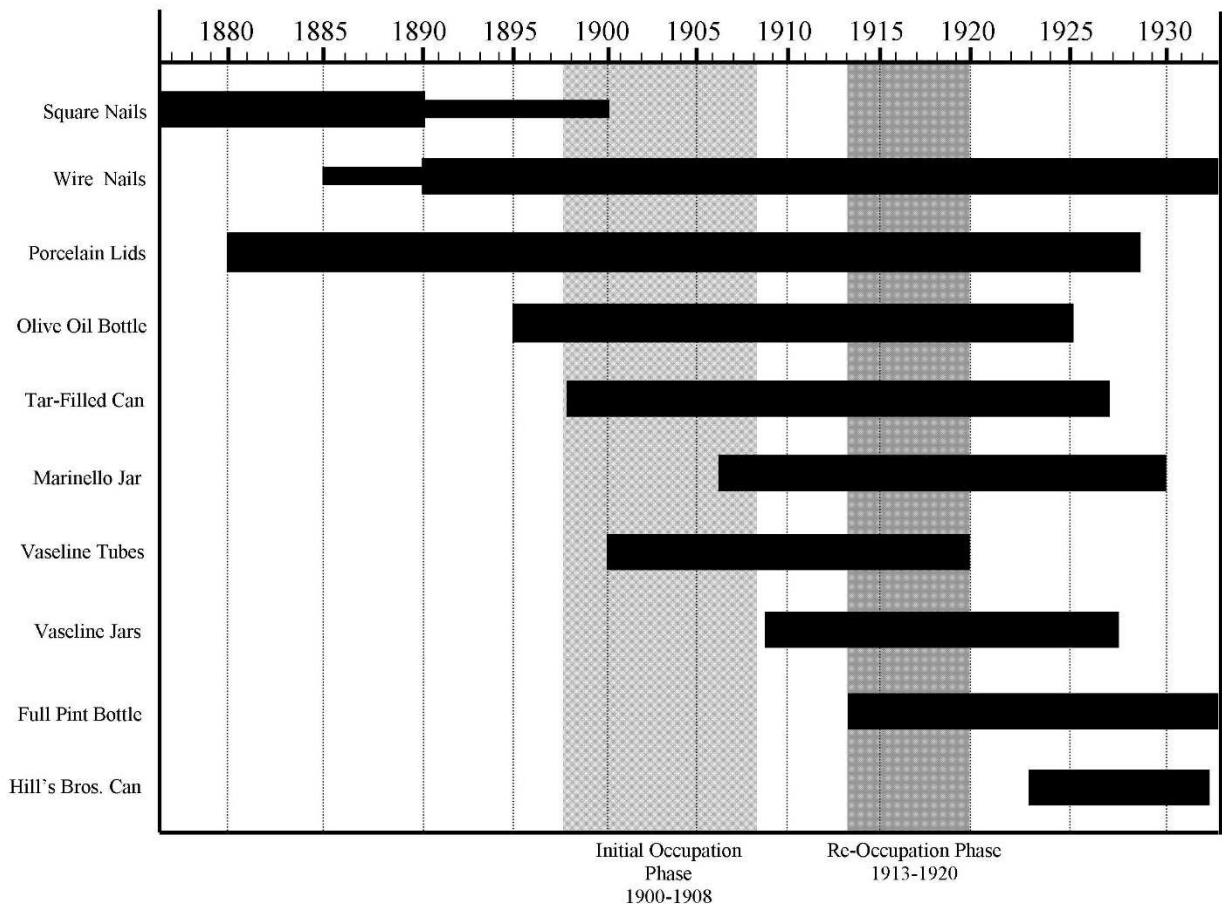
*Figure from Merritt & McLeod 2010.

Placing All This Stuff in Context (digitally)

Artifacts are worth only as much as the context in which they are found, and their relations to other artifacts, features, and landscapes. A better understanding of human history is the real goal of archaeology, and to accomplish this lofty goal we must place our findings in adequate context. A group of blasting cans, liquor bottles, and ironstone might be an expected pattern in a mining community, but what if it is found on the fringes of a heavily religious community? That simple change of context can lead us to completely new frames of reference in our understanding. To build a context, the archaeologist must understand the past historic and prehistoric uses of the landscape, and thankfully historical documents can provide some data in this respect. Historical documents alone though do not tell the entire story, that is why artifacts provide that unbiased reflection of personal and collective human action. Listed below are repositories of historical information that is largely freely available on the internet and can add to the history of humans in Utah and beyond.

Utah-Specific Online Primary Resources

- Utah Digital Newspapers
  http://digitalnewspapers.org/

- GLO Survey Plats
  http://www.ut.blm.gov/LandRecords/search_plats.cfm

- GLO Homestead Patents
  http://www.glorecords.blm.gov/

- Utah Water Rights Online Database
  http://www.waterrights.utah.gov/wrinfo/query.asp

- Sanborn Fire Insurance Maps
  http://content.lib.utah.edu/cdm/landingpage/collection/sanborn-jp2

- Historic Utah Topographic Maps
  http://www.lib.utexas.edu/maps/topo/utah/

- Historic Utah Maps
  http://www.davidrumsey.com/

- Historic Panoramic Maps (Brigham City, Ogden, Salt Lake City)
  http://www.loc.gov/collection/panoramic-maps/

- Utah State History Online Research Catalog
  http://utsl.sirsi.net/

- Utah State History Online Photo Database
  http://history.utah.gov/research_and_collections/photos/index.html

- Utah Cemeteries and Burials Database
  http://history.utah.gov/research_and_collections/cemeteries/index.html

- Utah Death Certificates (1904-1961)
  http://www.archives.utah.gov/research/indexes/20842.htm

- Utah Birth Certificates (1905-1911)
  http://www.archives.utah.gov/digital/81443.htm

- Utah Animal Brand Books (Possible Use in Identifying Arborglyphs or Historic Rock Art)
  http://www.archives.utah.gov/digital/540.htm

- Trails of Hope: Overland Diaries and Letters
  http://overlandtrails.lib.byu.edu/

- Utah Rails.net
  http://utahrails.net/

- Utah American Indian Digital Archive
  http://utahindians.org/archives/

National Online Primary Source Databases

- National Register of Historic Places Database & Research
  http://www.nps.gov/nr/research/

- HABS/HAER Database
  http://memory.loc.gov/ammem/collections/habs_haer/placeU.html

- Clearinghouse for Free and Subscription Genealogy Resources
  http://www.accessgenealogy.com/utah/

- USGenWeb Archives
  http://usgwarchives.net/ut/utfiles.htm

- Freely Accessible U.S. Federal Census Records (1790-1930)
  http://archive.org/details/us_census

- Indian Population Schedules (1885-1940)
  http://archive.org/details/us_census

- Google Books (many primary/secondary Utah historic resources are digitized)

http://books.google.com/

- Archive.org (many free digitized historic volumes)
  http://archive.org/details/texts

Secondary Resources

- Utah Historical Quarterly Online Database
  http://utahhistory.sdlhost.com/

- Utah Architecture Guide
  http://history.utah.gov/architecture/index.html

- National Register Bulletins and Publications
  http://www.nps.gov/nr/publications/index.htm#bulletins

- Vernacular Architecture Online Bibliography
  http://resources.umwhisp.org/vafbib.htm

- Society for Historical Archaeology (pre-2007 Journal articles are free)
  http://www.sha.org/publications/pubsexplorer/default.cfm

Utah Institutions with Online Digital Archives

- Mountain West Digital Library
  http://mwdl.org/
  **This resource also searches Utah State History, and the digital collections of USU and BYU

- Utah State University Digital Collections
  http://digital.lib.usu.edu/

- Weber State University Digital Collections
  http://dc.weber.edu/

- University of Utah Digital Collections
  http://www.lib.utah.edu/collections/digitalCollections.php

- Brigham Young University Digital Collections
  http://lib.byu.edu/digital/

- Utah Valley University Digital Archives
  http://contentdm.uvu.edu/index.php

- Southern Utah University Digital Archives
  http://www.li.suu.edu/page/special-digital-collections-digital-archives

Historic GIS Databases

- Historic Aerial Imagery: 1936-1952 (Majority in 1941)
  http://gis.utah.gov/data/utah-sgid-image-server/

- Historic Districts in Utah
  ftp://ftp.agrc.utah.gov/UtahSGID_Vector/UTM12_NAD83/HISTORY/UnpackagedData/HistoricDistricts/_Statewide/

- Lake Bonneville Extent
  ftp://ftp.agrc.utah.gov/UtahSGID_Vector/UTM12_NAD83/WATER/UnpackagedData/HistoricLakeBonneville/_Statewide/

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