

HISTORIC ERA ARTIFACTS

*J. Homer Thiel
Desert Archaeology, Inc.*

A large number of Historic era artifacts were recovered during archaeological work at the San Agustín Mission locus, the Clearwater site, AZ BB:13:6 (ASM), and the Tucson Presidio site, AZ BB:13:13 (ASM). Analysis focused on three assemblages: Spanish and Mexican period artifacts from the Tucson Presidio, American Territorial period items from the Tucson Presidio, and the artifacts at the Mission locus found in a well filled in by Chinese gardeners.

TRACES OF DAILY LIFE AT THE TUCSON PRESIDIO

Excavations beneath the parking lot at the southwest corner of Church Avenue and Washington Street and at the Tucson Museum of Art complex resulted in the recovery of a large sample of presidio-occupation (1775-1856) artifacts and food remains. These items, as well as artifacts found at other presidio and mission sites in Arizona, provide information that was not recorded in the surviving contemporary documents. Recovered artifacts reveal how foods were cooked, stored, and served. Scraps of bones and charred plants identify the kinds of foods eaten by Mexican soldiers. A few pieces of firearms tell us the types of weapons used by soldiers. Buttons and beads provide a small idea about the styles of clothing and adornment.

Many of the Tucson Presidio records disappeared when the presidio was evacuated in 1856. One record that has survived is an inventory of a single house in the community. On 17 September 1820, Father Pedro Arriquibar prepared his last will as he lay dying at the Tucson Presidio (Table 12.1).

Arriquibar's household, however, may not have been representative of a typical household at the Tucson Presidio. He had been a priest for 23 years, accumulating a sizable amount of money. He owned a large number of books and religious items, probably more than any other household in the community. Because he was a single male, he probably had his meals prepared by the women of the community. Thus, his inventory may lack the kinds of kitchen items likely found elsewhere. Despite these caveats, the inventory suggests that houses at the presidio were sparsely furnished and that both imported and local items were likely present inside dwellings.

Artifacts from presidio times were found in the seven borrow pits at the northeastern corner, scattered in soil layers throughout the corner parking lot area, as well as in the pre-1860 layers at the Art Museum. These items, as well as those found during previous excavations within the Tucson Presidio and at other Spanish and Mexican period sites, suggest that the people who lived at the fortress imported a small amount of goods, ranging from necessities such as weapons, to luxuries like chocolate and Asian ceramics. When items were broken or worn out, usable portions were recycled. Imported items were only discarded when they were completely unusable, or when they were accidentally lost. It was difficult to import bulky items into the community, and residents purchased many large ceramic vessels from local Native Americans who modified the vessel forms they produced to meet new demands. Perishable materials, such as wood, leather, or cloth, were used in items that were imported or made locally, but they have left few traces behind.

Kitchen Artifacts

Items used to store, prepare, and serve food were the most common of the basic categories of Spanish and Mexican period artifacts found during the Rio Nuevo excavations. From the 1770s to the 1850s, residents of the presidio probably cooked food indoors in small corner fireplaces such as the one found at the Art Museum, on outside hearths, or in indoor adobe hornos or bread ovens.

Previous excavations have also revealed that presidio residents ate primarily beef, with mutton and chicken contributing smaller amounts of meat. Charred plant remains in sediment samples indicate that wheat was the most common plant food eaten, followed closely by maize. Peppers, squash, beans, and prickly pear cactus have also been identified in sediment samples. All of these foods, both plants and animals, were locally grown. Some wild foods, such as cactus fruit and mesquite pods, may also have been collected or obtained through trade with local Native Americans. Mescal, an alcoholic beverage made from agave, was also reported to have been made in Tucson. A small amount of foods and beverages were probably imported into the region. These

Table 12.1. Inventory of Father Arriquibar's household in 1820 (Stoner 1959).

House with a parlor and two rooms, a storeroom, enclosure in rear of the back yard
A table and chairs
A statue of Our Lady of Sorrows
A Roman cassock
A rosary from Jerusalem
4 Roman breviaries
A book of sermons on parchment
11 Latin books bound in yellow pasteboard
4 Latin books bound in pasteboard
6 large sermon books on parchment
30 books bound in parchment and 2 without bindings
8 <i>ordos</i> in Latin
A package of manuscript sermons
A wood mattress, much worn
2 Pima sheets, much worn, and a pillow
1 black blanket and cot with horsehair rope lacing
A palmleaf hat bound with cotton duck
Some drawers, a shirt, some breeches of cotton duck, and some hose
A large handkerchief and some shoes
A mantle of blue wool cloth, a large snuff box, a snuff canister, and some glasses
A razor case, 2 razors, and a hone
An inkwell and 2 small bottles
4 pottery wine jars
A saddle with saddleskirts, horn bags, sweat leathers, and spurs
A metal knife and fork and spoon
A tin can
A candlestick and snuffers
7 saddle horses and 1 mule
5 mules
15 mares and their stallion
About 40 head of cattle
596 pesos, 3 <i>reales</i> , which remained . . . after deducting 200 pesos . . . for the stipulated pious works and the redemption of captives in Jerusalem

would have included chocolate, olive oil, wine, salt, and spices.

Many of the containers used to transport luxury goods would have been made of perishable materials, but a handful of sherds from green glazed "olive" jars—thick terra cotta jars imported from Spain—were found in presidio-occupation features or soil layers in Tucson and other sites in Arizona (Figure 12.1). These jars, similar to Roman amphoras, were sturdy and useful for carrying liquids overland on pack trains (Deagan 1987:32). The 1820 inventory of Father Arriquibar's house in Tucson indicates he had "four pottery wine jars" (see Table 12.1).

Food preparation artifacts found at the site were mostly limited to locally produced Native American vessels, as noted in Chapter 7 (this volume). Some presidio residents probably also had large copper or iron pots, but the metal was apparently

recycled when they were no longer usable. Copper *chocolatero* pots have been found at Terrenate, Tubac, and near Marana (Figure 12.2). These small copper vessels have a bulbous base and a cylindrical top. They were used to brew hot chocolate, which was whisked with a wooden *molinillo* to make the beverage frothy.

Pieces of food-service vessels are much more commonly found. The presidio residents dined from Mexican, Chinese, and English ceramics, along with locally produced Native American vessels. The most common imported ceramics were majolica dishes, brought to Tucson by mule train, originating in Puebla, Oaxaca, and other towns farther south in Mexico. A total of 831 pieces was found during the current project (Figure 12.3). Most trash at this time was discarded on the ground and then walked on by people and animals. Thus, most pieces found



Figure 12.1. A Spanish period olive jar, provenience unknown (ASM 76-18-10).



Figure 12.2. Copper *chocolateros* discovered near Marana, Pima County, Arizona (AHS/SAD 88.22.1 and 88.22.2).

were quite small, making it difficult to identify the varieties present.

Three categories of food-service vessels were present. Majolica with blue decorations was most common, with 351 pieces identified. Polychrome (multicolored) pieces accounted for 201 fragments. Plain white fragments, most of which were probably the undecorated portions of vessels with blue or polychrome designs, totaled 279 pieces. At least one undecorated cup was represented by several pieces.

Decorated majolica has been the subject of study by several researchers, who have separated the blue and polychrome varieties into various styles. Majolica dishes with blue designs were meant to imitate Chinese porcelains. Polychrome majolica was introduced in the 1770s, and imitated ceramics made in Europe. Unfortunately, the dating of these particular styles is currently not well understood, although the initial manufacture of blue varieties predated the introduction of polychrome varieties (Goggin 1968).

The majolica imported into Tucson was mostly in the form of plates, with a smaller number of cups and a handful of bowls. In contrast with the locally made Native American ceramics, the bright decorations on these dishes brought color to the tables of families and helped them to recall the times spent further south.

Chinese porcelain was brought in the same pack trains north to Tucson, but in much smaller quantities. Previous excavations in Tucson have identified several varieties of Chinese porcelain, some with blue designs and others with red and blue hand-painted patterns. These vessels traveled a great distance to arrive in the community—sent by ship to the Philippines and then to western Mexico. It is not surprising, then, that so few dishes ended up in Tucson.

English ceramics became available after Mexican Independence, with an Anglo-Mexican trade treaty signed in 1824, allowing for the importation of English goods directly to Mexico. Small quantities of transfer-printed and shell-edged ceramics began to be sent to Tucson. Many of the transfer-printed vessels bore scenes depicting the European world. Residents would have looked at the scenes of castles, cathedrals, and forests in amazement. In a time before books, magazines, or newspapers, these images would have provided a glimpse of another world. A small number of pieces were found in Mexican period deposits. Most of these were blue, with floral designs (Figure 12.4).

The kitchen-related artifacts found during the Rio Nuevo project and previous archaeological excavations at the Tucson Presidio suggest the importance of maintaining the traditions brought to Mexico from Spain. Families prepared meals using recipes handed down through the generations, serving foods and beverages in imported dishes. Locally made ceramic vessels replaced some Spanish and Mexican counterparts, such as the use of beanpots for cooking instead of metal pots. However, local O'odham potters modified vessel forms to meet the needs of presidio residents, creating *comales* to make tortillas on and *chocolateros* to make a chocolate beverage in.

Architecture

The architectural traditions brought to Tucson by the presidio soldiers contrasted strongly with those of the local Native Americans. Instead of dome-shaped huts made from saplings and covered with grass and mud, the soldiers elected to construct a large, elaborate fortress out of adobe bricks. The soldiers

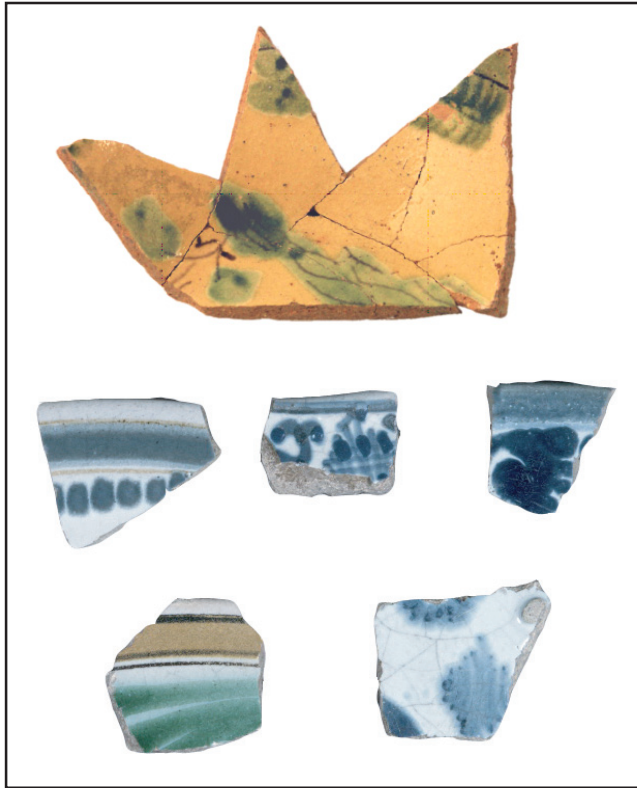


Figure 12.3. Mexican majolica from Spanish or Mexican period features from the Tucson Presidio, AZ BB:13:13 (ASM). Top: unidentified polychrome variety, Feature 409 (FN 3667 and FN 3786); middle row: San Elizario Blue-on-white, Feature 0 (FN 3221); unidentified blue variety, Feature 0 (FN 3901); and Puebla Blue-on-white, Feature 0 (FN 2232); bottom row: Aranama Polychrome, Feature 0 (FN 3632); and unidentified blue variety, Feature 376 (FN 2939).

brought ideas about how to build structures that were rooted in Europe, North Africa, and Mexico, tempered by the necessity to use locally available materials. For example, while adobe bricks formed the basis for the presidio structures, saguaro ribs and ocotillos were used as roofing material.

Surviving historical accounts and the portions of buildings found within the presidio suggest most people lived in small, one-story adobe brick homes built against the presidio walls. These homes lacked many of the amenities enjoyed by modern-day Tucsonans. There were no glass windows; in fact, most dwellings probably lacked windows. Milled lumber was scarce, so doorways were covered with hides instead. Earth was tamped down for inside floors and exterior courtyard areas. There was no running water in people's homes. An *acequia* (canal) was present just outside the main gate, and families could carry *ollas* (ceramic jars) down to the Santa Cruz River to collect water or to wash clothes, or they could walk a little further to the south to a spring called Los Ojitos.



Figure 12.4. English transfer-print ceramics recovered from Spanish or Mexican period borrow pits within the Tucson Presidio, AZ BB:13:13 (ASM). Top: Feature 409 (FN 3667); bottom left: Feature 441 (FN 4345); bottom right: Feature 409 (FN 4148).

These conditions sound harsh, although they were what the presidio soldiers and their families were used to and they would have duplicated living conditions in Mexico.

Few architectural artifacts, other than a handful of adobe brick fragments and a couple of nails, were found in presidio features. This reflects the use of local materials, many of which have completely decomposed, and the careful conservation of metal items, including nails, hooks, and other hardware.

Arms and Ammunition

The Spanish and Mexican soldiers stationed in Tucson relied on a variety of weapons for protection, including muskets, lances, knives, and several brass cannons. The presidio had an *armero*, whose job it was to care for and repair the weapons used by the soldiers. Inspection reports frequently commented on the poor condition of firearms, and on more than one occasion, the presidio commander requested additional muskets. The *armero* did the best he could under trying conditions, eventually recycling parts of muskets worn out from frequent use during campaigning. Because metal was valued and could be reworked into other items, such as nails or horseshoes, relatively few pieces of weaponry have been recovered at Spanish and Mexican period archaeological sites in Arizona, except at the Presidio Santa Cruz de Terrenate. Excavations in the 1950s and artifact looting in the 1960s and 1970s at Terrenate located many items left behind when the fort was hastily evacuated in 1780. Numerous fragments of



Figure 12.5. Brass gunstock ornaments from the Terrenate Presidio, AZ E:4:11 (ASM), dating to 1775-1780 (AHS/SAD 83-26-21 and 83-26-20).

brass gunstock ornamentation were among these (Figure 12.5).

In contrast, excavations at the Tucson Presidio have mostly found lead musket balls, which were easily lost, and gunflints, which were discarded when they were worn out, replaced by flints made from locally available stone. Twenty-five lead musket balls and three gun flints were found during the work at the presidio. The only musket part discovered during the Rio Nuevo excavations was the end of a ramrod holder (Figure 12.6). The fragment was a brass tube with a flared end and a projecting tab that allowed the holder to be attached to the underside of a musket. The ramrod, used to clean gunpowder residue from the barrel and to tamp the powder and lead ball into place, was held onto the underside of the musket barrel by this holder.

Two prior excavations have each yielded a single gun part dating to the presidio occupation. Work in 1943 uncovered a cast brass military *escopeta* trigger guard once used by a soldier during the Spanish period. Excavations at the León farmstead, occupied by a soldier who served in the Mexican military, resulted in the discovery of another trigger guard, this one from a Brown Bess musket, manufactured in England in the 1820s and imported by the Mexican military.

Clothing and Personal Items

Residents of the presidio probably owned a few pieces of clothing each. Hilario Gallego (1935:75-76), who was born in Tucson in 1850, provided a description of the clothing worn by local residents:



Figure 12.6. Brass ramrod holder recovered from the Tucson Presidio, AZ BB:13:13 (ASM), Feature 0 (FN 3273).

For clothing most of the men wore nothing but ‘gee-strings’ just like the Indians. Every six months or so the government would send to Hermosillo and bring back manta or unbleached cotton cloth from which men’s trousers and women’s skirts were made. The women wore long skirts and shawls or scarfs. Our shoes were mostly taguas, or rough shoes made of buck-skin, and guaraches, which were flat pieces of leather tied to the foot with buck-skin strings which ran between the big toe and the next. Many of the smaller children went naked, though a few wore ‘gee strings.’

A few other documents provide additional information about the subject. At least one presidio soldier was jailed for gambling away his pants. Travelers passing through the area in the 1840s to early 1850s were able to trade cloth, needles, and sewing notions to Tucson women. The lack of a store in the community made these items difficult to acquire. An illustration of the Tucson military chapel, drawn in the 1850s, was a contemporary depiction of what people wore in Tucson. The paintings within the San Xavier Mission may provide some clues as to the clothes typical in the late 1790s.

Articles of clothing were made from textiles and leather and rarely survived once they were discarded. Clothing-related artifacts recovered from the Tucson Presidio during the current project were limited to a small number of brass buttons found at the Art Museum in presidio soil layers.

Examples at Terrenate reveal that a variety of button styles were used by soldiers and their families at that presidio between 1775 and 1780. They ranged from plain pewter and brass buttons, either circular or octagonal, to elaborate molded buttons with flowers and geometric designs (Figure 12.7). Clothing and shoe buckles found at the site were equally elaborate and suggest residents enjoyed nice clothing (Figure 12.8). Cloth bale seals collected at the presidio reveal that at least some of the cloth was

imported from England at a time when trade with that country was prohibited by Spanish law.

All of the people living in the presidio probably once owned a few treasured items—pieces of jewelry, personal hygiene items, books, or other items that were considered their own possessions. Few of these items were found during the excavations at the presidio, which is not surprising given the value placed on these items. A pair of faceted blue beads and a striped glass bead were found in a borrow pit, Feature 409. Fragments of a bone comb were also found in this feature. The double-sided comb was made from a thin slice of cattle bone and had fine teeth on each side. It is identical to combs found at other eighteenth century Spanish sites in Florida. A Mexican *cuarto real* dating between 1831 and 1836 and a probable “piece of eight,” a silver coin clipped



Figure 12.7. Brass buttons from the Terrenate Presidio, AZ E:4:11 (ASM), dating to 1775-1780 (AHS/SAD 83-26-74, 76-79).



Figure 12.8. Brass clothing buckles from the Terrenate Presidio, AZ E:4:11 (ASM) (AHS/SAD 83-26-34, 83-26-32A).

into a pie-shaped wedge to make change, were also recovered. Several gaming pieces manufactured from flattened musket balls were probably used by presidio residents to play chess, checkers, or in other pastimes (Figure 12.9).

Overall, the diversity of Tucson Presidio-occupation artifacts is relatively small. Excavations and looting activities at the Terrenate Presidio suggest a greater variety of items have been found at Spanish period sites, but due to decomposition or recycling, these items are not recovered in Tucson.

Summary

Trash disposal was very casual—artifacts were tossed into nearby pits or onto the ground. As a result, many artifacts were smashed into small pieces, hindering their identification. A relatively small number of imported artifacts that date to presidio times have been found. This is partially because these items were costly to import. Other items were made from perishable materials, such as cloth, leather, basketry, and wood, that decompose once discarded. Items produced from recyclable materials, such as metal,



Figure 12.9. Small metal artifacts from the Tucson Presidio, AZ BB:13:13 (ASM). Top row: a “piece of eight” and a Mexican *cuarto real*, Feature 373 (FN 2454 and 3606); bottom row: a pair of gaming pieces fashioned from lead musket balls, Feature 0 (FN 2811 and FN 3015).

were probably sold to the blacksmith shops and reworked into new items. Those artifacts that were found—principally majolica dish fragments, buttons, coins, beads, and lead bullets—were either discarded when they broke or were lost by accident. The recovery of large amounts of majolica, although outnumbered by Native American pottery, indicates a strong desire by the people living in Tucson to recreate or emulate the lifestyles of people living in towns further south.

Excavations at other Spanish period sites in Arizona, especially the Terrenate Presidio; surviving inventories; and items found at the missions of San Xavier and Tumacacori allow identification of a wider range of artifacts brought into the area. These range from *chocolatero* pots to bookbindings to religious items. A small number of surviving images of the time, drawn or painted in California and Mexico, also provide clues about daily lives in presidios in the seventeenth and eighteenth centuries.

AMERICAN TERRITORIAL PERIOD

Artifacts from the Presidio Site Parking Lot

The artifacts found in American Territorial period features differ dramatically from those found in the earlier features of the presidio occupation. When Solomon Warner opened his store in 1855, increasing amounts of consumer goods were available in the community. Previously, a small amount of dishes, luxury foods, clothing and sewing notions, and religious articles were carried to Tucson in pack trains from the south. Warner's freight wagons from southern California brought some of these same items, but they also brought bottled liquor, tools, bolts of cloth, and packaged foodstuffs. By the late 1850s, advertisements in the first newspaper published in Arizona indicated that a wide variety of goods were now available to those who had the means to purchase them.

Freighting businesses, such as Tully, Ochoa & Company, specialized in importing goods. The arrival of new loads were eagerly anticipated by residents, especially new arrivals who sought to maintain their accustomed lifestyles. The arrival of the railroad in March 1880 brought an unprecedented glut of items to local stores. The old freighting companies soon went out of business, unable to compete with the cheaper prices of goods transported by trains.

Archaeologists working in downtown Tucson can clearly see the growing availability in consumer goods after the arrival of the railroad. The sheer quantity and variety of artifacts found at historic-era sites dating after 1880 is sometimes amazing. Outhouses, wells, and borrow pits are frequently

filled with thousands of artifacts. This proved to be the case for American Territorial period features found beneath the parking lot at the southwest corner of Washington Street and Church Avenue, where excavations yielded large samples of everyday items discarded and lost by residents of the lot.

The artifacts were brought back to the Desert Archaeology laboratory, washed, labeled, and given to analysts for identification. Each item was examined, and descriptive and interpretive information, which included such things as each item's form and function, were entered into a computer database. Some artifacts had maker's marks that could be researched in collector's guides, allowing features to be dated. Other items provided an understanding—not available in documents—of the lives of the people who lived on Lot 1.

Feature 376, Borrow Pit

A total of 9,279 artifacts was found in the excavated portion of this borrow pit. The base of the pit contained items from the late 1870s, while the uppermost portion of the pit had artifacts from the 1890s. As is typical of most historic-era sites in southern Arizona, architectural items and artifacts used to store, prepare, and serve food were most common (Table 12.2). At least five Mexican mixing and cooking bowls were represented by 34 fragments. Two pieces of yellowware bowls were also found. A pan, a lid to a large pot, and a pot handle were present. Food-service items included bowls, cups, saucers, plates, a brass tablespoon, a rice bowl, a shot glass, stemware, and two glass tumblers. Several pieces were decorated with a sponge-print design featuring pineapples and leaves (Figure 12.10). Elaborate serving dishes sometimes used in more affluent households were not present.

Food containers found in the pit included two lard buckets, 3,237 fragments of at least 36 tin cans, and two sauce bottle stoppers. The large number of tin cans reveals that the household residents who threw trash into the pit ate a lot of canned foods. The 1897 Sears, Roebuck, and Company catalogue sold a wide variety of canned fruits, vegetables, and meats. Apricots in heavy syrup cost 14 cents a can, as did Bartlett pears. A 1-pound can of corned beef sold for 12 cents, while a 5-pound pail of lard sold for 40 cents. Residents could purchase canned foods from local dry goods stores. Many things that could not be grown in Arizona, from pineapple to canned oysters, were readily available for purchase.

Alcoholic beverages were represented by 315 fragments of at least 10 beer, liquor, wine, and champagne bottles. Thirty-eight pieces of a Mexican ceramic canteen were found near the base of the pit.

Table 12.2. Number of artifacts from selected American Territorial period features at the Tucson Presidio, AZ BB:13:13 (ASM).

	Features			
	359 and 437	360	376	408
Kitchen				
Kitchen	5	2	4	2
Food preparation	3	1	47	4
Food service	208	222	716	445
Food storage	1,564	788	3,248	1,306
Alcoholic beverage	123	101	319	107
Beverage	26	44	42	34
Bottle glass	1,132	604	945	548
Native American ceramics	397	47	1,319	86
Architectural				
Architectural	-	7	1	4
Window glass	212	347	185	39
Nails	1,210	943	1,057	678
Construction hardware	19	10	3	5
Door parts	1	-	2	-
Materials	23	8	2	17
Electrical related	4	4	1	11
Utility	-	2	1	-
Furniture				
Furniture	2	22	7	181
Hardware	-	-	1	-
Lighting	14	15	6	4
Cleaning	-	-	4	3
Arms				
Ammunition	8	84	19	18
Gun part	-	-	1	-
Clothing				
Apparel	82	75	237	55
Accessories	8	3	6	1
Making/Repair	4	7	2	1
Personal				
Personal	15	2	5	2
Coins/Tokens	3	2	2	2
Hygiene	100	49	64	32
Tobacco	2	2	5	2
Religious	-	-	-	1
Medicine	4	27	4	39
Activities				
Activities	5	1	4	25
Tools	1	-	2	1
Toys	9	8	27	15
Miscellaneous hardware	33	49	79	55
Communication	8	13	68	13

Table 12.2. Continued.

	Features			
	359 and 437	360	376	408
Paint	2	-	1	1
Nuts and bolts	-	1	4	1
Transportation				
Transportation	7	4	7	1
Stable items	3	4	67	7
Mechanical	-	6	8	34
Unidentified				
Unidentified	480	232	757	523
Total	5,717	3,736	9,279	4,303

This unique container was made in two halves and fused together in the kiln.

Architectural artifacts found in the pit included 1,057 nail fragments, 185 pieces of window glass, wire, brick, and two door locks. Many of the nails may have come from packing crates or other non-architectural uses.

Pieces of furniture are not often found at archaeological sites, either because furniture was rarely discarded, or because, once discarded, its components become unrecognizable (nails) or decompose (wood and cloth). Four porcelain drawer pulls, a candlestick, and a clock were represented by artifacts found in the large pit. These items were probably tossed away when they broke and were unreparable. A decorative English bowl with a fish peering from inside was an unusual find (Figure 12.11).

Nineteen pieces of ammunition were found. These were mostly brass cartridge casings in a number of sizes, indicating residents once owned weap-

ons of varying calibers. All of the cartridges were heavily corroded, making it impossible to read any markings they may have had.

Clothing artifacts included: 3 suspender buckles, 73 buttons, an eye hook, 4 eyelets, a garter snap, several hooks and eyes, 21 brass and iron rivets, blue yarn, and 128 fragments from at least 13 shoes. The shoes were for both adults and children; they were very poorly preserved. A brass thimble, a safety pin, and a straight pin were found in the pit, a reminder that people frequently sewed and mended their own clothing. Four jewelry fragments including several brass hoop earrings and a blue bead were recovered.



Figure 12.10. A sponge-printed plate from an American Territorial period borrow pit, Feature 376 (FN 2594) at the Tucson Presidio, AZ BB:13:13 (ASM).



Figure 12.11. A decorative English bowl with a fish design found in an American Territorial period borrow pit, Feature 376 (FN 2523) at the Tucson Presidio, AZ BB:13:13 (ASM).

Personal artifacts included a couple of umbrella parts, a bone-handled penknife, and two corroded copper coins. Hygiene artifacts were 44 fragments from a plain whiteware washbasin, 16 pieces from at least two combs, and a bone toothbrush. Pieces from at least three medicine bottles were also recovered.

Three tobacco or snuff cans were found in the feature, along with two fragments of clay pipes. Most of the men living in Tucson during the American Territorial period probably used tobacco, either smoking it, or as “chew” or snuff. While pipe smoking was popular in other areas, cigarettes and cigars were favored in late nineteenth century Tucson. A bar tab for Solomon Warner survives, and shows that cigars cost 50 cents each in the 1870s.

Activity artifacts found in the pit included a paint can, a bucket, tool handles, 10 washers, 4 bolts, a lead sinker, 2 wheels, and a number of pieces of hardware. Fragments of school slates were common, with 38 pieces collected. Eighteen pencil leads and eight fragments from glass or stoneware ink bottles indicate the people who discarded trash into the pit were literate—a skill that was becoming increasingly widespread.

The toys found in the pit suggest that both boys and girls lived in the households that contributed trash to the pit. The items included two ceramic and one polychrome glass marble. Five fragments of doll dishes, including one made in Mexico, were probably used by little girls having tea parties. The 19 doll fragments were mostly from inexpensive heads and limbs that were once attached to cloth bodies. Two complete heads were found, both with black hair and blue eyes. Among the other pieces were a pair of legs with green shoes.

Transportation artifacts included five railroad spikes, wagon parts, five horseshoes, many harness buckles and rings, and a chain. The families who contributed refuse to the pit likely owned at least one horse.

Feature 359 and 437, Borrow Pit

Only a small portion of a large American Territorial period borrow pit in the center of the lot was excavated. Even this small exposure resulted in the recovery of 5,717 artifacts (see Table 12.2). Datable items suggest the pit was filled between the late 1880s and the early 1900s, probably by the earliest residents of the nearby boarding house. Three fragments of a Mexican mixing bowl were in the pit. Food-service items included bowls, cups, a glass lid, plates, several Chinese rice bowls, saucers, a goblet or wine glass, and a shot glass.

Food containers included 1,544 fragments from at least 11 tin cans. Nine baby food bottles and a spice jar were also recovered from the pit, as was a frag-

ment of a gray stoneware crock and a fragment of a Chinese stoneware jar that once held imported foods or sauces.

Alcoholic beverage bottles were represented by 123 fragments of five beer, champagne, and liquor bottles. Several fragments of an aqua beer or soda bottle and one crown cap were also collected.

Architectural items found in the excavated portion of the pit included 1,210 nail fragments, 168 window glass pieces, wire, and a door lock. Several lamp burner pieces and lamp chimney fragments indicate residents of the boarding house lit their rooms with kerosene lamps. The overall number was surprisingly low, when compared with other nearby sites. The internal workings of a clock were also found.

A bullet and three cartridges were in the pit. Clothing artifacts found in the pit included a silver-plated belt buckle with a design etched around its edge, a brass suspender buckle, 36 buttons, a garter snap, a pair of brass rivets, and 30 fragments of shoe leather. Clothing maintenance items found in this feature consisted of pieces of four brass safety pins. Accessories found in the pit included a clear bead, a pin, a pair of brass rings, a small jingle bell, a piece of decorative brass, perhaps from a coin purse, and two hairpins.

Personal artifacts included a small brass chain, pieces of a pair of spectacles, a dime, and two keys. Hygiene artifacts included pieces of a wash basin, a yellowware children’s chamber pot, and a whiteware pitcher with a purple transfer-print foliage design. Pieces from two bone toothbrushes were collected, as was a fragment from a kaolin pipe.

Several medicine bottles were present in the pit. One was labeled TRASK’S MAGNETIC OINTMENT. This was advertised as “The Discovery of the Age, a remedy for internal and external pain, nervous headaches, inflammation of the bowels, affections of the spine, in face or breast, burns, fever sores...” (Fike 1987:198). It is doubtful the substance provided any of these benefits. Another bottle was labeled DR. KING’S NEW DISCOVERY FOR CONSUMPTION. This was a medicine that was supposed to cure “any trouble of the throat, chest and lungs” and was touted as “the only sure cure for consumption in the world” (Adams 1906:46). Studies by government chemists in the early 1900s revealed that the bottled substance contained morphine and chloroform, neither of which were particularly helpful to a person with tuberculosis. One investigator noted that the “medicine” was a “combination ... admirably designed to shorten [the] life of any consumptive who takes it steadily” (Adams 1906:45-47).

A handful of Chinese artifacts were found in the borrow pit, including a pair of Chinese coins and a piece from an opium pipe. A Chinese man probably

lived at the boarding house at one time, perhaps working as a servant.

Activity artifacts included 2 paintbrush handles, 2 bolts, 3 washers, a pulley, 2 screws, and other hardware. Toys found in the pit included 3 doll fragments (Figure 12.12), a toy cat, 3 parts of gaming pieces, a lead wagon wheel, and 1 ceramic and 1 glass marble. A blue poker chip suggests poker or some other card game was played at the boarding house, and two harmonicas may have been used by either adults or children. Four pieces of school slate, two pencils, and a piece from a brown stoneware ink bottle were also found in the pit.

Transportation items were limited to three railroad spikes, two horseshoes, and a wagon part.

Feature 360, Outhouse

This early twentieth century outhouse, which was partially looted in the 1950s, yielded 3,736 artifacts in the excavated portion (see Table 12.2). An unknown number of artifacts were removed from the feature by the earlier bottle hunters. The outhouse had been filled in the 1900s to the early 1920s. A piece from a Mexican glazed bowl was the only food preparation artifact found. Food-service artifacts included a Japanese bowl, several decal-printed bowls, cups, a pitcher, a platter, 1 piece from a Chinese rice bowl, 5 saucers, 3 tumblers, and a piece of stemware.

Food containers from the feature included two wide-mouthed food jars, 777 fragments from at least 10 cans, a hole-in-cap milk can, and a canning jar and lid. Beer, champagne, and liquor bottle fragments totaled 101, representing at least 15 different bottles. Five aqua beer or soda bottles were present, as were 32 crown cap closures. Soda and beer bottles were probably returned for a deposit, which would explain why there were more crown caps than bottles.

Architectural artifacts from the outhouse included 943 nails, 347 pieces of window glass, brick, wire, and 2 hinges. An electrical insulator found in the pit indicates the boarding house had electricity by the 1910s. Furniture-related items included a decorative bowl (Figure 12.13), 14 fragments of lamp chimneys, and a chandelier or lamp fob. A lead bullet and 83 cartridges were also collected from the feature.

Clothing artifacts found in the pit included 5 buckles from suspenders and shoes, 29 buttons, 2 white milk glass collar buttons, an eye hook, 12 eyelets, cloth, 10 garter snaps, and 4 pieces of shoe

leather. Accessories included a pinkish-orange bead and two jewelry fragments. Two brass straight pins and pieces from four safety pins were found in the feature.

A Boy Scout shoe token from 1919 and a 1942 penny were found in the pit. The penny was dropped in when the upper portion of the pit was filled in. Several VASELINE and mentholatum bottles and a fragmentary bottle that once contained worm medicine



Figure 12.12. Bisque porcelain children's toys recovered from an American Territorial borrow pit, Feature 359 (FN 2678) at the Tucson Presidio, AZ BB:13:13 (ASM).



Figure 12.13. A decorative bowl found in an American Territorial period well, Feature 360 (FN 2983 and FN 3024) at the Tucson Presidio, AZ BB:13:13 (ASM).

were found in the outhouse pit. A perfume bottle with a decorative stopper, a cosmetic jar, a chamber pot and pitcher, a bucket, and four combs were present. A bone toothbrush reveals a concern with dental hygiene. A clear eyeglass lens indicates the presence of a person who needed their sight corrected. A clay pipe was also found.

Seven fragments from two different porcelain-headed dolls and a stoneware marble were found in the outhouse pit. Other activity artifacts included miscellaneous hardware, 6 screws, 3 staples, 3 washers, 1 bolt, and copper wire. A clear glass ink bottle, 2 pencil erasers, 6 pencil leads, and 3 pieces of school slate were also present.

Transportation artifacts found in the outhouse pit included two railroad spikes, several wagon parts, two horseshoes, a horseshoe nail, and a harness buckle.

Feature 408, Outhouse

The 4,403 artifacts from another outhouse pit, Feature 408 were generated by the residents of the boarding house (see Table 12.2). Datable items suggest the pit was filled between 1900 and 1910. Kitchen artifacts found in the pit included a pair of cooking pots and the handle from a third pot. Food-service items included bowls, a butter pat, a coffee pot, cups, serving dish lids, plates, a platter, pieces from two Chinese rice bowls, saucers, a salt or pepper shaker, a serving spoon, glass stemware, and pieces from a tureen.

Food containers found in the outhouse included several wide-mouth bottles that could have held olives or pickles, an olive oil bottle with a partially intact paper label, 1,289 fragments from at least 26 cans, a sardine tin, pieces from a brown stoneware crock, a fragment of a gray stoneware crock, and several stoppers. Alcoholic beverage bottles were represented by 107 fragments from at least nine bottles. These included beer, champagne, and several liquor bottles. Another 34 pieces from beverage bottles probably represent several soda bottles.

Architectural items from the outhouse pit included 678 nail fragments, 39 pieces of window glass, 3 hinges, and electrical wire. A complete kitchen sink was also pulled from the pit. A lightbulb and pieces of kerosene lamps suggest that, by the 1910s, electricity had been installed in the boarding house and residents were switching from the old-fashioned lamps to the brighter electric lights.

Eighteen pieces of ammunition were found in the outhouse; two were from a 22-caliber short rifle.

Clothing artifacts were common in the feature. These included 2 brass buckles; 3 brass suspender buckles, 1 with black and white cloth attached; 36 buttons; 3 eyelets; cloth; 4 garter snaps; and 3 poorly preserved leather shoes. A shoe polish bottle and a

pair of brass safety pins were found in the outhouse pit, as was a bottle of SPERM SEWING MACHINE OIL, presumably refined from sperm whale blubber. A small brass crucifix was recovered. This was the only religious artifact found in the American Territorial period features and probably indicates at least one resident of the boarding house was Catholic.

A Chinese coin and a token from a Los Angeles store were found. Hygiene artifacts included fragments from a wash basin, pitcher, and a chamber pot; a cologne bottle; a comb; and a ceramic toothpaste jar lid. Several medicine bottles were found in the outhouse pit. They included bottles labeled VASELINE, KIDD'S COUGH SYRUP, AYER'S CHERRY PECTORAL, PITCHERS CASTORIA, and DR. A. BOSCHEE'S GERMAN SYRUP. Castoria was a cod liver oil preparation often used as a laxative or as a nutritional supplement. The Kidd's and Ayer's products were cough medicines, with Ayer's also advertised "to cure colds, coughs, sore throat, asthma, bronchitis, hoarse" (Fike 1987:199).

Toys found in the excavated portion of the outhouse pit included eight ceramic marbles, six fragments from porcelain dolls, and a small porcelain toy teapot lid. Adult entertainment items included a tobacco tin and a clay pipe.

A kerosene can, a whetstone, a bracket, three bolts, and other miscellaneous hardware were found. Chalk, eight pieces of school slate, and parts from three pencils were also found. A carriage part, several pieces of horse harnesses, wagon parts, and a bicycle tire were transportation artifacts found in the outhouse.

Artifact Analysis

Functional

A common practice of historical archaeologists is to categorize artifacts into functional categories based on how the items were used, and then to examine how the percentages of these categories changed through time, or among households of differing ethnicity or income. The four American Territorial period features from Lot 1 of Block 181 yielding large sets of artifacts were studied in this manner. Feature 376 was the oldest, followed by Feature 359 and 437, then Feature 360, with Feature 408 the most recent feature (Table 12.3).

The kitchen and architectural categories typically represent the highest percentages of artifacts, and this proved to be the case at Lot 1 of Block 181. The kitchen artifacts from Feature 376 comprised 72 percent of the items found in that borrow pit, with only 13 percent architectural items. Later features had proportionally fewer kitchen artifacts and more architectural

Table 12.3. Percentages of functional categories of artifacts from selected American Territorial period features at the Tucson Presidio, AZ BB:13:13 (ASM).

	Features			
	376 (1870s-1890s)	359 and 437 (1880s-1900s)	360 (1900s-1910s)	408 (1910s-1920s)
Kitchen	72	60	48	57
Architectural	13	26	35	17
Furniture	-	-	1	4
Arms	-	-	2	-
Clothing	3	2	2	1
Personal	1	4	2	2
Activities	2	1	2	3
Transportation	1	-	-	1
Unidentified	8	8	6	12

items. The smaller number of architectural artifacts in Feature 376 is explained by the fact that the earliest house on the block was built of adobe and probably had a traditional flat roof and tamped-earth floor. As a result, the structure had few nails and perhaps only one or two glass windows. As the railroad brought in more lumber and pre-manufactured windows, the costs of these goods rapidly declined. Later structures on the block incorporated new building materials. This change is seen by examining the changing percentages of nails, which increased from 11 percent of the artifacts in Feature 376, to 25 percent in the Feature 360 outhouse.

Other artifact categories had much smaller numbers of items, and no trends are visible. There were more furniture artifacts in the Feature 408 outhouse, but most of these items were springs from a single mattress. In general, clothing, personal, and activities artifacts each represented about 2 percent of the items from individual features. The overall frequency of these items did not change through time because they were small, easily imported, and were probably discarded at the same rate as they were worn out, used up, or lost.

Ceramics

Styles changed in the past, just like they do today. Photographs, magazines, newspapers, and catalogues all document these changes at national, regional, and local levels. Artifacts, especially ceramics, can show if residents of a particular household were closely following consumer trends.

The types of kitchen (service dishes and crockery) and hygiene (pitchers, basins, and chamberpots) ceramics found in the four features are summarized in Table 12.4.

The most notable trend is the decline in frequency of Native American ceramics. Of the ceramics found in the borrow pit Feature 376, about 60 percent were manufactured by local Papago (Tohono O'odham) potters. By the 1910s-1920s, the ceramics discarded into outhouse Feature 408 included only 15 percent Papago sherds.

The decline in the amount of Native American pottery can be attributed to several factors. The construction of water lines through the neighborhood and the installation of running water meant that *ollas* were no longer needed to store water. The construction of the boarding house in the 1890s brought new residents to the lot, mostly Euro-Americans who typically used less Native American pottery than their Mexican neighbors. Finally, the two borrow pits contained dirt swept up from surrounding areas, which included soil containing prehistoric and presidio-occupation artifacts. Much of the Native American pottery found in the two large pits, as well as the Mexican majolica sherds recovered, had been originally discarded long before the residents of the lots began to use the borrow pits as a place for their trash.

Hard-paste earthenware ceramics, also known as whitewares, were favored by people living on the block in the late nineteenth and early twentieth centuries. Vessels of this durable type of ceramic were used to serve meals on. Bathroom sets—wash basins, pitchers, and chamber pots—were also present. Many of the vessels were undecorated and therefore inexpensive. Undecorated sherds represented 87 percent of the whiteware fragments recovered from Feature 360, 76 percent found in Feature 376 and Feature 408, but only 40 percent in Feature 359/437. Most of the meals eaten at the old adobe house and the later boarding house were clearly served on plain dishes.

Table 12.4. Number of ceramic sherds of different decorative types from selected American Territorial period features at the Tucson Presidio, AZ BB:13:13 (ASM).

	Features			
	376 (1870s-1890s)	359 and 437 (1880s-1890s)	360 (1900s-1910s)	408 (1910s-1920s)
Whiteware				
Plain	493	76	212	307
Transfer-print and flow blue	26	89	8	39
Decal	-	10	10	31
Annular/Sponge	45	3	2	2
Hand-painted	69	10	4	4
Gilt	-	-	4	16
Tinted	-	2	2	3
Mocha	4	-	-	-
Shell edged	2	-	-	-
Solid color	1	-	1	-
Majolica				
Mexican	123	14	2	2
European	-	-	-	-
Porcelain				
Plain	1	19	13	19
Hand-painted	-	9	36	20
Decal	-	16	-	9
Tinted	1	2	4	1
Gilt	-	4	2	7
Flashed	-	-	1	-
Chinese	15	7	1	2
Japanese	-	4	-	1
Other				
Yellowware	3	33	2	-
Stoneware	1	1	1	4
Mexican glazed	77	3	1	1
Chinese earthenware	-	1	-	-
Native American	1,319	397	47	86
Total	2,180	700	353	554

Residents also had a small number of decorated vessels, however. The earliest occupants, as shown by sherds found in Feature 376, had a few dishes with brightly colored annular bands on their outside, as well as some dishes with sponge-stamped designs. Hand-painted gaudy dutch or peasantware vessels were also common. A small number of transfer-print dishes bore scenes of castles and cathedrals in bright colors. These dishes added a splash of color. The decorated vessels were often smaller bowls and cups and may have been favored possessions.

The people who discarded trash into Feature 359/437 in the 1890s tossed out many fragments from

transfer-printed dishes, but were also beginning to use decal-printed vessels. The decal-print method became popular around the turn of the nineteenth century and allowed for multicolored vessels. Consumers in Tucson quickly purchased dishes from local stores sporting pink and yellow roses surrounded by green foliage. As old-fashioned annular, sponge-, and hand-painted ceramic vessels broke, they were increasingly replaced with the decal-printed vessels.

After 1900, these trends continued, as shown by dishes found in Features 360 and 408. A small number have gilt decoration, which became more common

in the early 1900s. The end of the Victorian era saw a movement away from profuse decoration, and white vessels with thin gilt bands close to the rim may mark this desire for greater simplicity. Residents of Lot 1 also used more porcelain dishes in the 1890s, most of which were decorated in various ways.

The Telles and other families living on the lot in the 1870s and 1880s, and the residents of the boarding house from the 1890s onward, spent little money on dishes for their cupboards. The overall impression when examining the ceramics found at the site is that residents bought vessels piecemeal, one at a time at local stores, rather than complete sets. Examination of all the decorated vessels revealed only a handful with matching patterns. Most vessels were inexpensive, plain whitewares, with a smaller amount of decorated vessels. However, these included some examples bearing the latest designs available in local stores. While residents were relatively poor, they did attempt to keep up with the newest styles and have a few pretty dishes to enliven their meals.

Ethnicity

Documents suggest a Mexican family, the Telles, were the initial occupants of Lot 1 and that Euro-Americans later occupied the boarding house. Do the artifacts found at the site support the surviving records?

The vast majority of American Territorial period artifacts found at the site were created in factories in the eastern United States or Europe. By the time the Telles family lived on the block in the 1870s, large amounts of American and European goods were brought from southern California to Tucson via freight wagons. This trend accelerated when the railroad arrived, with the variety of American and European goods increasing and their prices decreasing. A visitor to a Mexican-American household in Tucson in the 1880s would have found relatively few distinctly Mexican artifacts, and many of these would have been perishable materials—clothing, leather-goods, and foodstuffs—that leave little evidence in the archaeological record.

Some artifacts found on Lot 1 of Block 181 suggest persons of differing ethnicity once lived there. Small numbers of artifacts from Mexico, China, and from the Tucson area were found during the excavations. As noted above, Native American pottery was recovered from the two borrow pits and two outhouses. It was most common in Feature 376, which dated from the 1870s-1890s, and probably contained trash discarded by the Telles family and other Mexican-American households. This hypothesis is strengthened by the presence of pieces of at least eight ceramic vessels made in Mexico—large serving or cooking bowls and a reconstructible canteen. The

other three features had only a handful of Mexican sherds. Mexican ceramics are uncommon at contemporary sites occupied by Euro-American households.

Chinese artifacts were uncommon at the site. Those found included fragments of rice bowls, a piece from a food jar, and a fragment from an opium pipe. They may signal the presence of at least one Chinese person living at the site, perhaps working as a servant at the boarding house. Euro-American and Mexican-American households rarely used Chinese ceramics and would not have used Chinese foods or smoked opium. The overall low number of Chinese artifacts also raises the possibility that some of the artifacts were brought in with dirt used to fill existing holes.

The artifacts found in the features suggest the residents of the block switched from primarily Mexican-American to Euro-American in the 1880s or 1890s, probably when the single family house was demolished and the boarding house was constructed. Documents such as deeds, census records, and city directories support this conclusion. None of these documents indicate Chinese men lived on the block, although the presence of a handful of Chinese artifacts suggests one or more may have been present.

ARTIFACTS FROM THE CHINESE WELL

Trash deposited during the 1890s in the Chinese well, Feature 4 at the Mission locus of the Clearwater site, included 2,388 artifacts manufactured in China, the United States, Mexico, or Europe, as well as 664 pieces of locally made Native American ceramics, most of which were prehistoric sherds incidentally included in the fill. During analysis, an attempt was made to identify how each item was used and to determine the minimum number of each type of artifact present in the well (Table 12.5). It was not possible to identify everything found; some artifacts, such as tin cans, were very poorly preserved. Iron objects were often too rusty to be identified.

Kitchen

Artifacts used to store, prepare, and serve food are usually the most common functional category found at historic-era sites in southern Arizona. This was the case for the well, where kitchen artifacts represented approximately 59 percent of the artifacts, excluding Native American ceramics.

Like most recent immigrants, the Chinese who came to Tucson in the 1880s wished to recreate the food customs they had known in China. Not surprisingly, many of the kitchen-related artifacts were Chinese in origin and showed that the farmers purchased

Table 12.5. The number of fragments and minimum number of artifacts from the Chinese well, Feature 4, the Clearwater site, AZ BB:13:6 (ASM).

Artifact	Number of Fragments	Minimum Number
Kitchen		
Mexican glazed bowl	35	5
Wok	1	1
Iron pot	6	1
Pan	3	1
Chinese bowl	21	1
Chinese sauce dish	2	1
Chinese soup spoon	18	6
Chinese wine cup	5	3
Chinese teapot and lid	12	1
Celadon rice bowl	25	3
Bamboo rice bowl	14	1
Brass oval bowl	1	1
Tinware plate	3	1
Whiteware bowl	20	3
Whiteware butter pat	1	1
Whiteware cup	2	1
Glass goblet	4	2
Tumbler	4	2
Miscellaneous small vessel fragments	6	0
Bottle cork	2	2
Glass food bottles	113	3
Tin cans	112	5
Chinese stoneware jars	302	21
Chinese stoneware fragments	210	0
Chinese jar lids	17	7
Alcoholic beverage bottles	271	18
Chinese alcoholic beverage bottle	5	1
Beverage bottle	7	2
Unidentified bottle glass	142	5
Barrel hoop	25	1
Architecture		
Fired brick	1	1
Adobe bricks	8	4
Wall plaster	3	1
Window glass	97	1
Nails	132	132
Spikes	5	5
Bracket	1	1
Hinge	2	1

Table 12.5. Continued.

Artifact	Number of Fragments	Minimum Number
Furniture		
Lamp chimneys	395	5
Lamp parts	3	3
Arms and Ammunition		
Cartridge shells	20	20
Clothing		
Buckle	1	1
Shoe buckle	1	1
Buttons	50	50
Eyelet and rivets	34	28
Shoe fragments	27	6
Washtub	5	1
Safety pin	1	1
Personal		
Coin	1	1
Chinese coins	3	3
Toothpaste jar	1	1
Toothbrushes	7	3
Opium lamp	4	2
Opium pipe bowls	2	2
Chinese medicine bottle	4	3
Medicine bottle	1	1
Vaseline jar	1	1
Activity		
Bucket	52	2
Large rectangular container	48	4
Honing stone	1	1
Fan tan gaming piece	6	6
Bolt	1	1
Washer	2	2
Iron pipe	2	2
Machinery part	1	1
Unidentified		
Unidentified	76	32

imported foodstuffs, preparing them in traditional ways, and served foods and beverages in the same kinds of vessels used in their homeland.

Food preparation artifacts included a complete wok (Figure 12.14), a deep pot, a pan, and fragments from four Mexican bowls (Figure 12.15). The wok was

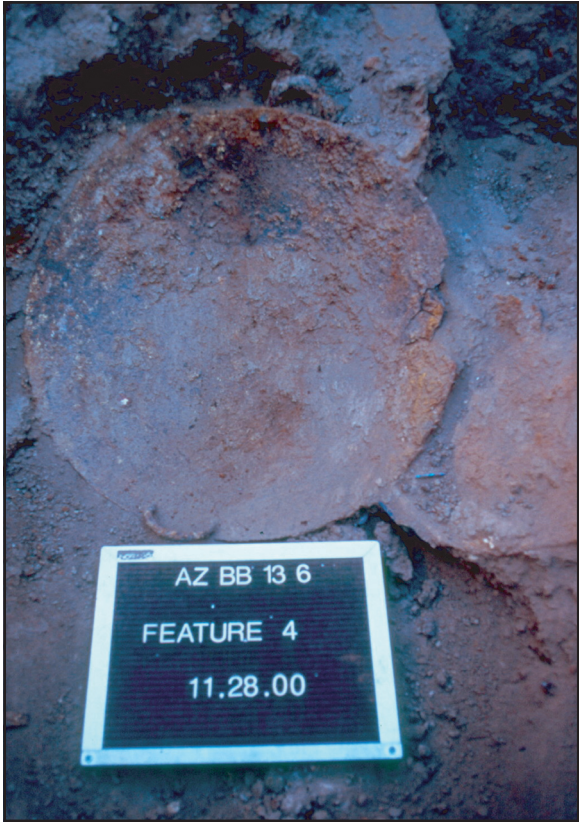


Figure 12.14. An iron wok found in the Chinese well, Feature 4, at the Clearwater site, AZ BB:13:6 (ASM).

found lying on its side, pressed up against the wall of the well. It had two looped iron handles soldered to the outside of its large iron bowl. It appeared very similar to modern woks. The wok did not appear to be broken, and it is unknown why it would have been discarded. Similarly, the pot and pan did not appear damaged or worn out. These items may have been discarded when households changed or when their owners died.

Four ceramic bowls found in the well were made from coarse earthenware; these were imported from Mexico. Each had a rounded strap handle attached to one side of the rim, with the opposite side having a series of fingerprint indentations, perhaps to help when handling the bowl. The interiors were glazed green and brown. Only the upper rims of the exteriors were glazed, and several of these bowls had soot on their exteriors, indicating they were used to cook or warm foods directly over fires.

The nearby Carrillo House had an indoor corner fireplace, and some cooking likely occurred there. An outdoor hearth or brazier was probably set up in the summer, and cooking was done outside, similar to what happened at the households of local Mexican-Americans.



Figure 12.15. A Mexican earthenware bowl found in the Chinese well, Feature 4 (FN 5450, FN 6303, and FN 6317) at the Clearwater site, AZ BB:13:6 (ASM).

Dishes used to serve meals were found in relatively large numbers in the well. In China, four ceramic forms typically saw daily use: a teacup, a rice-soup bowl, a saucer, and a soup spoon (Lister and Lister 1989:48). Excavations at the Spruce Street Chinese gardeners' compound and the Tucson Urban Renewal project indicated that saucers were rarely used by local Chinese and that teacups were also rare (Lister and Lister 1989:48; Thiel 1997).

Four different styles of Chinese ceramic tablewares were recovered. All would have been used by Chinese commoners during the closing years of the Qing Dynasty, which lasted from 1644 to 1911. These dishes were exported from China and transported across the Pacific Ocean in the holds of ships. From the west coast of the United States, they were carried to Tucson by Chinese immigrants, or they were imported and sold in local stores.

The most common style found in the well was Celadon or Winter Green (*ch'ing*), which has a light green glaze on the exterior and either a white or lighter green glaze on the interior. In China, this style of porcelain was mold-made, mass-produced, and marketed to commoners. In Tucson, Winter Green vessels have been found in a variety of forms, including rice bowls, teacups, and soup spoons (Lister and Lister 1989:50).

Four Flowers or Four Seasons (*szu hua*) vessels are mold-made, porcelain, and have four hand-painted floral designs on a light green or white background. Four Flowers vessels come in a wider variety of forms, including different-sized bowls and cups, plates, soup spoons, saucers, sauce dishes, and larger serving dishes (Lister and Lister 1989:50).

Bamboo (*chu hua*) vessels, also known as Swatow, Three Circles and a Dragonfly, or Three Circles and

Longevity, have a light blue or blue-gray glaze over a coarse gray stoneware body and they are decorated with dark blue or dark green hand-painted designs. This style is found on rice bowls and a saucer in Tucson (Lister and Lister 1989:49-50).

Finally, a handful of plain white vessels were present. Undecorated porcelain vessels were not found in the excavations at Spruce Street or during the Tucson Urban Renewal project.

The serving vessels found in the well were mainly manufactured in China. Rice bowls (*fan wan*) were represented by two Bamboo and two Celadon examples (Figure 12.16). These bowls would have held sauces or stews, which would have been eaten with the five Four Seasons and one Celadon soup spoons found in the well. A large Four Seasons serving bowl would have conveyed food to the dining area.

The Chinese often seasoned meals with imported sauces and spices. Two small sauce bowls—one decorated in the Four Seasons pattern and one small, plain white example—were found (Figure 12.17).

A plain white teapot had a brass handle and a white lid. The spout curved elegantly outward and may have been used to pour tea into the two Celadon and one Four Flowers cups. These cups could also have been used to hold wine or liquor.

A handful of ceramic vessels manufactured in Europe were found in the well. A butter pat and a small round bowl may have been substitutes for sauce dishes. A larger oval bowl was probably used as a small platter. A plain white cup, missing its handle, was found, as were fragments of another plain dish. Two glass goblets and fragments of one or two glass tumblers were also found. Small fragments of two other dishes, a majolica plate and a flow blue plate, probably represent vessels used by the Gallardo or Carrillo families prior to the arrival of the Chinese farmers.

Chinese ceramic food and beverage containers were also common. Unbroken Chinese sauce jugs were recovered from the well. The jugs were similar to the catsup bottles of today; that is, the gardeners were more interested in the contents than in the container. These somewhat sturdy ceramic vessels held foods and beverages prepared in China, shipped in boats across the Pacific, and then sent by train to local Chinese grocery stores. Farmers probably traded fresh produce for a variety of imported foodstuffs.



Figure 12.16. Celadon and Bamboo rice bowls from the Chinese well at the Clearwater site, AZ BB:13:6 (ASM). Left: Feature 4 (FN 5137 and FN 5311); right: Feature 4 (FN 5311, FN 6418, and FN 6461).



Figure 12.17. Four Seasons sauce bowl from the Chinese well, Feature 4 (FN 5308) at the Clearwater site, AZ BB:13:6 (ASM).

Sixteen spouted jars (*Nga Hu*) once held soy sauce, black vinegar, or peanut oil (Yang and Hellmann 1996). They have a small spout projecting from one side and a narrow opening at the top that would have been closed with a cork or wooden stopper. The spout was also sealed with a plug of clay (Lister and Lister 1989:40).

Six wide-mouthed jars (*Fut How Nga Peng*) of varying sizes once held tofu, sweet bean paste, beans, pickled turnips, cabbage, shrimp paste, sugar, or condiments (Yang and Hellmann 1996) (Figure 12.18). Most of the jars had brown glaze on their interior and exterior, although the exterior base was usually



Figure 12.18. Food and sauce jars from the Chinese well at Clearwater, AZ BB:13:6 (ASM). All are from Feature 4: lid, FN 6303; small brown jar, FN 6303 and 5450; green jar, FN 6303 and 6359; large brown jar, FN 5121.

unglazed. One smaller jar has a lovely green glaze on the outside. Seven glazed and unglazed jar lids once capped these food containers, originally sealed in place with white clay or some other substance (Lister and Lister 1989:40-41).

The Chinese farmers also purchased some foods bottled and canned in the United States or elsewhere. A clear, wide-mouthed jar; a light blue pickle or olive bottle; and a blue peppersauce bottle were found in the well. At least four tin cans were also present. The number was probably much higher originally, but iron artifacts were extremely poorly preserved in the well, preventing an accurate count of the number of cans present.

Alcoholic beverages were regularly consumed by the Chinese gardeners. Two Chinese brown stoneware liquor bottles (*Tsao Tsun*) were also recovered (Yang and Hellmann 1996). These bottles are glazed on the interior and most of the exterior and have a narrow opening that could be plugged with a cork or stopper. Much more common were liquor and beer bottles manufactured and filled in the United States or Europe. These glass bottles can be identified due to their distinctive shapes, types of top or finish present, and, in some cases, by the presence of a kick-up base. Eight brown glass beer or liquor bottles, one clear glass picnic flask, and 10 olive green bottles, which would have held wine or champagne, were present in the well. Two of the brown beer bottles were marked "F. H. G. W." on their bases. This mark was from the Frederick Hampson Glass Works of England and was made after 1880 (Toulouse 1971:202).

One of the olive green bottles was marked "L. B. S. 5" and probably dates from 1880 to 1900 (Toulouse 1971:319-320). Work during the Tucson Urban Renewal project also indicated that the urban Chinese drank more American alcoholic beverages, with imported spirits probably reserved for special occasions (Lister and Lister 1989:77-79).

The Chinese farmers obtained water from the well before it fell out of use, and they probably got water from a nearby canal in the 1890s. Water was probably stored in large tinned containers or in wooden barrels. A large barrel hoop found in the well may have originated from one such barrel used to hold well or rain water. Excavations at the gardeners' compound beneath Spruce Street resulted in the discovery of two water barrels partially set into the ground (Thiel 1997).

The farmers' Mexican-American and Euro-American neighbors stored water in large *ollas* made by the local Tohono

O'odham. However, the Chinese farmers who lived on the Carrillo property do not appear to have followed this custom. Although 664 Native American sherds were found in the well, none were reconstructible, and many of the sherds appear to be small pieces that were incidentally included in the dirt that filled the well.

The kitchen category also includes unidentified bottle glass; 149 pieces were recovered from the well. Some of this glass probably came from bottles and jars that once held beverages and foods, but some may have originated from bottles that held nonfood substances, such as medicines or oil.

Architectural

Architectural artifacts are those used to build, maintain, and illuminate structures. They are commonly found in historic-era features in southern Arizona, and the Chinese well was no exception. Building materials were represented by 1 fired brick, 8 fragments from four adobe bricks, and 2 pieces of wall plaster. At least one window pane was found, broken into 97 pieces. Nails are usually the most common architectural artifact, and 132 nails and five spikes were found in the well. However, some of these could have come from packing crates, furniture, or equipment such as wagons. It is impossible to differentiate nails that were used for these different purposes. A bracket and two pieces from a hinge were also found.

Some of these artifacts may have come from the Carrillo House, discarded as items wore out or repairs were made. The Carrillo House, in which the Chinese men probably lived, was extensively documented by Frederick Nichols of the Historic American Buildings Survey in 1939. Built in the late 1860s, the home had two rooms—a kitchen and a living room that was probably also used as a bedroom. Cooking may have been done inside the kitchen or on outside hearths during the summer. Likewise, the Chinese men probably slept outside during the summer, a common practice in Tucson until the 1920s, when evaporative cooling was invented and became widely adopted.

The Chinese men used kerosene lamps to provide light at night. Fragile lamp chimneys often broke, and 395 fragments were collected, representing a minimum of five individual chimneys. Three brass burner fragments were also found. While both electricity (used for lighting) and telephone service were present in the 1880s in Tucson, the farmers probably did not have these luxuries. In contrast, early Tucson City Directories suggest that the urban Chinese storekeepers and laundries had installed these conveniences soon after they became available.

Arms and Ammunition

Newspaper accounts indicate Chinese residents of Tucson frequently carried firearms. Many merchants acquired pistols and rifles to protect their stores from robbery. Other Chinese men may have carried them for personal protection, a necessity due to the violence common between the men of the Chinese and Mexican communities. The excavation of the Chinese gardeners' household beneath Spruce Street recovered ammunition from a variety of weapons, with at least nine different pistols and shotguns present (Thiel 1997).

Twenty cartridges were found in the well. Cartridges are often stamped with the name of the manufacturer on their heads. Unfortunately, most of the cartridges were too corroded to be read, and efforts to clean them proved futile. Eight of the cartridges were for a 32-gauge rifle, 1 was for a .22-short rimfire marked "H" manufactured by the Winchester Repeating Arms Company (Hull-Walski and Ayres 1989:138), 10 were for a 410-caliber shotgun, and 1 was for an 8-gauge shotgun.

At least four different firearms were used by the farmers. In addition to personal protection, the rifle and shotguns may have been used for hunting. The nearby Warner's Lake attracted a variety of wildfowl. Rabbits were also readily available in the desert, as well as in field areas.

Clothing

Chinese men arrived in the western United States with their traditional clothing, although they soon adopted western attire for several reasons. A primary reason was the desire to be less conspicuous. The U.S. government had passed the Chinese Exclusion Act in 1882 and renewed it in 1892. These laws required that the Chinese in the U.S. carry identification papers, issued by the government. Chinese without these documents could be detained and deported. The laws attempted to discourage immigration to the U.S., but Chinese men still arrived in search of opportunities. New arrivals quickly donned Western attire, which was unfamiliar to the men. Chinese inspectors, who were trained to spot and detain new immigrants, often recognized them due to the way they walked in their ill-fitting new wardrobes (Perkins 1976).

Intact clothing is rarely found in archaeological excavations because cloth and leather typically deteriorate. This can make it difficult to interpret the portions that survive. Fifty buttons were found in the well—3 made from bone, 2 from brass, 2 from iron, 5 from shell, and 22 from milk glass, including several with transfer-printed calico designs. Two buttons were made from round porcelain pieces set into brass shanks. Fourteen small, round-shanked brass buttons came from a traditional Chinese jacket. Identical buttons were found at the Spruce Street gardeners' compound (Thiel and Diehl 1997:69-71). The buttons from the well came in a range of sizes that would have been used for shirts, underwear, and even coats. Their variety suggests clothing was purchased piecemeal, with some items probably bought second-hand. The hard manual labor the farmers performed likely resulted in the need to replace worn clothing on a regular basis.

Twenty-seven pants' rivets were also found, as were two small brass buckles, perhaps used in a pair of suspenders. The rivets came from western-style denim pants, which were sturdy enough to sustain heavy use. Pieces from four or five leather shoes, including soles, heels, and six eyelets, indicate western footwear was used by the farmers.

Many of the Chinese men who settled in Tucson established laundries. This type of business required little overhead; a launderer merely had to purchase a washtub, scrub board, and soap to go into business. The Carleton Watkins photograph of Tucson, taken in April 1880 from A-Mountain, shows drying sheets and clothing draped over the bushes lining the canals. The Chinese gardeners may have traded produce for laundry services, including mending. Relatively few clothing maintenance artifacts were found in the well—only pieces of one tinned washtub and one safety pin were recovered.

Personal

Personal items are those likely to be owned and used by a single individual, sometimes for extended periods of time (such as a toothbrush), or sometimes for a short period (such as a coin).

Three poorly preserved Chinese coins were found in the well. These coins are round, have a square hole in the center, and have four Chinese characters on one face. Due to their corrosion, it was impossible to determine the dates of the coins. They were imported from China and were used extensively within the immigrant community for purchasing items within the Chinese community, for use in secret societies, and sometimes for gambling (Lister and Lister 1989:76). Coins were also found at the Spruce Street compound and several locations in downtown Tucson during the Tucson Urban Renewal project (Lister and Lister 1989:76; Thiel and Diehl 1997:73). One copper coin or token was also found, but it was illegible due to corrosion.

The Chinese farmers probably relied on traditional folk medicines when they had health problems. By 1900, there were three Chinese doctors and three druggists in Tucson, and local stores carried a variety of medicines. During the Tucson Urban Renewal project, a large number of medicinal products were collected from standing structures. Most of these were packaged in paper containers that leave no archaeological evidence. A few small, hand-blown glass bottles were also found during that earlier project, one of which had a paper label indicating it had contained medicine to relieve sunstroke, cholera, or fever (Lister and Lister 1989:69). More recent excavations resulted in the recovery of five of these bottles at the Spruce Street compound and five examples from a trash-filled borrow pit in the Barrio Libre. One of the latter bottles had a paper label revealing the small bottle had held an oil used for headaches, sinus problems, or mosquito bites (Thiel 2002:44; Thiel and Diehl 1997:94-95).

Two Chinese medicine bottles were present in the well. These bottles were hand-blown, with a narrow neck and a wider body. They are light blue and would have held a small amount of traditional medicine within a concavity running down the length of the bottle.

A few medicines manufactured in the U.S. were also used by the farmers. One small, hand-blown, light blue medicine bottle was unmarked, and its contents are unknown. Another small clear bottle was embossed "CHEESEBROUGH MFG CO. VASE-LINE" and once held a product used as a skin balm. Fragments from at least one other light blue medicine bottle were present in the well. The small number of Euro-American medicinal products in the well

contrasts strongly with contemporary households in Tucson, as Euro-Americans and Mexican-Americans purchased large numbers of over-the-counter and prescription medicines. The gardeners probably relied heavily on traditional Chinese medicines, including those packaged in paper that have left no trace.

Prior to the 1920s, few people in the U.S. regularly brushed their teeth. Poor dental hygiene contributed to early tooth loss, and dentists in Tucson had a thriving business pulling teeth and filling cavities. The Chinese farmers appear to have been more concerned with dental health than the average person living in the community. Three bone toothbrushes and one whiteware toothpaste container were discovered in the well. During the Tucson Urban Renewal project, bone-handled toothbrushes were frequently discovered in Chinese features (Lister and Lister 1989:106-107).

Activity

The activity category includes items used during work-related tasks or for recreation; recovered items are 58 fragments from two large tinned metal buckets. Several accounts of Chinese farmers note that they carried water to their crops using buckets hung from a shoulder yoke. The farmer would dip the buckets into water and walk down the rows of plants, tipping the water where necessary. The 48 fragments of four large square containers found in the well may have served a similar purpose.

While the farmers likely used a variety of tools in their daily tasks, none were found in the well. A honing stone was recovered, perhaps used to sharpen the knives used to cut and trim the produce before it was taken to market.

The gardeners found time to play games and gamble. Although playing cards were probably used in the household, none were found. Instead, two black and four white *fantan* gaming pieces were present in the well. These pieces, or counters, were used in gambling games. In one version of *fantan*, playing cards are placed in sets on a table, and if a person cannot play a card, they add a chip or piece to the pot. The winner, the first person to play all their cards, received the entire pot. "White pearls" were reported to have counted as 100 and "black pearls" as 500 (Lister and Lister 1989:75).

Alcohol and opium use were common among the overseas Chinese. As noted earlier, numerous alcoholic beverage bottles were found in the well. Social drinking allowed the farmers to relax after a hard day in the fields, as did the use of opium. A complete black ceramic opium pipe and a fragment from a second orange ceramic pipe indicate opium smoking occurred



Figure 12.19. Glass opium lamp from the well, Feature 4, disk (FN 5119); globe (FN 5289) at the Clearwater site, AZ BB: 13:6 (ASM).

within the farmers' household. Two glass opium lamps were also present (Figure 12.19). These lamps have a glass base, a glass reservoir, and a circular pierced glass disk that caps the reservoir. Two reservoirs and one disk were found in the well.

Opium was introduced into China by Western European countries in the 1700s in an effort to force China to trade with the outside world. At that time, opium was a legal drug, and like tobacco and alcohol, had very addictive qualities. It is manu-

factured from poppy seeds and is a thick viscous black material. A flame is placed near the material and, when heated, a smoke is produced, which was inhaled by the user. Smoking opium produced a muscle-relaxing effect, similar to drinking several beers. It also produced a feeling of calmness and could make a person feel drowsy.

The U.S. government made the smoking of opium illegal in 1881, although it remained legal in Tucson until 1906. Contemporary accounts suggest members of the Chinese community did not abuse alcohol or opium, but this did not stop the police from occasionally raiding opium dens (Thiel and Diehl 1997:97-98). These raids did not prevent the use of the substance; instead, it drove it underground. During the

Tucson Urban Renewal project, archaeologists occasionally found opium paraphernalia hidden from prying eyes above ceilings or in other places (Lister and Lister 1989:81).

Other activity artifacts included two bolts, two washers, and a piece of iron pipe. It is unknown how these particular items were used by the farmers.

For various reasons, including corrosion or fragmentation, 55 artifacts could not be identified. This is a rather small number compared with other historic-era sites. These items included 10 brass screws and bolts with iron washers attached, probably pieces from a larger item; 2 pieces of wood with brass caps; 2 pieces of carved bone that may be from an umbrella; 22 iron strips; 2 pieces of lead; and 7 fragments of hard rubber.

Summary

The artifacts from the Chinese well indicate the gardeners living at the Carrillo House during the 1890s attempted to maintain their accustomed lifestyle. The men ate meals flavored with Chinese sauces and containing imported foods, wore some traditional clothing, and smoked opium and played Chinese games in their spare time. They acquired and used many goods and foods made in the United States and Europe, although they retained a strong inclination to remain separate and not blend in with their neighbors.

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