

# Shadows of the Things That Have Been: An Analysis of and Identification Guide to Ceramics From the Chapel Complex Excavation of the San Diego Presidio

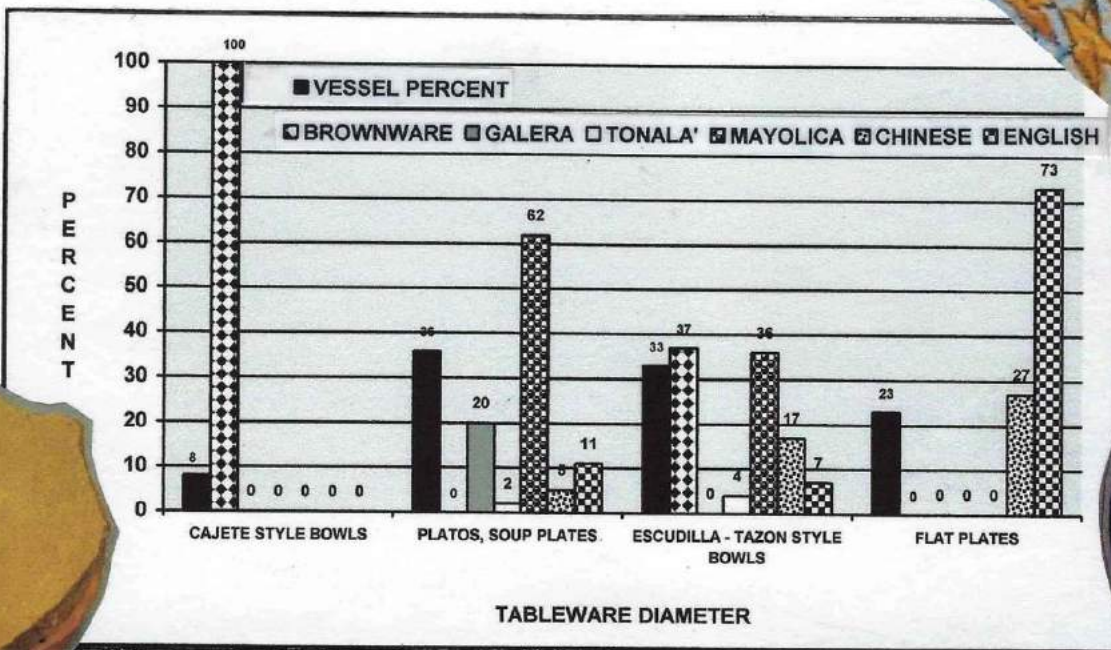
**Volume 5:  
Summary, Synthesis and Conclusions  
Appendix 1: Intrusive Ceramics, and  
Appendix 2: Mayolica Economic Scaling  
Calculations**

2024

Stephen R. Van Wormer

Susan D. Walter

Sue A. Wade



***Shadows of the Things That Have Been:  
An Analysis of and Guide to Ceramics of the San Diego Presidio***

Cover Design by Susan D. Walter

**About the Cover**

**Volume 5:**

Summary, Synthesis and Conclusions

Appendix 1: Intrusive Ceramics, and

Appendix 2: Mayolica Economic Scaling Calculations

All items shown are part of Volume 5.

Clockwise from the left is shown an intrusive Japanese *Phoenix* ware plate; a *Willow* platter in blue transferware, next the two doves from *Willow* enlarged; and conjectural illustrations of Mayolicas:

- Zuniga Polychrome
- San Diego Polychrome
- Tucson Polychrome
- Monterey Polychrome
- Puebla Blue on White
- Orange Band Polychrome
- San Elizario Polychrome

A snip (a piece I snipped from a photo or illustration showing specific information) of two birds on a blue transferware with gold overpainted plate of the pattern *Love Chase* is on the corner of a graph showing diameters of tableware types of the San Diego Presidio's Chapel Assemblage, and finally, the interior base of a Native American Brown Ware vessel.

These objects are not to scale for this cover.

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# SUMMARY, SYNTHESIS, AND CONCLUSIONS

So there isn't anything more to write about, and I sure am glad of it. If I had known how much trouble it would be to write a book, then I wouldn't have ever started writing it in the first place (Huckleberry Finn in *The Adventures of Huckleberry Finn* by Mark Twain 1884).

"I told you these were shadows of the things that have been," said the Ghost.

"That they are what they are, do not blame me!" (The Ghost of Christmas Past to Ebenezer Scrooge from *A Christmas Carol* by Charles Dickens 1843).

## Introduction

This chapter will summarize analysis results, synthesize the data, and provide interpretations. The summary includes a quantitative synopsis of ware types along with a review of the cultural and archaeological contexts. Data synthesis and interpretations includes an examination of the assemblage's composition and cross-site comparisons by ware type origins, vessel functions, the relationship between vessel forms and foodways, economic analysis, and statements on the presidio's ceramics associations with gender and cultural identity.

## Analysis Results Summary

### Quantitative Synopsis of Ware Types

Analysis of 27,818 sherds, weighing 151.333 kilos, resulted in identification of a minimum number of 1,294 vessels. These items represented diverse origins and included locally produced Native American Brown Ware, Mexican ceramics, Chinese ceramics, and English wares. Each of these categories included a variety of types. Mexican

ceramics were analyzed within an emic typology of Mexican folk vessel shapes and functions. A minimum of 248 items were identified. Ceramic types included Galera Ware, Mayolica, Tonalá Bruñida Ware, and Botija Olive Jars. Native American Brown Wares consisted of Tizon Brown Ware and Lower Colorado Buff Ware sherds. A minimum of 675 vessels were identified. Most represented traditional prehistoric forms. Through an examination of shape, rim diameter, and the presence or lack of soot or other evidence of burning they could be hypothetically equated to Mexican folk vessel shapes and functions. Chinese ceramics included Canton, Nanking, other Pavilion Landscape, and additional Blue-on-White Export Wares; Overglaze Enamels; Celadon Native Wares; Blue-on-White Native Wares; Unidentified Wares; and Chinese utilitarian brown glazed wares. They represented a minimum number of 118 vessels. English ceramic sherds represented a minimum of 253 vessels and included Undecorated Whitewares; Dipped, Banded, Mocha Ware; Edge Decorated Vessels; Painted Earthenwares; Transferwares; Bone China Porcelain; and other Miscellaneous Wares.

### **Other Ceramic Objects**

Eight items were identified that were not vessels. Two were chipped ceramic disks. Six were ceramic figurines. The two circular to ovoid shaped chipped disks measured approximately 1.5 inches (3.8cm) in diameter. One had been manufactured from a sherd of undecorated pearlware. The other was of Native American Brown Ware pottery (See Volume 3: Native American Brown Ware, and Volume 4: English Ceramics). Disks of this type have been found in prehistoric and historic period sites throughout the Americas. They have often been considered to be gaming pieces (Sampson 2019). At colonial era locations in California they have been interpreted as two-sided dice that “facilitated the social cohesion of Native people living in the large multiethnic Indigenous communities that formed around Spanish colonial missions and later Mexican-era ranchos” (Panich et. al. 2018:1). There is also evidence indicating that they were used as small lids to seal narrow mouthed containers and to repair pots by attaching them with adhesives over holes and cracks (Ezell 1961:40; Sampson 2019; Hector 2022:2-3).



The six figurines constituted another interesting identification in the Chapel Complex ceramics assemblage. They included the fragmented limbs of two Mexican Tonalá Bruñida ware ceramic animals, and remains of four English Bocage statuettes.

The four brightly painted Bocage figures of lead glazed pearlware were produced in England's Staffordshire District between 1810 and 1885. The term bocage refers to the presence of foliage and flowers spreading above and behind the figure, as part of the objects' structure. The word is French, meaning woodland (Halfpenny 1991:215-271; Schkolne 2006, 2019).

All the Presidio's bocage figurines are fragmentary, though several sherds do crossmend. Two are of the Catholic Saints, John and Peter, and reflect the religious faith of the Presidio's population. These statuettes measured approximately 8 to 11 inches in height, and 4 to 6 inches across. Fragmentary remains of two other figures and some unassociated individual pieces were also identified. Their subjects could not be recognized.

### **Cultural Contexts**

The culture of Mexican Colonial California was an extension of the common folk culture found in New Spain's Northwest provinces. Consequently, the customs and foodways of the Californios was that of Colonial Mexico's Northwestern frontier. Most Hispanic pioneers who settled in California during the eighteenth and early nineteenth centuries originated from the northern frontier regions of Baja California, Sonora, and northern Sinaloa (Mason 1978, 1998; Guerrero 2010). They possessed a Mexican Colonial Folk Cultural identity.

In the almost 250 years that passed between the Spaniards' conquest of Mesoamerica and their occupation of California, the blend of Mesoamericans and Colonials brought an

invigorating mixture of races that combined traits from pre-conquest native cultures and Europe, and resulted in the emergence of a multiracial mestizo Colonial Mexican Society with its own customs and food ways (Miranda 1988:265; Super 1988; Webber 1992:315-317; Deagan 1996; Pilcher 1996:198, 1998; Reynoso Ramos 2015:312). By the 1540s, mestizos were a recognized racial-cultural group and by the early 1600s a Mestizo Folk Culture had emerged (Redfield 1930:13; MacLachlan 2015: 22, 30-31).

Members referred to themselves as *gente de razón*, a generic term for people who were culturally Hispanic but racially mixed<sup>1</sup> (Kessell 1976:39, 2002:423; Guerrero 2010), and generally identified as anyone who spoke Spanish, adopted Roman Catholic beliefs, and “had shifted their self-ascribed identities from indigenous to more mainstream national forms” (Newman 2010:35). “In simple terms any non-Indian” person (Crosby 1994:424). This term was in common use throughout Mexico including Sinaloa, Sonora, and Baja California<sup>2</sup> (Officer 1987:32, 41, 54-57, 72-78, 80-87, 93, 133; Crosby 1994:239-249, 275-297, 354-355; Kessell 2002:272, 273, 316, 322, 335, 423; Katzew 2004:43). Although regional differences evolved and can be seen in a variety of distinct provincial dances, folk music, and culinary dishes, for preparing food the basic underlying ingredients, cooking methods, vessels, and utensils remained common throughout Colonial Mexico (Pilcher 1998:31, 49, 132; Morton 2014:66-70; Reynoso Ramos 2015:312-313).

As settlement moved northward *gente de razón* carried Mexican Colonial Mestizo Folk Culture out of the original Mesoamerican core area to other frontiers, including the Northwest regions of Sinaloa, Sonora, Baja California, and ultimately Alta California. In

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<sup>1</sup>. The term “español” was also used to denote “all hispanicized individuals, regardless of origins, race, or caste,” (Guerrero 2010:7). It will not be used in this narrative in order to avoid confusion between American-born Mexican Colonial people and European-born Spaniards.

<sup>2</sup>. Voss (2002:156, 2005) has advanced the thesis that *gente de razón* was a term adopted by settlers in California, and that in doing so they rejected the Spanish imposed racially based *systema de castas* and achieved a new identity as Californios. In fact, as noted by the authorities cited in the text, the term *gente de razón* was in use throughout Colonial Mexico long before the colonization of Alta California, and the Cultural Mestizo pioneers who later settled there already self identified as *gente de razón* prior to their move north. The *systema de castas* was used by and served the needs of the elites. The people of the cultural *mestizaje* did not identify with it. Its use was gradually discontinued in official records and replaced by the terms *gente de razón* and *español* throughout colonial Mexico, not just in California. Webber (1992:328) notes similar phenomena during the early nineteenth century in both California and Texas.

these regions it adapted to an arid and demographically sparse environment (Hews 1935; Ives 1950; Hastings 1961; Dunbier 1968:109-111; Leon-Portilla 1972; Crosby 1994:239-249, 275-297, 354-355, 2015:41-68; Arreola et al. 2009). Regional elements that distinguished the western Norteño culture from its central Mexican base included ranching and highly skilled horsemanship (Hews 1935; Ives 1950; Brand 1951; Hastings 1961; Dunbier 1968:125; Leon-Portilla 1972; West 1993:27-69; Crosby 2015:131-132; Pavo-Zuckerman 2017), and consumption of a wider variety of vegetables and other foods. Meat, especially beef, along with cheese became common and abundant parts of daily diets (Hews 1935; Leon-Portilla 1972; Heyman 1991:84; Crosby 2015:98, 103-104, 115, 119-120, 156-159). In addition, wheat developed into as important a crop as corn and was adapted to the indigenous Mesoamerican technologies of grinding with mano and metate, and cooking on a comal, to create the flour tortilla, which augmented but did not replace the original corn variety (Velasco 1850; Hews 1935; Ezell 1961:33; Leon-Portilla 1972:111-112; Heyman 1991:84-85; West 1993:37-38; Crosby 2015:9, 29, 32, 115, 118-119) (See Volume 2: Californio Cultural Origins). The culture and foodways of the Californios was that of the Northwestern frontier gente de razón.

In summary, the conquest of Mesoamerica by Spaniards in the 1520s resulted in the creation of a unique Mexican Colonial Mestizo Folk Culture, as Natives and invading colonials fused as much, if not more, culturally as they did biologically (MacLachlan 2015:5). Although regional differences evolved, for preparing food the basic underlying ingredients, cooking methods, vessels, and utensils remained common throughout Colonial Mexico (Pilcher 1998:31, 49, 132; Morton 2014:66-70; Reynoso Ramos 2015:312-313). As settlement moved northward gente de razón carried Mexican Colonial Mestizo Folk Culture out of the original Mesoamerican core area to other frontiers, including the Northwest regions of Sinaloa, Sonora, Baja California, and ultimately Alta California. In these regions it adapted to an arid and demographically sparse environment (Hews 1935; Ives 1950; Hastings 1961; Dunbier 1968:109-111; Leon-Portilla 1972; Crosby 1994:239-249, 275-297, 354-355, 2015:41-68; Arreola et al. 2009).

The folk culture of the Cultural Mestizo Northwestern Mexican Colonial gente de razón was brought to Alta California where, especially in the practice of foodways, it experienced very little change (Miranda 1988:265). It was the result of the blending of Mesoamericans and Colonials that combined traits from pre-conquest native cultures and Europe, resulting in the emergence of a mestizo Colonial Mexican Society with its own customs and foods adapted to the arid expanses of the northern frontiers.

## **Archaeological Contexts**

### **Stratigraphy - Depositional Conditions**

As summarized in the Chapter in Volume 1, on Site Formation, examination of artifact distribution and stratigraphic analysis concluded that the Chapel Complex contained three types of deposits. Primary refuse in the Courtyard, secondary deposit trash middens in the Cemetery, and secondary post abandonment deposits inside the Chapel. The Courtyard was a kitchen area and deposits there, including Cluster Number Two south of the southern defense wall, consisted of items discarded at or near the area where they were used for meal preparation and consumption. Cemetery deposits were secondary refuse thrown into the east end of the cemetery through the discarding of household trash. A small number of cross mends indicated that a minor part of this refuse probably originated in the primary deposits in the Courtyard. However most cross mends do not represent vessels with pieces from different deposits but are from sherds originating within the same deposit, suggesting that much of the cemetery trash came from somewhere else in the presidio outside of the Chapel Complex and that both the Cemetery and Courtyard deposits remained fairly stable following the presidio's abandonment. Deposits within the Chapel rooms appear to be secondary refuse, a conclusion based on the large number of entries for butchered animal bone from this area listed in the Presidio Chapel Catalog (2005). Exactly how trash came to accumulate in the Chapel is not clearly understood and will require more study. Likewise, the nature of deposits in the rooms of the Courtyard's north wing is confusing. The number of listings of animal bone in the catalog is much less for these units than in the Chapel, so the smaller amount of faunal material that occurs there might be the result of food

preparation and, consequently, the archaeological material might be primary refuse. In order to confirm this or another scenario of deposition, more analysis is also needed for this part of the site.

The site's stratigraphic sequences were designated as three general levels. Level I was the Marston layer or overburden put down under Percy Broell's direction in the late 1930s. Level II was either the rubble layer surrounding and extending out from the wall mounds, or original soil layers in those areas not covered by building rubble. Level III was only occasionally designated and consisted of materials that appeared to have been in place prior to their being covered by the formation of Level II (Field Books: Scaramella-Spring 1965). Stratigraphic analysis as derived from student notebooks suggests most artifacts were recovered from Level II.

## **Chronology**

Temporal analysis showed that regardless of their origins all the deposits within the Chapel Complex are generally contemporary and date to the final decades of the presidio's occupation. For this reason the entire assemblage has been treated as a single community-level trash midden deposit. These types of deposits, consisting of middens and broad artifact scatters are "the norm" on many Mexican Colonial sites along New Spain's northwestern frontier. As such, they represent the consumer patterns and life styles of a community group rather than specific individuals or households (Voss 2002:426-427), which is the case with the San Diego Presidio Chapel Complex assemblage.

The most liberal estimate and broadest interpretation of the probable deposition period concluded that the refuse was discarded between 1820 and 1837. Analysis within specific refuse concentration areas produced mean dates that were consistent with this conclusion and range over an 18-year period from 1814 to 1832 (See Table 1 in Volume 1, Site Formation). All are by and large contemporary with the overall Chapel Complex site mean date of 1820. Although they did not produce enough artifacts to calculate mean

dates, the few dated items from the Chapel and Courtyard North Wing rooms represented the same periods.

Site formation processes, then, consisted of deposition of primary deposits in the Courtyard and secondary trash disposal in the eastern portion of the Cemetery during the closing decades of the presidio's habitation. Shortly following abandonment (probably within ten years) presidio period refuse from unknown nearby areas, and contemporary to that previously discarded in the Courtyard and Cemetery, was apparently redeposited in the Chapel and possibly the Courtyard north wing. As buildings were dismantled for construction materials, and then continued to erode over the following decades, debris and eroded adobe wall melt covered floors and other living surfaces along with the artifact deposits. Finally, in the late 1930s the ruins were buried under a layer of silt top soil obtained from the San Diego River bed. The cultural material that was on the surface at this time became mixed with the imported overburden fill designated as the Marston level.

## **Data Synthesis and Interpretations**

### **Assemblage Composition and Cross Site Comparison by Ware Type**

#### **Origins**

As noted, analysis of 27,818 sherds, weighing 151.333 kilos, resulted in identification of a minimum number of 1294 vessels. Ware origin quantities are shown and compared to ceramic identifications from the San Diego Presidio Gateway midden excavations (Barbolla 1992:122-127) and the Building 13 midden of the San Francisco Presidio (Voss 2002:703-733) in Table 1 and Figures 1 through 3.

For the San Diego Presidio Chapel Complex Assemblage Native American Brown Ware dominated at 52 percent by minimum vessel count and around 70 percent by weight and sherd counts. At 19 and 20 percent respectively minimum vessel numbers for Mexican

and English wares were almost evenly divided. This is also the case for weight and sherd counts that range between 11 and 13 percent. Chinese vessels ranked lowest with a minimum vessel count that made up 9 percent of the assemblage. Weight and sherd counts for these Asian ceramic sherds were evenly divided at 4 percent each.

In Figure 2 ware type origins by sherd count are compared between the San Diego Presidio's Chapel Complex and Gateway midden excavations, and the San Francisco Building 13 midden. There are distinct differences in the assemblages that reflect their periods of deposition and geographic location. Both San Diego Presidio assemblages are dominated by Native American Brown Ware pottery at 70 percent for the Chapel Complex and 74 percent for the Gateway midden. The San Francisco collection, on the other hand, is dominated by Mexican wares at 86 percent, while Mexican ceramics make up only 13 and 24 percent respectively of the Chapel and Gateway assemblages. This difference is due to the heavy reliance of local Native American pottery for cooking and tableware vessels at San Diego. At San Francisco the natives did not have a traditional ceramic manufacturing industry and Mexican Galera Ware was the ceramic type that presidio residents there used for cooking. This, of course, resulted in the greater quantities of Native pottery in archaeological deposits at San Diego and its decreased presence in place of Mexican Wares in deposits at San Francisco (Voss 2002:684, 690). A comparison of minimum vessel count ware types between the Chapel Complex and San Francisco's Building 13 midden, as shown in Figure 3, reconfirms these conclusions. Native brown ware makes up 52 percent of the Chapel Complex collection, while unglazed brownware of either presidio or local mission manufacturer constitutes only 18 percent of the San Francisco collection. Reliance on native produced pottery was even more pronounced in other places along Colonial Mexico's northern frontier. At the presidios of Tubac, Tucson, and Santa Cruz de Terrenate, Indian manufactured brown ware constituted over 90 percent of ceramics by sherd count recovered from archaeological excavations (Williams 1992:15).

The other main difference reflects the time spans represented by the deposits. By sherd count at San Francisco and the San Diego Gateway midden, Chinese and English-

European ceramics made up one percent or less of the collections, while for the San Diego Chapel Complex deposits, these wares made up 4 and 13 percent respectively of the assemblage. By minimum vessel count, English-European and Chinese wares constituted 3 percent each of the San Francisco Assemblage (Voss 2002:728) and 20 and 9 percent each of the Chapel Complex assemblage.

Mexican ceramics, on the other hand, were much more abundant at the San Diego Gateway and San Francisco middens, making up 24 and 86 percent by sherd count of those collections and only 13 percent of the Chapel Complex assemblage. By minimum vessel count Mexican wares made up 66 percent of San Francisco's ceramics and only 19 percent of the Chapel Complex collection.

Refuse at both the San Diego Gateway and San Francisco Building 13 middens was deposited before 1810, when the main source for goods manufactured outside California relied on the San Blas ships (Barbolla 1992:140; Voss 2002:695). The Chapel Complex artifact deposits occurred between 1820 and 1837, during the period when the hide and tallow and Eastern Pacific Coastal Trade supplied California, and imported English ceramics had displaced local manufacturing in most of Mexico and Latin America. These ships, consequently, carried few Mexican-made wares and much larger cargos of Chinese, English and other European manufactured goods than had the San Blas ships (Farris 2013).

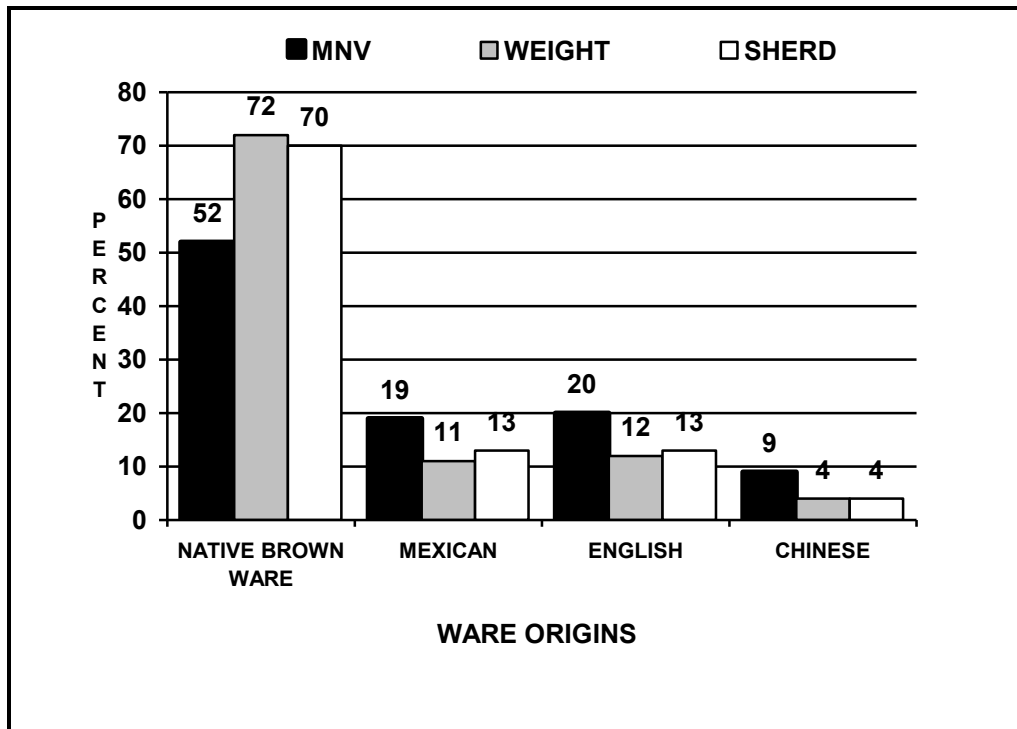
Yet even though the quantity of Chapel Complex Mexican wares is significantly less than from deposits that date prior to 1810, at 19 percent of the ceramics they could be considered high when compared to other sites deposited during the Mexican Republic period of 1822 to 1840. Investigations at many Mexican California occupied locations from this time show an "overwhelming lack of Mexican-made wares" (Farris 2013:105), and where present the few sherds of Mayolica, Galera, and Tonalá Bruñida ceramics "constitute a tiny fraction of the assemblages" (Allen, Felton, and Corey 2013:25). The San Diego Presidio Chapel Complex collection stands out in contrast with its significant



quantities of Mexican wares that make up almost 20 percent of the assemblage and are equivalent to the portion of English made ceramics in the collection.

**Table 1: Ceramic Ware Origins San Diego Presidio Chapel Complex.**

TYPES	MNV	%		WEIGHT	%		SHERDS	%
Native Brown Ware	675	52.16		109050	72.06		19573	70.36
Mexican	248	19.17		17285	11.42		3507	12.61
English	253	19.55		18666	12.33		3520	12.65
Chinese	118	9.12		6332	4.18		1218	4.38
TOTALS	1294	100.00		151333	100.00		27818	100.00



**Figure 1: Ceramic Ware Origins San Diego Presidio Chapel Complex.**

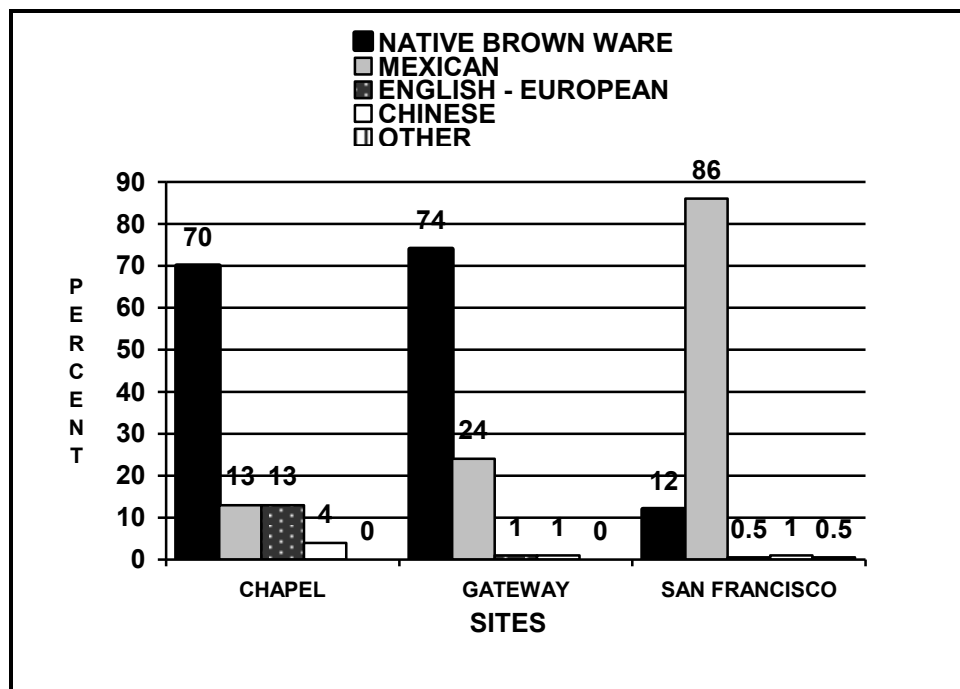


Figure 2: Ceramic Ware Origins by Sherd Count for San Diego Presidio Chapel Complex, Gateway Midden, and San Francisco Building 13 Midden (Barbolla 1992:121; Voss 2002:704).

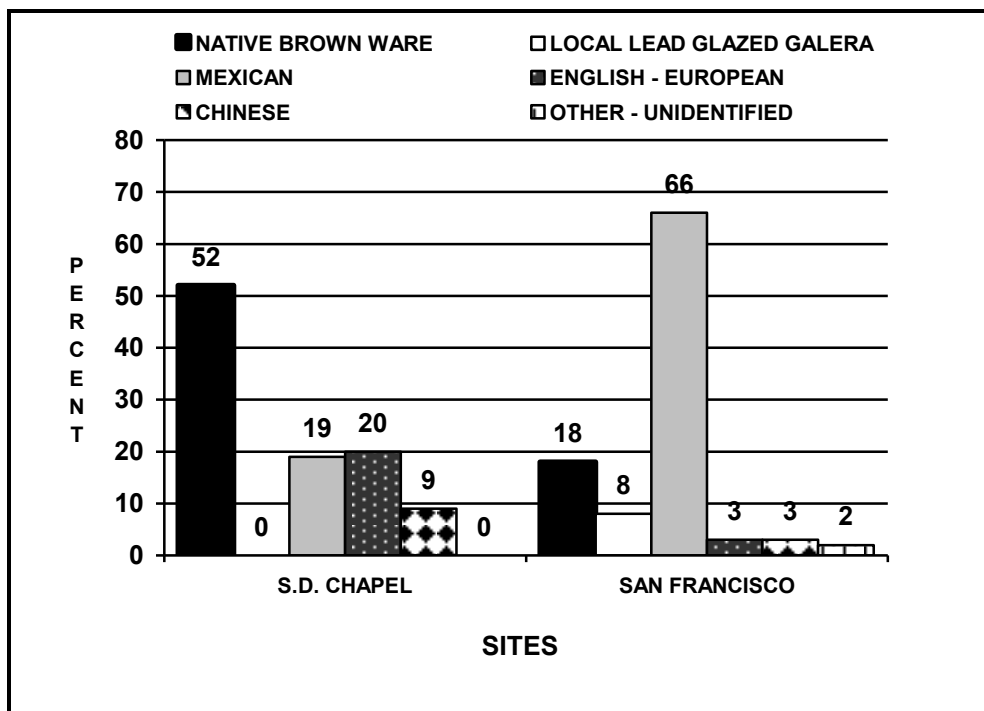


Figure 3: Ceramic Ware Origins by Minimum Vessel Count for San Diego Presidio Chapel Complex and San Francisco Building 13 Midden (Voss 2002:728, Table B-3).

## Vessel Functions

Vessel Functional categories are shown by MNV quantities on Table 2, and compared to frequencies from the San Francisco Building 13 midden ceramic assemblage in Figure 4. For the Chapel Complex they include cooking vessels (33 %), tableware (28%), serving and general use vessels (11 %), tea and beverage wares (20 %), water and storage vessels (2 %), and other vessels (5 %).

The San Francisco analysis did not separate tea and beverage vessels from tablewares so the graph in Figure 4 includes values for the combination of these categories. When compared to the San Francisco assemblage the main differences are the higher percentage of combined table and tea-beverage wares for San Diego at 43 percent, in contrast to 29 percent for San Francisco, and the higher quantity of serving and general use vessels for San Francisco at 29 percent as opposed to San Diego at 16 percent. Cooking vessels make up 33 percent of each assemblage, while the water/storage and other vessels categories are 5 percent or less of both of the collections.

## Cooking Vessels

Cookware consists of those vessels that were employed to prepare food, usually but not always, on the open fire. They were used continually and are closely linked with the hearth and kitchen (Reynoso Ramos 2015:261). In this analysis they were identified by vessel shape and the presence of soot and evidence of burning on the sherds.<sup>3</sup>

Undoubtedly other vessels, such as mixing bowls, may have been used for preparing meals and not exposed to flames. Since these containers would not exhibit soot or burning, there is no way to differentiate them from others in the collection so they remain unaccounted for. In addition, neither do the ceramic cooking vessels constitute the entire assemblage of food preparation containers used at the presidio. Metal pots, skillets, and

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<sup>3</sup> In the case of comales all 36 identified were considered to be cooking vessels even though six had no soot or burning.

comales were also utilized (Perissinotto 1998; *Alert Manifest 1840*)<sup>4</sup> but have survived in only limited circumstances.

A minimum number of 433 Cooking vessels were identified, constituting 33 percent of the assemblage. The individual vessel types included in the cooking vessels category are listed on Table 3 and in Figure 5. They include cajete style bowls (9 %), cazuelas (51 %), comales (9 %), and ollas (31 %). All are either Native brown wares or Galera Wares. Brown wares are by far the majority making up 100 percent of the ollas, 97 percent of the comales, 98 percent of cazuelas, and 77 percent of cajete style bowls.

**Table 2: Vessel Functional Categories.**

CATEGORY	SAN DIEGO		SAN FRANCISCO*	
	NUMBER	PERCENT	NUMBER	PERCENT
Cooking	433	33.46	86	34.40
Tableware	367	28.36	0	0
Serving/General Use Wares	146	11.28	73	29.20
Tea-Beverage	253	19.55	253	19.55
Water-Storage	29	2.24	29	2.24
Other	66	5.10	1	0.40
Combined Beverage and Tableware	(620 From Above Already Counted Shown as % on Chart Below) 0	(48% From Above Already Counted Shown on Chart Below) 0	88	35.20
Totals	1294	100.00	250	100.00

\*San Francisco functional vessel totals were taken from Voss 2002: 444-446, 713-727, Table B-2; 731, Table B-6.

<sup>4</sup> See Perissinotto 1998 index entries for copper pots (397), griddle irons (389), pans (395), and frying pans (395). Also *Alert Manifest 1840*: Lot # 2 dish kettles; Lot # 4 pans; Lot # 21 iron pots; Lot # 42 iron tea kettles, sauce pans, stew pans.

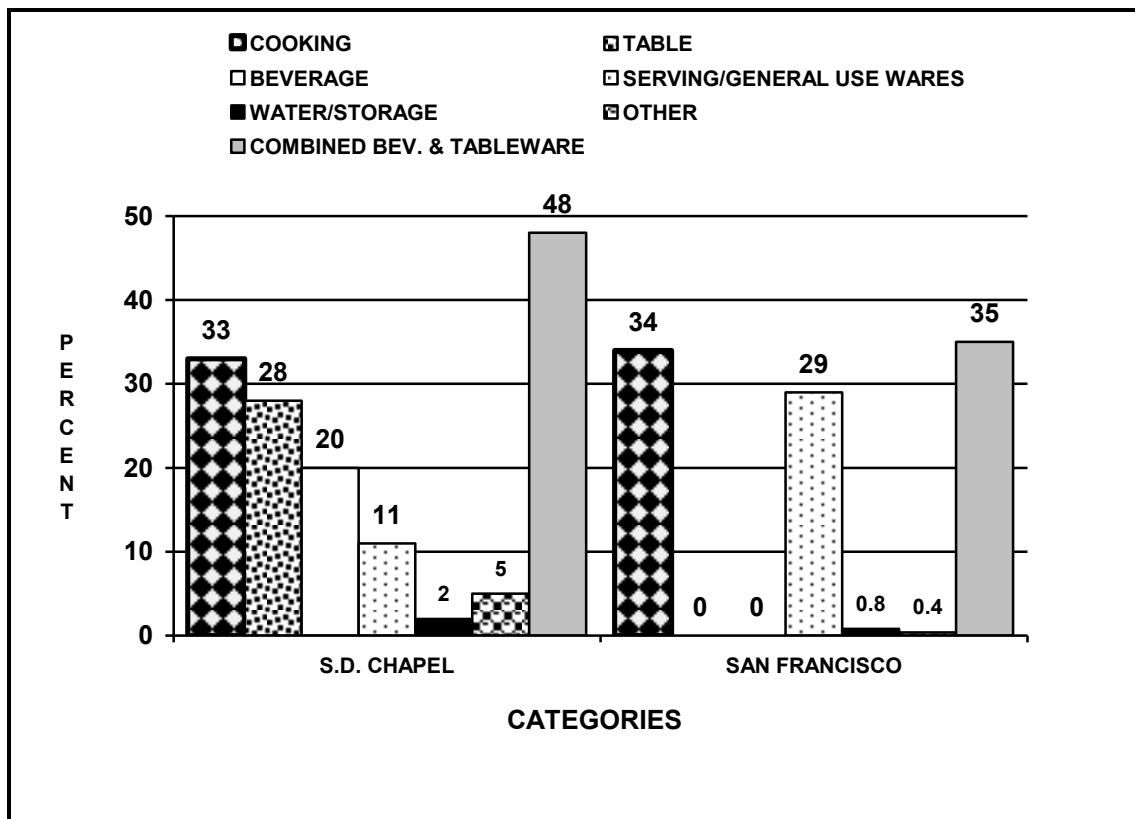


Figure 4: San Diego Chapel Complex and San Francisco Building 13 Midden Vessel Functional Categories.

Table 3: Chapel Complex Cookware Vessels

VESSELS				VESSEL	VESSEL
				TOTALS	PERCENT
	Ware Types	Ware Type	Ware Type		
		Vessel Totals	Vessel Percent		
Cajete Style Bowls				39	9.01
	Native Brown Ware	30	76.92		
	Galera Ware	9	23.08		
Cazuelas				222	51.27
	Native Brown Ware	195	87.84		
	Galera Ware Large	19	8.56		
	Galera Ware Small	8	3.60		
Comales				37	8.55
	Native Brown Ware	36	97.30		
	Galera Ware	1	2.70		
Ollas				135	31.18
	Native Brown Ware	135	100.00		
	TOTALS	433		433	100.00

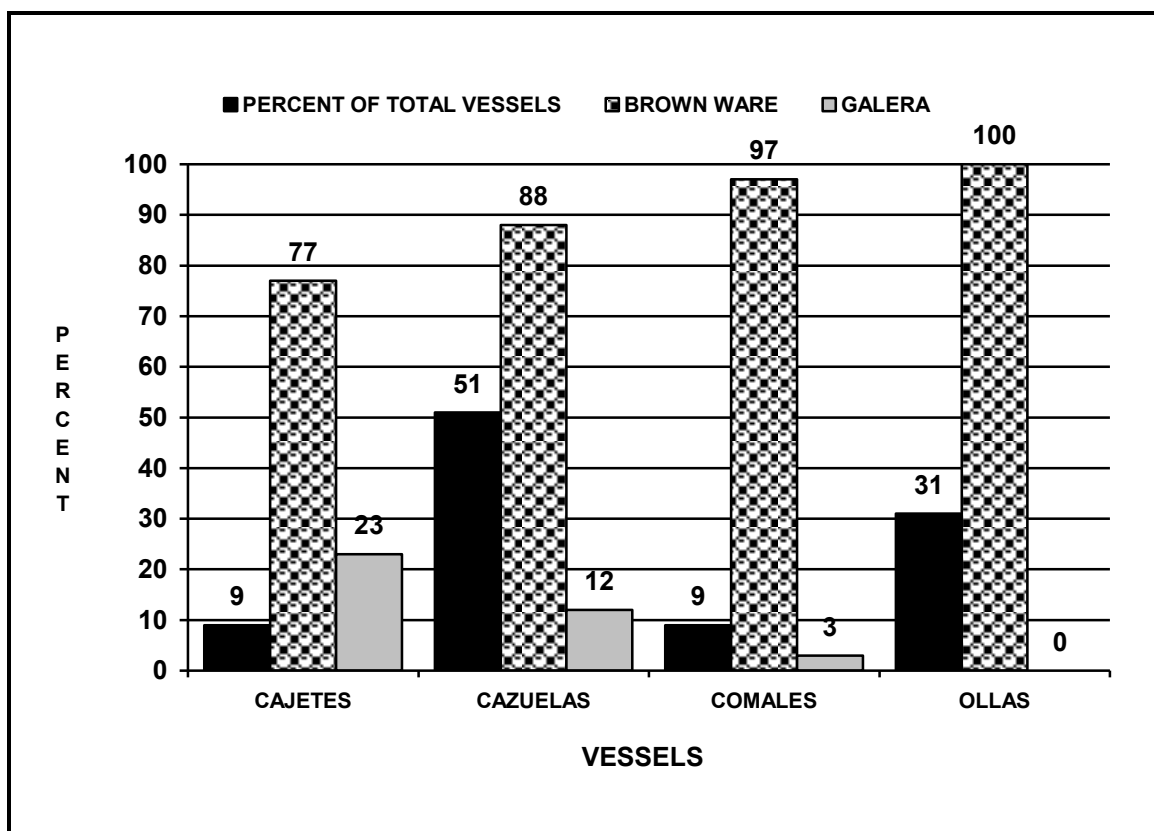


Figure 5: Chapel Complex Cookware Vessels.

### Tableware Vessels

Tablewares consist of those vessels that were employed to consume meals. Their use is closely linked with food consumption and table settings in a kitchen or dining room. Quantities are shown in Table 4 and Figure 6. Vessel types included cajete style bowls (8%), platos and soup plates (36%), escudillas - tazón style bowls (33%), and English - European flat plates (23%). The table setting vessels included a variety of ware types,

with platos, soup plates along with escudilla-tazón style bowls showing the most diversity. Platos and soup plates consisted of Mayolica (62 %), Galera Ware (20 %), English wares (11 %), Chinese wares (4 %), and Tonalá Bruñida Ware (2%). There were no brown ware platos or soup plates. Escudilla-tazón style bowls included Native brown ware (37%), Mayolica (36%), Chinese wares (17 %), English wares (6 %), and Tonalá Bruñida Ware (4 %). There were no Galera Ware escudilla-tazón style bowls. Cajete-style bowls and flat plates showed the least range of ware types. All 31 cajete-style bowls were Native brown ware. Flat plates included only English (73 %) and Chinese (27 %) manufactured items.

### **Tea - Beverage Vessels**

Tea-beverage vessels are a subcategory of tablewares and included containers used for preparing and using beverages, especially hot drinks such as tea, coffee, and chocolate (Connores MaQuade 2005:43; Graham and Skowronek 2016). They included jarros (22 %), tazas, pocillos, and cups (56 %), saucers and platillos (15 %), tea bowls (4 %), teapots and individual teapot lids (2 %), and tankards (1 %) (Table 5, Figure 7).

Different vessels exhibited wider and narrower ranges of ware types manufacturers. Jarros were exclusively Native brown ware, and tankards consisted only of English wares. Teapots and lids included Chinese (66.67 %) and English (33.33 %) wares. Tea bowls were dominated by English (82 %) followed by Chinese wares (18 %). Saucers and platillos included English (73 %), Chinese (24 %), and Tonalá Bruñida Wares (3 %). The vessel category with the most variety was tazas, pocillos, cups, which included Native brown ware (45 %), English wares (18 %), Chinese wares (15 %), Mayolica (13 %), Galera Ware (7 %), and Tonalá Bruñida Ware (2 %).



Table 4: Tableware

VESSELS				VESSEL TOTALS	VESSEL PERCENT
	Ware Types	Ware Type	Ware Type		
		Vessel Totals	Vessel Percent		
Cajete Style Bowls				31	8.45
	Native Brown Ware	31	100.00		
Platos, Soup Plates				133	36.24
	Native Brown Ware	0	0.00		
	Galera Ware	27	20.30		
	Tonalá Bruñida	3	2.26		
	Mayolica	83	62.41		
	Chinese	6	4.51		
	English	14	10.53		
Escudilla - Tazón Style Bowls				120	32.70
	Native Brown Ware	44	36.67		
	Tonalá Bruñida	5	4.13		
	Mayolica	43	35.54		
	Chinese	21	17.36		
	English	7	5.80		
English - European Flat Plates				83	22.62
	Chinese	22	26.51		
	English	61	73.49		
	TOTALS			367	100.00

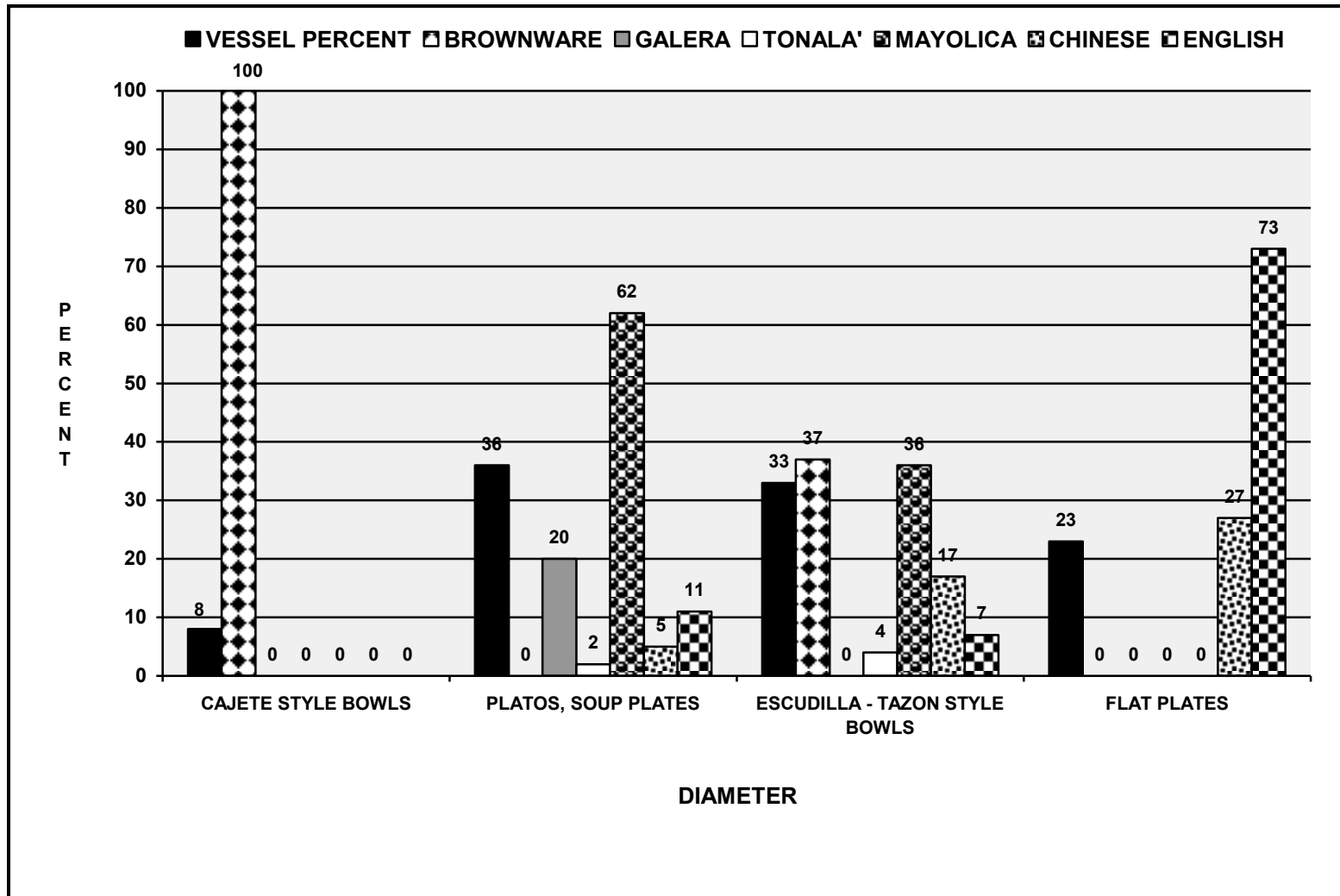


Figure 6: Tableware.

Table 5: Tea - Beverage Wares

VESSELS				VESSEL	VESSEL
				TOTALS	PERCENT
	Ware Types	Ware Type	Ware Type		
		Vessel	Vessel		
		Totals	Percent		
Jarros				55	21.74
	Native Brown Ware	55	100.00		
Tazas, Pocillos, and Cups				142	56.13
	Native Brown Ware	64	45.07		
	Galera Ware	10	7.04		
	Tonalá Bruñida	3	2.11		
	Mayolica	19	13.38		
	Chinese	21	14.79		
	English	25	17.61		
Saucers, Platillos				37	14.62
	Tonalá Bruñida	1	2.70		
	Chinese	9	24.32		
	English	27	72.97		
Tea Bowls				11	4.35
	Chinese	2	18.18		
	English	9	81.82		
Teapots And Individual Lids				6	2.37
	Chinese	4	66.67		
	English	2	33.33		
Tankards				2	0.79
	English	2	100.00		
	TOTALS	253		253	100.00

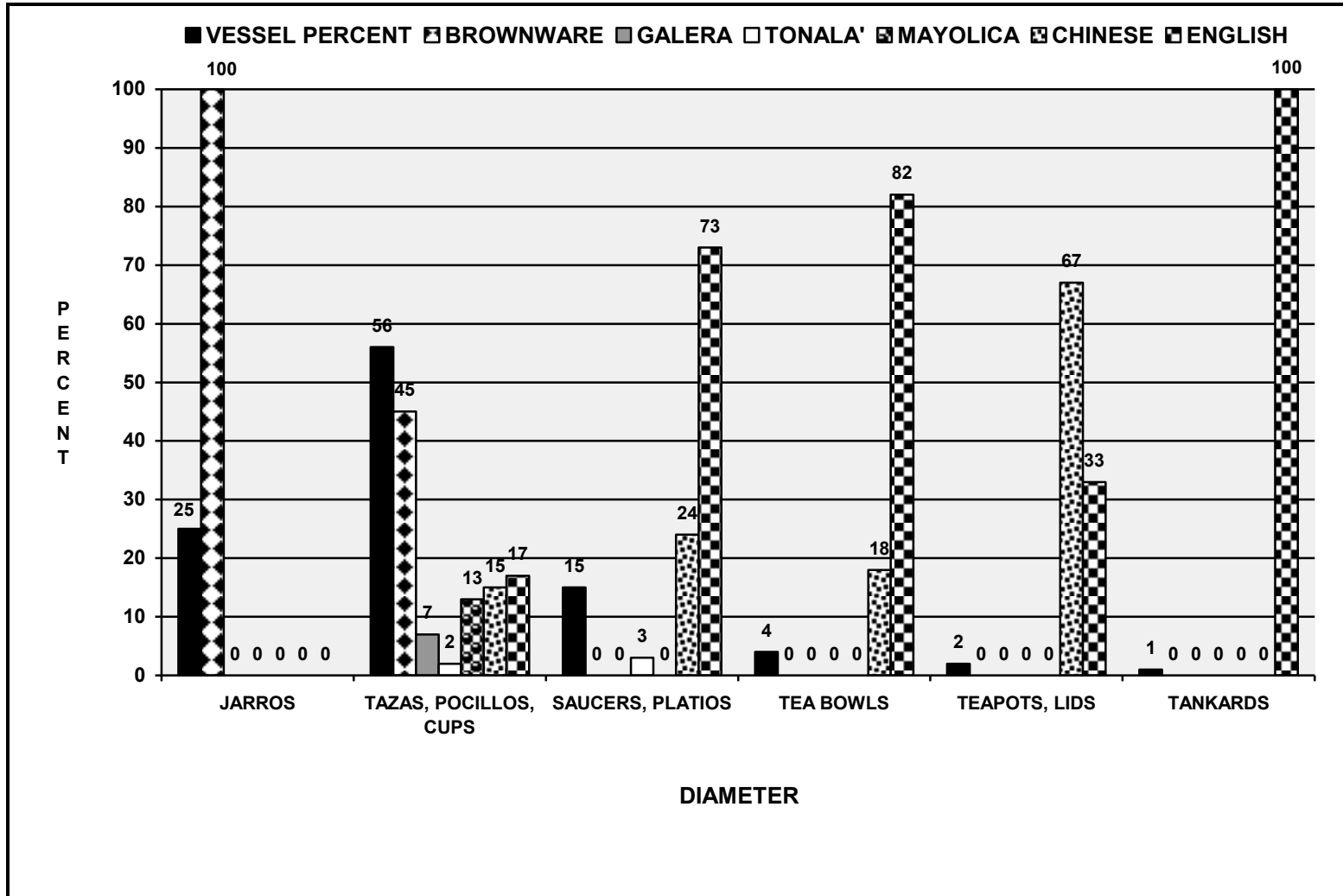


Figure 7: Tea - Beverage Wares.

### **Serving-General Use Vessels**

Serving and general use vessels consist of those containers that were employed to serve meals and in “other aspects of food storage, preparation, service, and consumption.” They included traditional serving vessel forms such as platters, pitchers and sugar bowls, or any hollowware vessel that did not have soot residue and was not identifiable as a tableware vessel form. In addition to serving “these ceramics are perhaps best thought of as multi-purpose utilitarian vessels used in various food-related activities but that were not used to cook foods, at least not over an open flame” (Voss 2002:446). Their use is closely linked with food preparation, serving, consumption and table setting in a kitchen or dining room.

Serving-general use vessel quantities are shown on Table 6 and Figure 8. They included unidentified Hollowwares (36%); jarros and pitcher-jugs (36%), serving ollas (15 %), platters (7 %), and serving bowls (5%), in addition to a single salt cellar, sugar bowl, and gravy boat that each made up 1 percent of the assemblage. As with the other functional categories, different vessels exhibited wider and narrower ranges of manufacturer ware types. The salt cellar and sugar bowl were made in England, and the gravy boat was Chinese. Serving bowls and platters included English and Chinese wares. Vessels from China made up 43 percent of the serving bowls and 30 percent of the platters, while English products constituted 70 percent of platters and 57 percent of serving bowls. Jarros and pitcher-jugs included Native brown wares (79 %), and English ceramics (21 %). Serving ollas consisted of Native brown ware (95 %) and Galera Ware (5 %). Unidentified Hollowwares showed the most variety with English (83 %), Chinese (12 %), Tonalá Bruñida (4 %), and Galera Ware (2 %).

### **Water and Storage Vessels**

Water and storage wares are vessels used to transport, store, and serve water. Many of these vessels in larger sizes were also used to keep other commodities, both solids and

liquids, like grains, olive oil, honey, liquors, aguas frescas, and other beverages (Voss 2012:48; Reynoso Ramos 2015:215-16, 292).

Water and storage vessels consisted of only two container forms, cántaros (48 %), and tinaja - botellones (52 %). Quantities are shown in Table 7 and Figure 9. Cántaros were exclusively of Native brown wares. Tinaja-botellones included Native brown wares (60 %), botija-olive jars (20 %), and Chinese brown ware wine jars (20 %).

### **Other Vessels**

The Other Vessels category includes all containers not included in the previous functional categories such as unidentified vessels (58 %), chamber pots (18 %), unassociated lids (11 %), wash basins (6 %), small storage and other jars (6 %), and a sake jar (2 %).

Quantities are shown in Table 8 and Figure 10. All chamber pots were manufactured of English wares and the sake jar was made in China. Unassociated lids included both English (57 %), and Chinese (43 %) wares. Wash basins also included both types, with English wares comprising 75 percent and Chinese wares 25 percent of these vessel types. Jars included Chinese brownware (50 %), Chinese porcelain (25 %), and Mayolica (25 %). Unidentified vessels had the most variety with English wares (53 %), Chinese wares (21 %), Tonalá Bruñida wares (13 %), Galera Wares (8 %), and Mayolica (5 %).

Table 6: Serving - General Use Wares

VESSELS				VESSEL	VESSEL
				TOTALS	PERCENT
	Ware Types	Ware Type	Ware Type		
		Vessel Totals	Vessel Percent		
Hollowware-Unidentified				52	35.62
	Galera Ware	1	1.92		
	Tonalá Bruñida (Small Mouthed Vessels)	2	3.85		
	English	43	82.69		
	Chinese	6	11.54		
Serving Bowls				7	4.79
	English	4	57.14		
	Chinese	3	42.86		
Gravy Boat				1	0.68
	Chinese	1	100.00		
Platters				10	6.85
	English	7	70.00		
	Chinese	3	30.00		
Jarros and Pitchers-Jugs				52	35.62
	Native Brown Ware	41	78.85		
	English	11	21.15		
Salt Cellar				1	0.68
	English	1	100.00		
Sugar Bowl				1	0.68
	English	1	100.00		
Serving Ollas				22	15.07
	Native Brown Ware	21	95.45		
	Galera	1	4.55		
	TOTALS	146		146	100.00

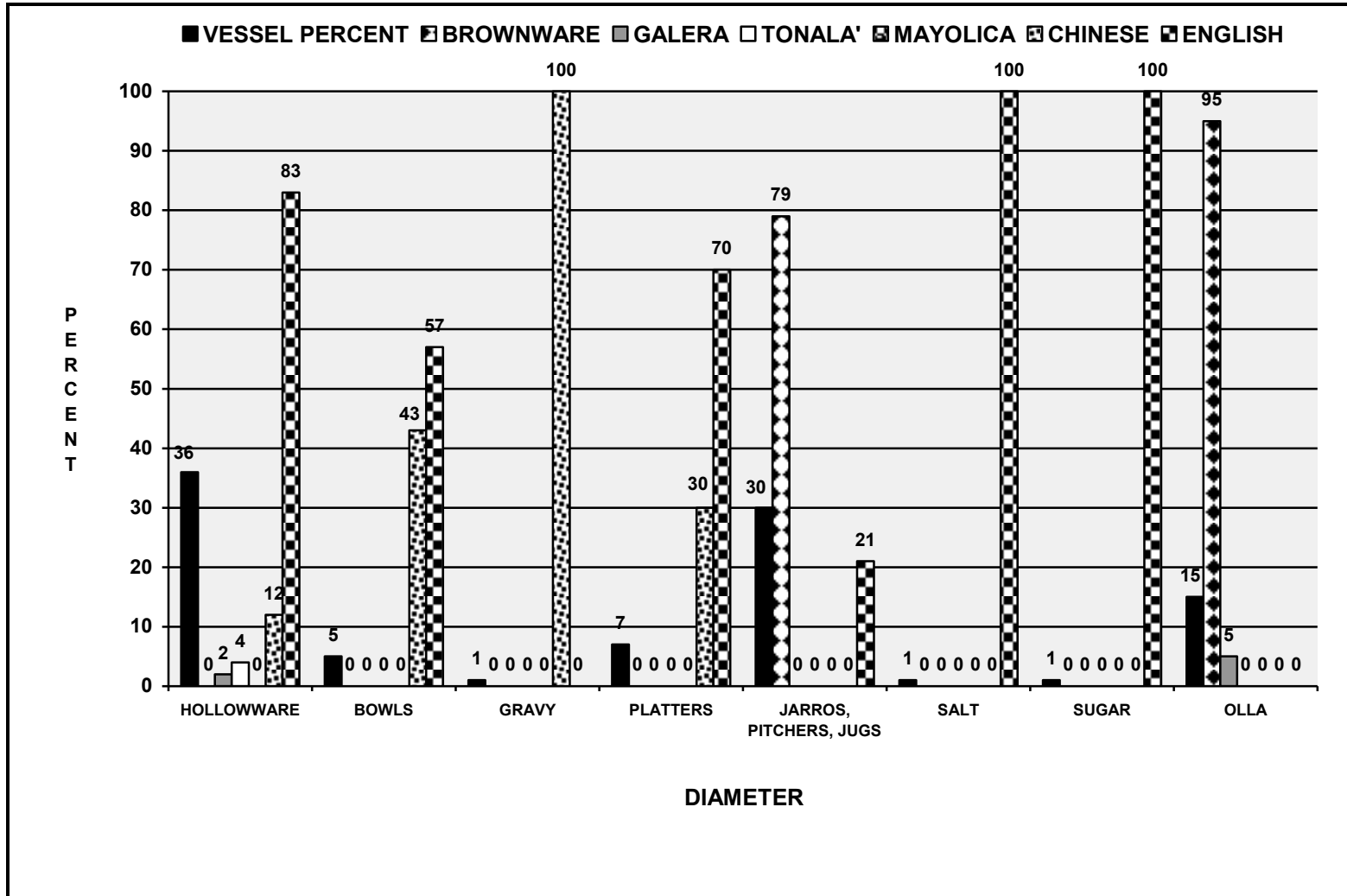


Figure 8: Serving - General Use Wares.



Table 7: Water Storage Wares

VESSEL				VESSEL	VESSEL
				TOTALS	PERCENT
	Ware Types	Ware Type	Ware Type		
		Vessel	Vessel		
		Totals	Percent		
Cántaro				14	48.28
	Native Brown Ware	14	100.00		
Tinaja - Botellón				15	51.72
	Native Brown Ware	9	60.00		
	Botija-Olive Jar	3	20.00		
	Chinese brown ware Wine Jars	3	20.00		
	TOTALS	29		29	100.00

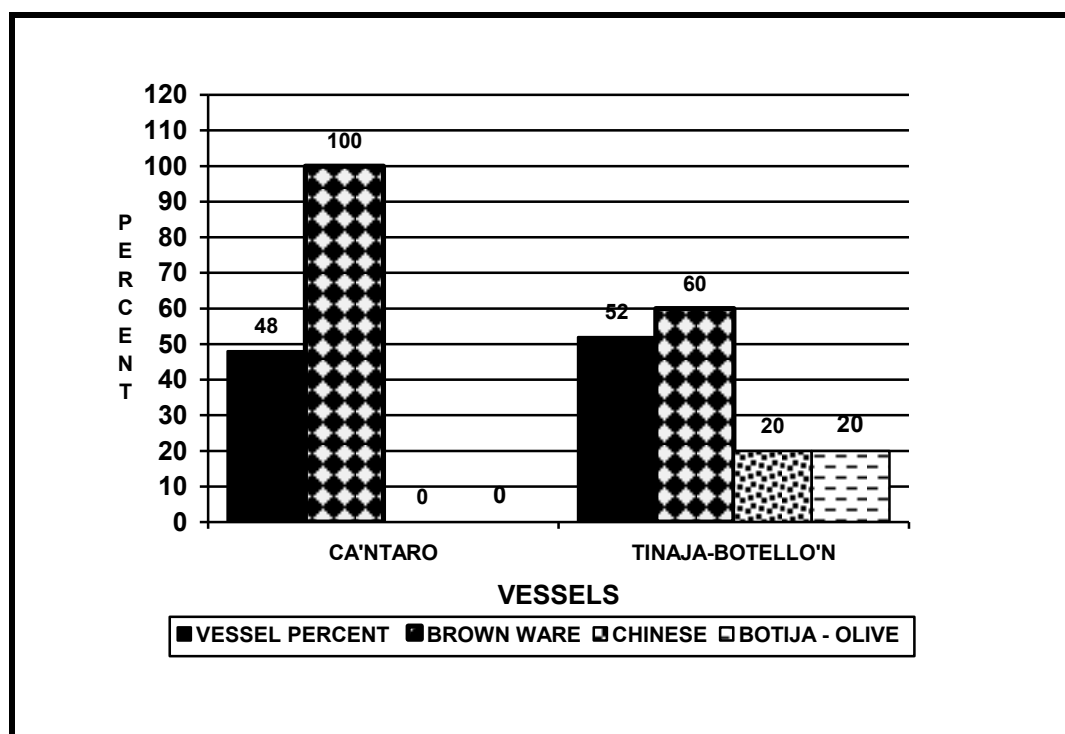


Figure 9: Water Storage Wares.

Table 8: Other Vessels

VESSELS				VESSEL	VESSEL
				TOTALS	PERCENT
	Ware Types	Ware Type	Ware Type		
		Vessel Totals	Vessel Percent		
Chamber Pots				12	18.18
	English	12	100.00		
Jars (Storage)				4	6.06
	Chinese Ginger Jar	1	25.00		
	Chinese brown ware	2	50.00		
	Mayolica	1	25.00		
Lids				7	10.61
	Chinese	3	43.0		
	English	4	57.0		
Unidentified Vessels				38	57.58
	Galera	3	7.89		
	Tonalá Bruñida	5	13.16		
	Mayolica	2	5.26		
	Chinese	8	21.05		
	English	20	52.63		
Sake Jar				1	1.52
	Chinese	1	100.00		
Wash Basins				4	6.06
	English	3	75.00		
	Chinese - Basin or Tank	1	25.00		
	TOTALS	66		66	100.00

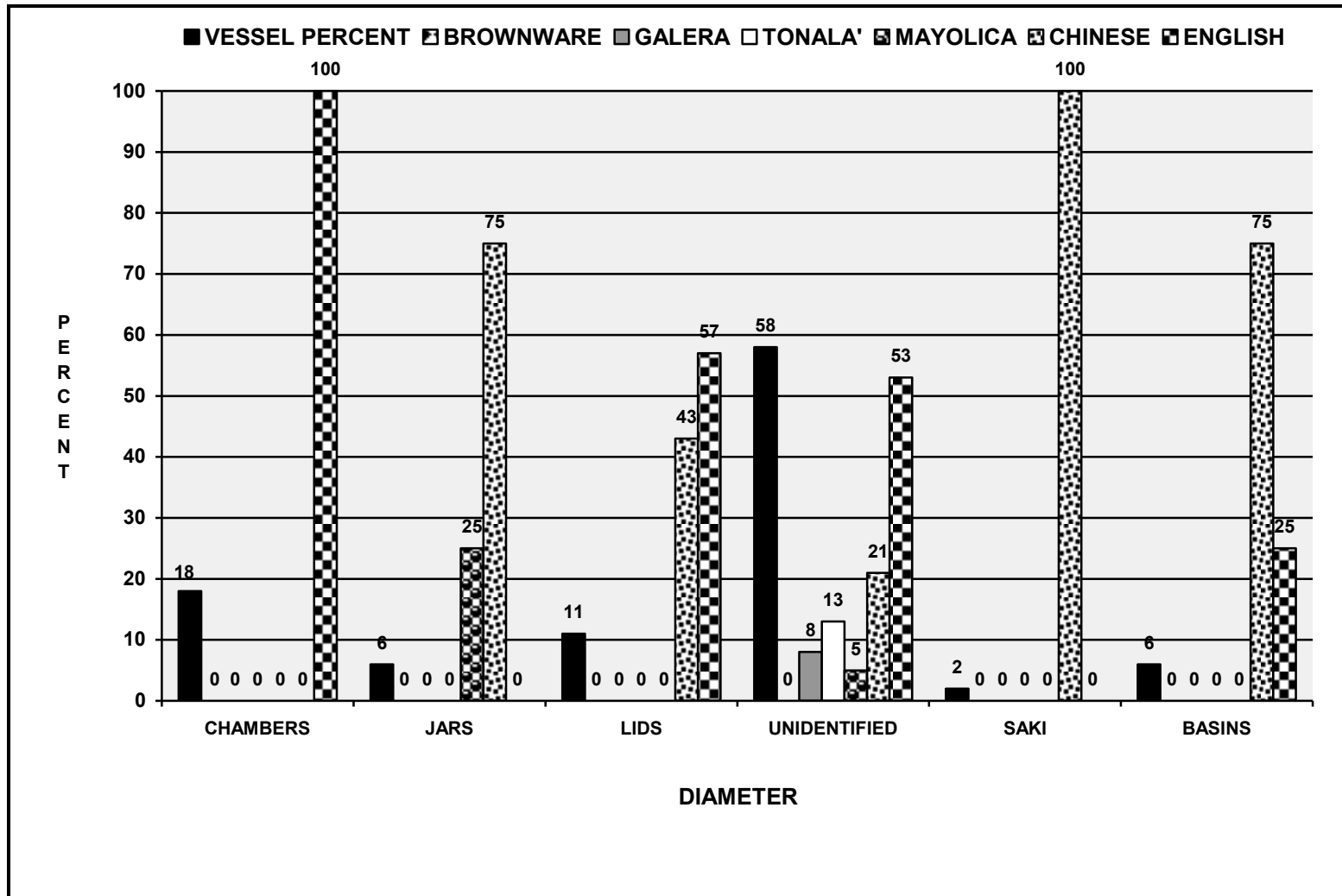


Figure 10: Other Vessels.

## **Foodways and Vessel Forms**

The study of foodways and vessel forms can provide insight into the types of meals individuals and populations prepared and ate (Otto 1977, 1980; Otto and Burns 1983; Reynoso Ramos 2004:18-19). The kinds of food individuals choose and the way they prepare and eat it are indicative of cultural preferences that extend well beyond the satisfaction of hunger and nutritional needs (Harris 1987; Reynoso Ramos 2004:18; Twiss 2007).

Food for the Mexican Californios was a strong cultural identifier (Strehl 2003:31). Conservative in nature, culinary practices in Alta California remained strongly connected to those of Mesoamerica and northern Colonial Mexico and were an extension of the common *gente de razón* folk culture found in New Spain's Northwest provinces (See *Californio Cultural Origins* in Volume 2). Some of the foodways of presidio inhabitants are revealed through an examination of cookwares and tablewares.

## **Cookware**

As already noted (See Table 2), Chapel Complex cookwares include cajete style bowls (9 %), cazuelas (51 %), comales (9 %), and ollas (31 %). All were manufactured of either Native brown wares or Galera Wares. Brown wares are by far the majority, making up 100 percent of the ollas, 97 percent of the comales, 98 percent of cazuelas, and 77 percent of cajete style bowls.

All of the cookwares represent traditional Mexican Colonial period Mesoamerican vessel shapes. During the early colonial period, native women working for Spanish settlers perpetuated prehispanic food preparation practices while adopting new foods introduced by the colonizers (Fournier 1999:153). This resulted in a continuation of basic prehispanic Mesoamerican vessel types such as ollas, cazuelas, cajete style bowls, and comales into the historic period. In addition, many basic native vessels such as the cazuela, and olla, had their counterparts in Spain so that various native and Iberian

cooking methods and vessels were quite compatible (Lister and Lister 1976; Reynoso Ramos 2004:143,156, 2015:308; Ness 2015). The persistence of these specific ceramic forms over time is not simply the result of function, but also of other influences such as gender, social and cultural identity, status, and eating practices (Reynoso Ramos 2015:303). It reflects the fact that Mexican Colonial Society's cooking, which became "distinct from both indigenous American and Iberian diets, but had traits in common with each,"<sup>5</sup> reflected the blending of native Mesoamerican and European traditions (Deagan 1996:148; Pilcher 1996:198-199, 215-215; 1998:27, 42; Reynoso Ramos 2015:312-313).

All of the cooking vessels except the comales are Hollowwares, which suggests the preparation of broth-based dishes such as sopas and caldos (soups), pucheros, ollas, and guisados (stews including pozole and menudo), and atoles (porridges). Cazuelas, cajete style bowls, and larger ollas could also be used to steam or fry beans, rice and other grains, meats, poultry, fish, eggs, vegetables, tamales, and cook fruit preserves and marmalades (Foster 1948:81-88; Whitaker and Whitaker 1978:55; Pilcher 1998:51; Reynoso Ramos 2004:84-88, 143, 2015:253, 271-278, 316, 324; Mindling 2015:126-131; Ness 2015:309-333; 2017:24-35; Fournier García 2016:291; Marquieta 2016).

Comales made up nine percent of the cooking vessels. One was manufactured of Galera Ware the other 36 were of Native brown ware. The comal is closely associated with making and cooking tortillas and thus, by default, evidence of the process of nixtamal for preparing corn to make masa (Foster 1948:81-85; Fournier 1998:18, 31; Reynoso Ramos 2004:85, 170, 173-174, 2015:253, 262; Newman 2013; Morton 2014:xvii; Mindling 2015:122; Marquieta 2016). Accounts of daily routines for grinding and preparing nixtamal in California (Vallejo 1844; Híjar 1877a:40, 1877b:25, 61; Arnaz 1878:18; Bancroft 1888:370; Davis 1889:251-252; Pinedo 1898:166, 2003:134) are remarkably close to depictions of the same process in Mesoamerica and other parts of Mexico

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<sup>5</sup>. Quoted from Deagan 1996:148.

(Redfield 1929:186, 173-174, 1930:39; Parsons 1936:31; Brand 1951:180; Morton 2014:9-12) (Figure 11).

In addition, comales have traditionally been used for roasting or slow heating and steaming a wide variety of foods (Fournier 1998:18; Reynoso Ramos 2015:85, 252-253, 266-268; Marquieta 2016), and can be used as a base or grill over a fire, on which pots and other vessels were placed for heating (Fournier 1998:19; Reynoso Ramos 2004:85; Marquieta 2016).

The presence of numerous comales in the San Diego Presidio Chapel Complex assemblage is strong evidence of tortilla consumption. That the Californios ate tortillas is overwhelmingly documented in historical records, especially in contemporary nineteenth century accounts as well as recollections (memorias) dictated by native Californios.<sup>6</sup> Preparation and consumption of corn tortillas in Californio households prior to 1850 are specifically documented by Sandels (1843:37), Amador (1877a:115, 1877b:140-141), Híjar (1877a:40, 1877b:25, 61), Lugo (1877a:88; 1877b:218), Arnaz (1878:16, 23), Davis (1889:83, 251-252), and Vallejo (1844). Carlos N. Híjar (1877a:24, 1877b:18) stated “El pan eran las ‘tortillas’ que por nada del mundo hubiera presindido.” (The bread was the “tortillas” that for nothing in the world would they have given up). Consumed at every meal, they served not only as food but as eating utensils (Bancroft 1888:369; Sanchez 1929:370-371). As with the use of mano and metate, accounts of eating with tortillas in Alta California (Amador 1877a:116, 1877b:142-143; Lugo 1877a:88, 1877b:218) are

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<sup>6</sup> This is in contrast to assertions by Voss (2008 & 2015:243-245, 291) and echoed by others (Skowronek et al. 2014:178) that Californios avoided consumption of corn because it was associated with Indian diets. As documented in sources cited in the text, Californios consumed both corn and wheat, as was common throughout Colonial Mexico and the territories of the northern frontier. Voss’ alternate explanation, that colonial households were using corn already ground elsewhere, seems a more reasonable reason for the small amount of corn in some archaeological deposits at the San Francisco Presidio. As with all archaeological deposits, there could also be preservation issues. If corn kernels were soaked before grinding, as would have been the case with nixtamal, any chance of preservation would have been eliminated (Popper 2016:14). Silliman (2004:174) has noted similar issues for the preservation of beans.

Voss also feels that a scarcity of clay comales at the San Francisco Presidio was evidence that people residing there did not make tortillas (2002:490-491, 697; 2005). As cited in the text, documentation for tortilla consumption among Californios is plentiful. The lack of clay comales at San Francisco can be explained by the fact that iron comales (comales de fierro / griddle irons) were commonly used and regularly imported on San Blas supply ships (Perissinotto 1998:52-53, 58-59, 66-67, 258-259, 300-301, 342-343; Simons and Turley 2007:117-118). This seems a more reasonable explanation, to this author, than the rejection of a basic food item.

remarkably close to ethnohistoric documentations from Mesoamerica and other regions of Mexico (Bourke 1895:63; Redfield 1929:175, 1930:39). Flour tortillas made from a masa of wheat flour and fat were also eaten. They were patted out by hand and cooked on a comal like the corn tortilla (Arnaz 1878:23-24; Bancroft 1888:363; Shinn 1891:397; Pinedo 1898:268, 2003:67) (See Volume 2: California Foodways).



**Figure 11: Grinding Stones from the San Diego Presidio Chapel Complex Excavations. Metates are in the top row and hand stones below. These examples show the mixture of imported Mexican black basalt and local materials that were used. The metate and hand stone fragments in the upper right are of Mexican black basalt. The large hand stone in the lower left is sandstone. The remainder are granitic (SDSU Catalog #s 08839, 08737, 08742, 08762, 08763, 08738).**

Table 9 and Figure 12 compare cooking vessel quantities from the San Diego Presidio Chapel Complex, and the Building 13 midden at the San Francisco Presidio (Voss 2002:713-727, Table B-2; 731, Table B-6). In order to assess the similarities or differences of vessels used by California Presidio households and those from homes from earlier colonial periods in central Mexico, vessel analysis from early colonial (late sixteenth through the middle of the seventeenth century) trash deposits associated with Spanish households (The Sears Collection) in Puebla Mexico are also included (Reynoso Ramos 2004:97-100, 215).

Vessel typologies used for these three sites do not match perfectly. Reynoso Ramos did not include cajete style bowls with cooking vessels in her analysis of ceramics from Puebla. Cajetes in her typology are only serving vessels. It might be assumed that the cazuelas in the typology for Puebla serve the functions of cazuelas as well as cooking vessels described as cajete style bowls in the Chapel Complex typology. For this reason, the quantity of combined cazuela and cajete style bowl totals has been included for the Chapel Complex in the Table and Figure. Likewise, the terminologies used for cooking vessels for the San Francisco ceramics analysis differs in several aspects from that used for the Chapel Complex. However, in some cases Voss' designations can be equated. Her description of "bean pots" matches that of cazuelas. A "bowl shaped cooking pot with flared collar" sounds like an olla. However, most of the San Francisco cooking ware vessels were described as hollowwares, which were most likely a combination of cajetes and ollas. For this reason the combined quantity of cajete style bowls and ollas from the Chapel Complex and Puebla are also provided in Table 9 and Figure 12.

The Chapel Complex is dominated by cazuelas at 51 percent, followed by ollas at 31 percent, and comales and cajete style bowls at 9 percent each. The combined total for cajete/ollas at 40 percent ranks behind their total for San Francisco where this category dominates that assemblage at 77 percent. Ollas dominate the Puebla collections at 57 percent, followed by cazuelas at 22 percent, which ranks well below those vessel totals of



51 percent, or of the combined cazuela/cajete totals of 60 percent for the Chapel Complex.

The Puebla assemblage ranks highest in the number of comales at 21 percent, followed by the Chapel Complex at 9 percent, and San Francisco at 5 percent. These figures are interesting. They attest to the common use of comales and the consumption of tortillas in households identified as Spanish at Puebla during the early colonial period. The reduced number of ceramic comales at San Diego can easily be accounted for by the additional use of iron griddles imported on both the San Blas supply ships and later coastal trade hide and tallow ships (*Tasso Manifest 1846:April 6; Perissinotto 1998:52-53, 58-59, 66-67, 258-259, 300-301, 342-343*). Comales were also often made from scrap iron in Mexican Colonial communities (Simons and Turley 2007:117-118). What probably greatly contributed to the deficit of ceramic comales at San Francisco was the use of imported metal griddles and the general lack of availability of local Native American produced pottery at that settlement.

To conclude, although quantities of vessel types differ considerably between the three assemblages, the cookwares at San Diego and San Francisco represent traditional Mexican Colonial period Mesoamerican shapes, as exemplified by container forms in the Puebla collections, and have their origins in earlier colonial periods. Most are Hollowwares suggesting a predominance of broth-based meals in the diets of the represented populations. Significant quantities of comales at the San Diego Presidio and Puebla document the consumption of tortillas in households at both of those locations. The lack of ceramic comales at San Francisco might be attributed to the use of imported iron griddles.

**Table 9: Cross-Site Cookware Totals**

VESSELS	SAN DIEGO	SAN DIEGO		SAN FRANCISCO	SAN FRANCISCO		PUEBLA	PUEBLA
	TOTALS	PERCENT		TOTALS	PERCENT		TOTALS <sup>7</sup>	PERCENT
Cajetes/Ollas+	174	40.18		66	76.74		93	57.06
Cajete Style Bowls	39	9.00		0	0.00		0	0.00
Cazuelas++	222	51.27		5	5.81		36	22.09
Comales	37	8.55		4	4.65		34	20.86
Ollas*	135	31.18		5	5.81		93	57.06
Unidentified	0	0.00		6	6.98		0	0.00
<b>TOTALS</b>	<b>433</b>	<b>100.00</b>		<b>86</b>	<b>100.00</b>		<b>163</b>	<b>100.00</b>

Voss 2002: terminology \*=bowl shaped cooking pot with flared collar, + = hollowware cooking vessels, \*\* = bean pot

San Francisco cooking ware totals were taken from Voss 2002:713-727, Table B-2; 731, Table B-6 and included the following:

VESSELS	UNGLAZED	GALERA	CALIFORNIA	TOTALS
	EARTHENWARE	WARE	LEAD GLAZED WARE	
Hollowware	11	41	7	59
Unidentified	2	4	0	6
Bowl	1	6	0	7
Bowl - pot flared collars	0	5	0	5
Bean pots	0	5	0	5
Comal	0	4	0	4
<b>TOTAL</b>				<b>86</b>

<sup>7</sup> Reynoso Ramos 2004:215

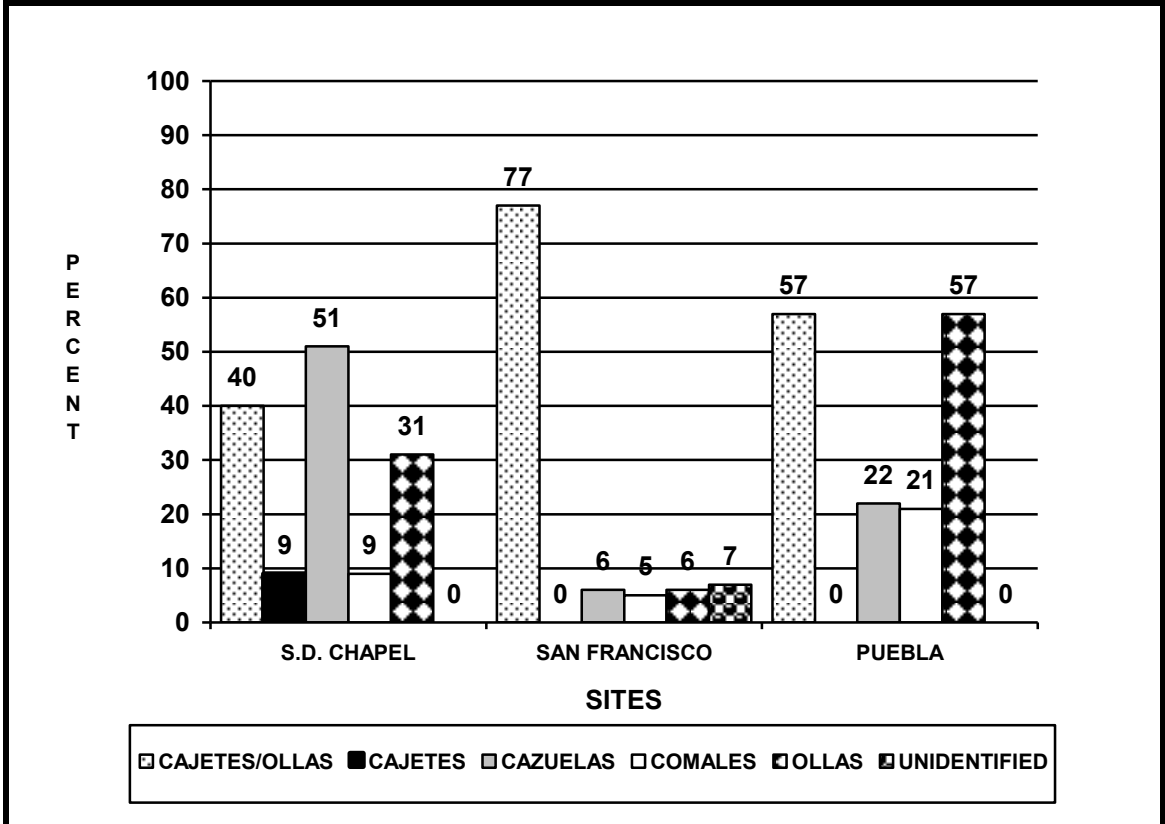


Figure 12: Cross-Site Cookware Totals.

## Tableware

“Liquid-based food could be served in either a bowl or a soup plate, but not on a dinner plate” (Felton and Schulz 1983:86).

Examinations of relative quantities of tableware vessel shapes can also provide insight into dietary practices. Research has shown that assemblages with higher numbers of bowls and soup plates than European style flat plates are indicative of meals consisting of slow-simmer foods cooked in a single pot (Otto 1977, 1980; Baker 1980; Otto and Burns 1983; Felton and Schulz 1983:83-86, 89-90; Reynoso Ramos 2004:19; Barker and Majewski 2006:229). In the case of the Mexican Californios this would translate to the serving and consumption of traditional broth-based dishes such as sopas and caldos (soups), pucheros, ollas, and guisados (stews) prepared in the hollowware cooking vessels previously discussed (Revere 1872:184, 1947:218; Wise 1849:61; Lyman 1925:228-229; Dakin 1939:72; Townsend 1970:110; Felton and Schulz 1983:89-92). These dishes are mentioned by almost every writer who experienced Californio cooking and the women were celebrated for their rich soups and stews (Robinson 1846:79; Híjar 1877a:24, 1877b:18; Arnaz 1878:23-24; Davis 1889:380-381; Ladies’ Social Circle 1894:264-266; Pinedo 1898:167, 219-221, 2003:133).

In Table 10 and Figure 13 frequencies of cajete and escudilla/tazón style bowls; platos, soup plates; and European flat plates from the Chapel Complex assemblage are compared to four other sites representing inhabitants of Mexican heritage, and one of high status Anglo-American residents. The sites representing Mexican culinary traditions are the well-to-do early colonial period households in Puebla (Reynoso Ramos 2004:235, Table 4), the late eighteenth century Building 13 midden from the San Francisco Presidio (Voss 2002:733, Table B-8); an 1850s deposit from the Diaz household in Monterey California (Felton and Schulz 1983:69-71), and an assemblage from the late nineteenth-early twentieth century mining town of Hedges, California (Burney and Van Wormer 1993:7.15). The high status Anglo-American assemblage is from a circa 1822 to 1845

planter's kitchen at Cannon's Point Plantation in Georgia (Otto 1980:9; Felton and Schulz 1983:80).

The greatest contrast between the assemblages is exhibited by the Anglo-American artifacts, which have the highest quantity of plates at 89 percent and the lowest value of bowls and soup plates at 11 percent, thus reflecting a dietary tradition of roast meats, and other non-broth-based foods (Otto 1980:11). All of the Mexican heritage sites show high quantities of bowls and soup plates suggesting the emphasis on slow-simmer foods cooked in a single pot (Felton and Schulz 1983:83-86, 89-90; Reynoso Ramos 2004:19). Bowls and soup plates make up 100 percent of the Puebla and San Francisco Collections. For the San Diego Chapel Complex they constitute 76 percent of the assemblage. For the Diaz and Hedges sites they are about half the collections at 50 and 46 percent respectively. Both the Puebla and San Francisco refuse was deposited before English white wares flooded the Americas in the early 1800s, so European flat plates were not available during the times they represent. The Chapel Complex, Diaz Household, and Hedges deposits date after European style ceramics were easily accessible in California and their quantities show the adoption of European flat plates into the serving ware assemblages.

The adoption of plates by households of Mexican heritage is not necessarily indicative of a change in foodways. An alteration in dietary preferences is suggested by Felton and Schulz (1983:86-89) for the Diaz household, where faunal remains showed a preference for Anglo-American style butchered meat cuts rather than traditional Mexican butchering practices where the bone is highly fragmented. At the Chapel Complex and Hedges, however, faunal remains were highly fractured in the Mexican manner (Christenson 1993; Buitenhuis 2014:110-112), so European style flat plates were being incorporated along with bowls and soup plates into the serving of traditional Mexican meals. This is not surprising and is, in fact, the way most traditional meals in Mexico and in Mexican restaurants in the United States are served in the present day (Figure 14). In spite of their dominance, many Mexican foods are not broth-based but dry, mushy, or paste-like,

especially the ever present frijoles and tamales, and many fried, roasted, and baked meats, fish, and vegetables. Whereas the original Mexican plato, like the European soup plate, could serve both liquid-based and drier foods, when it became available the European flat plate was used for drier foods and combined in services with bowls or soup plates for broth-based dishes. This appears to have been occurring at the San Diego Presidio in the 1820s and 1830s, and may have, at least in part, been the case at the Diaz household in the 1850s,<sup>8</sup> and was also the practice during the early twentieth century at Hedges.

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<sup>8</sup> The Diaz household may have purchased American style butchered meat cuts and then removed the meat from the bone and cut it into pieces for preparation of traditional Mexican dishes. An examination of cooking vessels from the Diaz household would be useful in order to determine exactly how the food was being prepared.

Table 10: Bowls, Soup Plates, and Plates

SITE	CAJETE, ESCUDILLA/TAZÓN STYLE BOWLS		PLATOS, SOUP PLATES		PLATES		TOTAL	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
PUEBLA	15	25.86	43	74.14	0	0.00	58	100.00
S.D. CHAPEL	129	37.39	133	38.55	83	24.06	345	100.00
SAN FRANCISCO	24	44.00	31	56.00	0	0.00	55	100.00
DIAZ	5	12.00	15	38.00	20	50.00	40	100.00
HEDGES <sup>9</sup>	32	45.71	0	0.00	38	54.29	70	100.00
PLANTERS KITCHEN	12	8.70	3	2.17	123	89.13	138	100.00

<sup>9</sup> The total number of plates identified at Hedges totaled 54 (Burney and Van Wormer 1993:7.15). Sixteen of these were from the Company Compound Dining Hall that served Anglo-American meals. These were subtracted from the total to derive 38 plates from Hispanic households.

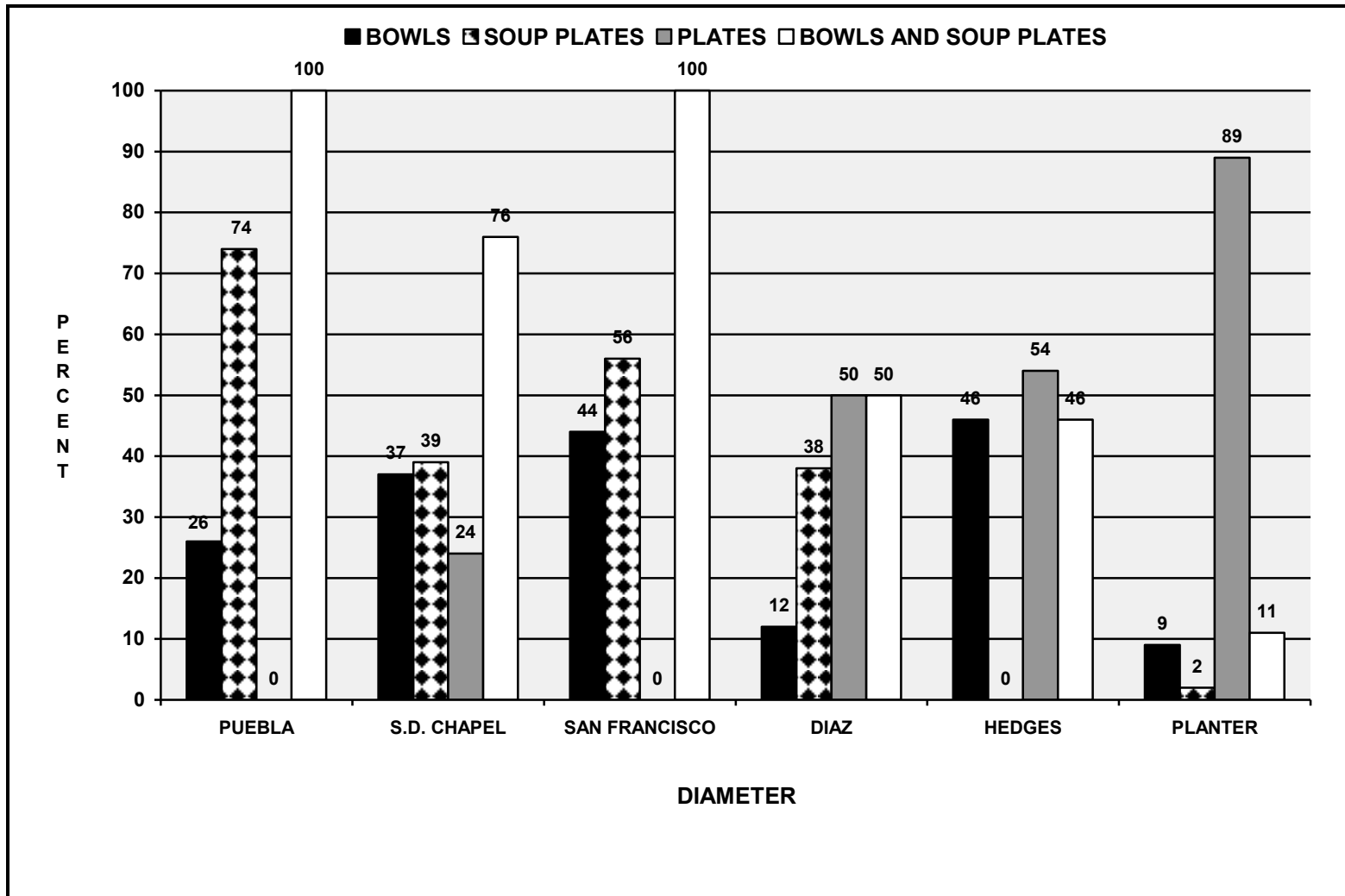


Figure 13: Bowls, Soup Plates, and Plates.





**Figure 14: A Modern-Day Restaurant Serving of Mexican Food Using a Bowl and Flat Plate (Photograph by Jill Van Wormer).**

## **Economic Status Analysis**

Three analyses were used to extract economic information from the ceramic assemblage: comparisons of relative quantities of tableware types, economic scaling, and ware type functionality.

## **Tableware Types**

It has been pointed out that Presidio families had little choice in the types of ceramics they purchased. Choices were limited to goods ordered by colonial supply officers and sent from San Blas (Voss 2002:428, 700; 2012). In spite of this, the overall grade of sherds recovered from California presidios makes a general statement on the economic and social position of presidio populations.

As discussed in the Mayolica Chapter in Volume 3, the original ceramic guild ordinances adopted in Puebla in 1653 specified two grades of Mayolica: common ware, designated común, and fine ware designated loza fina. The first had a poorer quality and the latter a higher quality glaze (Cervantes 1939 1:23; Connors MaQuade 2005:136).

Archaeological occurrences of loza común and fina have been associated with communities of different social and economic status. Higher grades of loza fina occur in sites representing urban centers, presidios, and mining districts (reales de minas). Excavations in rural areas produce higher quantities of loza común, indicating that consumers with less income purchased this grade of Mayolica (Fournier Garcia 1997:55; Fournier 1999:161; Reynoso Ramos 2004:128; Fournier Garcia and Zavala Moynahan 2014).

Mayolicas from the San Diego Presidio Chapel Complex exhibit attributes of loza fina or fine grade. The sherds have a solid textured cream-colored paste with occasional instances of rose to pink color, and solid opaque glazed surfaces that completely cover the underlying vessel body paste. Mayolica sherds from other areas of the San Diego

Presidio and from the Presidio of San Francisco have the same loza fina attributes (Voss 2012; Williams 2014). So although individual presidio soldiers and their families may not have had a wide choice in the ceramics that arrived from San Blas, in the case of Mayolica it was almost all fine grade ware that is associated with metropolitan centers, other northern frontier presidios, and mining district sites, as opposed to rural sites where inhabitants had less disposable income. The fact that shipments of presidio Mayolicas consisted of fine grade wares suggests that as a whole the presidio population represented a “middling” rather than economically depressed class on the frontier.

Tableware type quantities for the San Diego Chapel Complex and San Francisco Building 13 midden<sup>10</sup> are compared in Figure 15. Mayolica dominates San Francisco at 45 percent, followed by Galera Ware at 25 percent. English/European whitewares make up 11 percent, while Tonalá Bruñida and Chinese wares constitute 9 percent each of the assemblage. The Chapel Complex tableware shows more diversity. Brown wares dominate at 31 percent. Next, English wares and Mayolica are almost evenly distributed at 24 and 23 percent. Chinese wares constitute 14 percent, Galera Wares 6 percent and Tonalá Bruñida Wares 2 percent of the collection. In conclusion, San Francisco is dominated by Mayolica and Galera Wares, which together make up 70 percent of the tableware, while at San Diego Native American Brown Ware, English ceramics, and Mayolica make up the majority of the food consumption vessels with a combined total of 78 percent. As already noted, the greater quantities of British and Chinese ceramics in the San Diego Assemblage than in the San Francisco deposit is due to the opening of trade networks during and after the war for Mexican Independence.

As noted by Voss (2002:700), the San Francisco Building 13 midden wares “do not appear to reflect the admixture of ceramics from households of different economic and ethnic statuses.” Rather, they appear to represent the presidio frontier “middling class” whose main tableware consisted of fine grade Mayolica. The diversity of wares in the

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<sup>10</sup> From Voss 2002:733 Table B-8.

San Diego Chapel Complex collections, on the other hand, seem to reflect more economic diversity. The significant numbers of high value English and Chinese vessels suggests the purchasing patterns of individuals and households with substantial income and stands in contrast to the equally significant tableware quantities of low valued native brownwares characteristically used by less economically fortunate populations.

The fact that Mayolica is a significant ware in the Chapel Complex assemblage is also perplexing given the time period represented. Mexican Mayolica production declined dramatically during the early nineteenth century at the same time as British whitewares flooded Mexican and other Latin American markets. Many of the Mayolica vessels from the Chapel Complex had probably been purchased in prior decades suggesting they were appreciated and had been taken care of.

There was a degree of economic stratification within presidial society. Officers earned more than enlisted men with salaries increasing depending on rank. In the mid-to-late 1770s ranks and occupations along with annual salaries at San Diego consisted of a storekeeper at \$1000, a lieutenant with a salary of \$700, one sergeant at \$450, two corporals at \$400 each, twenty-two soldiers at \$365 each, “two carpenters to serve the presidio and the mission at \$300 each, and two blacksmiths for the same purpose at \$300 each” (Englehardt 1920:45). In spite of the limited variety of merchandise available from San Blas for presidio families to purchase, as elsewhere on the frontier, those with higher incomes had more choices in what they could buy including higher status luxury goods (Fournier 1999:61 Smith-Litner 2007:178). Supply requisitions sent to San Blas often included special orders for the officers (“para oficiales”) (Perissinotto 1998:261, 287, 303, 327, 335, 343, 351, 361).

There are historical references to economic distinctions in Californio society (Felton and Schulz 1983:97-103). “Poorer people,” a term often mentioned but never well defined in contemporary accounts, had less variety in their food and ceramics choices, often eating with vessels of locally made brownwares (Amador 1877a:116, 1877b:142-143; Lugo

1877a:88, 1877b:218; Bancroft 1888:363; 364; Ezell 1976:17). José del Carmen Lugo recalled “Los que tenían platos, que eran pocos, comeron en ellos - los que no, usaban cajetes de barro que tenían forma que los platos comunes (Those who had plates, which were few, ate on them - those who did not used cajetes of clay, that had the same form as common platos”) (Lugo 1877a:84).

Identification of Native American Brown Ware and Galera Ware eating vessels at the Chapel Complex, along with significant quantities of Mayolica, Chinese Export and English porcelain, and English transferwares, indicates a wide range of tableware types in presidio households, with the possibility of more brownware and Galera tablewares in lower economic homes and higher quantities of porcelains and transferwares in homes with more disposable income. On the other hand it could be a situation where elite households dined on expensive imported tablewares and their servants used native pottery and Galera Ware (Fournier 1999:161). The fact that the Chapel Complex deposits are communal middens rather than refuse that can be identified with a single household makes analysis that could differentiate between the above scenarios difficult, yet as the following discussion shows, some general consumer trends can be detected.

### **Economic Scaling**

Exactly who deposited the trash remains recovered from the Chapel Complex remains undetermined. As explained in detail in Volume 1 (Site Formation), in spite of possible diverse origins consisting of a mixture of primary, presidio period secondary, and post abandonment redeposition of presidio period material, all deposits represent an artifact disposal time period of circa 1820 to 1837. The time period represented was one of significant demographic and economic change in San Diego. The replacement of the Spanish mercantilist San Blas supply ships with the free trade commerce of the coastal hide and tallow trade provided a wider variety of consumer products and choices for all of California’s inhabitants. In addition, beginning in 1825, the arrival of Governor (Jefe Político and Comandante General) José María Echeandía and his cabinet, combined with

the regular presidio garrison officers' corps, constituted a concentration of elite status individuals living within the walls of the presidio at this time (Vallejo 1875:351; Bancroft 1885:543-544, 548; Williams 2003).<sup>11</sup> Economic scaling analysis revealed the presence of elite consuming practices through the relative quantities of English and Chinese wares. The significant quantity of locally made Native brown ware eating vessels also attests to the presence of lower economic status families and individuals.

First developed by George L. Miller, ceramic economic scaling is based on indices developed from the cost relationships of tableware vessel forms and decorations during specific time periods (Miller 1980, 1991). This analysis has used Miller's revised set of index values published in 1991.

Since Miller's indices address only English ceramics, available values for other sites are also confined to English wares. Calculation of the index value for the Chapel Complex English wares is shown on Table 11 and provided a value of 2.03. However, because English ceramics are only a part of the tablewares represented in the Chapel Complex collection various experimental techniques have been attempted in order to provide at least some "rule of thumb" relative values for the other wares. This allowed a better assessment of the comparative value of the entire tableware assemblage, as well as the relationship between values of the different wares within the collection.

Detailed studies of ceramic prices similar to Miller's analysis of English wares have not been undertaken for Chinese porcelains, Mexican wares, and locally produced Native Wares. Some general observations of cost relationships between these various ceramic types do exist. Studies based on Mexican probate inventories have concluded that during

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<sup>11</sup> These included Echeandía, along with his cabinet, which included his secretary Ensign Agustin V. Zamorano, Captain Pablo de Portilla of the Mazatlán Squadron, and Lieutenant Juan M. Ibarra, as well as Padre Antonio Mendez, a Dominican who lived in the presidio as a permanent residential Chaplain, and taught school (Bancroft 1885:543-544, 548; Engelhardt 1920:205, 224-225, 327; Pourade 1961:193). These gentlemen, combined with the regular garrison officers' corps, which included Captain Francisco María Ruiz, Lieutenant José María Estudillo, Ensign Santiago Argüello, Habilitado Domingo Carrillo, Sergeants José Gongora, Pedro Lobo, and José Antonio Pico, along with others of higher rank (Bancroft 1885:543-544, 548).

the eighteenth and early nineteenth centuries Chinese porcelain was generally equivalent in price or slightly more expensive than European porcelain. Mayolicas were less expensive than porcelains and European whitewares, but higher priced than Tonalá Bruñida Wares, which were followed by lead glazed Galera Wares. Locally produced Native American vessels were the cheapest ceramics available (Fournier Garcia 1997:54; Fournier 1999:156-157; Reynoso Ramos 2004:131-132).

Other studies have shown that in California during the early nineteenth century Chinese porcelain was not as expensive as European porcelain. Opening of the costal trade after 1810 made both Chinese and English wares much more available than they had been during the era of the San Blas supply ships and undoubtedly less expensive than in those earlier years. In her study of economic change in the California missions Julia Costello (1990:312) concluded that Chinese porcelains were not necessarily associated with higher status households. A quick review by this author of Chinese export ceramic prices from secondary sources showed that values between types varied greatly. Blue on white wares tended to be more costly than their enamel decorated counter parts, and both were more expensive than folk Minyao vessels (Morrison 1921:71<sup>12</sup>; Mudge 1986:181; Layton 2002:216-218). In her review of Export porcelain pricing Jean Mudge concluded that “the commonest sort of ware was probably within the income of the middle class householder” in the United States (Mudge 1981:101). As a result of these observations Chinese export porcelains will not be priced as equal in value to European porcelains but at the somewhat lower value of transfer (printed) wares.

Based on these assessments an index value for the entire Chapel Complex tableware assemblage was calculated. As noted, Chinese export wares were given the same value as their transferware equivalents in Miller’s 1991 indices. An average index value for Mayolica wares was calculated by comparing prices from San Blas shipping manifests

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<sup>12</sup> On line at [http://teachingresources.atlas.illinois.edu/chinatrade/resources/resource2\\_2.pdf](http://teachingresources.atlas.illinois.edu/chinatrade/resources/resource2_2.pdf).

(Perissinotto 1998:80, 154-155, 174-175, 264 - 265) and the price of undecorated bowls listed on an 1840 manifest for the hide and tallow ship *Alert* (*Alert* Manifest 1840:Lot # 18). These calculations are provided in Appendix 2 and resulted in the determination that the average piece of Mayolica cost approximately twice as much as the average undecorated English vessel. Although based on a limited sample and not accounting for price variation by vessel form, changes in price over time, or the fact that most, if not all, of the Mayolica was probably over a decade old, the results, nonetheless, do give a point with which to begin to assess relative values of Mexican ceramics. Since undecorated (CC) wares always have an index value of 1.0 in Miller's indices, Mayolica vessels were assigned a value of 2.0. Values were then assigned the remaining ware types to reflect their cost in relationship to Mayolicas, resulting in index values of 1.5 for Tonalá Bruñida Ware, 1.0 for Galera Ware, and 0.5 for Native American Brown Ware. Calculations for the complete Chapel Complex tableware assemblage are shown in Table 12 and resulted in index value of 1.68. For comparative purposes Table 13 shows an index value of 1.87 resulting from tableware assemblage calculations for the San Francisco Presidio Building 13 midden using the same assigned ware values.<sup>13</sup>

Figure 16 shows the index values for the Chapel Complex compared to San Francisco, starting with English wares and the consequent results as values for each ware type are added. The English ceramics value of 2.07 increases with the addition of Chinese wares to 2.31. When Mayolicas are added the value drops back to 2.17, and the combining with Galera and Tonalá Bruñida vessels further reduces values to 2.05 and 2.03 respectively. At this point the overall Chapel Complex index value is still slightly above San Francisco's at 1.87, but with the addition of brownware it falls below that to 1.68. If English and Chinese wares are filtered out of the Chapel Complex calculations the value

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<sup>13</sup> The quantities for San Francisco are taken from Voss 2002 Table B-2, pp 722-723, and Table B-8, p. 733. Totals differ somewhat. Voss included jarros / chocoteros in her tableware calculations. Since jarros were not considered to be part of the tableware assemblage used for economic scaling, they were taken out of the San Francisco totals. In addition on Table B-8 six unidentified British Whitewares were identified but in attempting to determine their decorations by reviewing the listing of individual vessels on Table B-2 only 3 could be identified. One (MNV # 186) was described as a probable saucer and so has been included with cups and bowls in the economic index calculations due to its close association with tea wares. The upshot is that whereas a total of 88 tableware vessels were identified for San Francisco, for the ceramic economic scaling calculations presented here only 75 are used.



falls well below San Francisco's to 1.32. If only the English ware from San Francisco are indexed that assemblage has a value of 2.47, which rises to 3.01 if Chinese wares are included. These later numbers have little meaning, however, since they represent totals of only three and eleven vessels each and show the importance of attempting to include the additional wares that dominate pre-1840 California historic period ceramic assemblages even with the crudely derived values used in this experiment.

In order to assess these results in a slightly broader context, in Figure 17 economic index values for the Chapel Complex and San Francisco Building 13 midden are compared to economic scaling results provided by Felton and Schulz (1983:76-80) for three other sites: the Diaz Adobe, and the Cannon's Point overseer's and planter's households. Because these studies used Miller's 1988 indexes, they have been recalculated using his 1991 values.<sup>14</sup> Tablewares in these assemblages were largely dominated by English ceramics so their values are more reflective of the complete table settings available to the populations they represent (Otto 1980; Felton and Schulz 1983).

The San Diego Chapel value of 2.31 for English and Chinese is among the highest. It is only slightly lower than that of the Diaz adobe at 2.39 or the Cannon Point planter's house at 2.67. Representing a very well-to-do Californio family, the Diaz ceramics consisted almost entirely of English wares, including porcelains, and so are comparable to the wares represented by this portion of the Chapel Complex assemblage. The Cannon's Point planter's house assemblage also represents a wealthy household and consists of English ceramics. It would appear, then, that the English wares, especially the transferwares, along with the Chinese porcelains in the Chapel Complex collection reflect the purchasing power of higher status, individuals.

The value for the entire Chapel Complex assemblage at 1.68 is somewhat more modest. It is lower than San Francisco's value of 1.87. Both would still seem to reflect

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<sup>14</sup> The Diaz value had already been recalculated by Costello (1990:339-340) and was taken from her research.

comfortable “middling class” consumption when compared to the Cannon’s Point overseer’s value of 1.84. The 1.32 Chapel Complex value for Mexican and brownwares is the lowest of all and could be seen to represent households of depressed economic circumstances.

Costello (1990:306-343) in her study of early nineteenth century California Mission ceramic assemblages dating circa 1805 – 1840 found that increased quantities of English and Chinese ceramics were associated with higher status households. Lower status households represented by mission Indians and middling status trades people represented by a blacks smith had smaller relative quantities of English vessels and more examples of Mexican Colonial earthenwares and Mission Brownwares. They also included Chinese ceramics.

Based on the relationship of index values in Figures 16 and 17 and the association of ceramic ware types with households of differing status described by Costello, a scenario could be proposed of elite households at the San Diego Presidio setting tables with English and Chinese wares along with some well preserved Mayolica, which would be more closely reflected in the Chapel Complex index values shown in Figure 16 of 2.31, 2.17, and 2.05, while “poorer” households ate food off of Native American Brown Ware vessels augmented with older Mayolica, Galera, and Tonalá Bruñida ceramics reflected in the depressed Chapel Complex index value of 1.32. Of course there are several other possible scenarios than these two extremes, which cannot be identified precisely. English undecorated, edge decorated, and banded-mocha wares, for example, along with some Chinese wares were not expensive and could also have been used by less affluent households together with older Mayolicas, Galera, and brownwares. What can be stated is, that in spite of the fact that the Chapel ceramics are from cumulative midden deposits representing various households, consumer choices of higher economic income individuals and families are reflected in the elevated quantities of Chinese porcelain and English transferwares, and the consuming practices of lower status households is shown in the large quantity of older Mayolica, Galera Ware, and Native American Brown Ware

in the tableware assemblages. A similar pattern was detected in the ceramic assemblage of the Los Ades Presidio in Texas where “the Governor’s House yielded a greater variety of porcelain, and faience cups, saucers, and plates,” while “in contrast” lower status households “yielded greater proportions of Native American plain ceramics, faience, and majolica bowls and platters” (Pavo-Zukerman and Lorren 2012:221-222).

Documentary evidence supports the fact suggested by the contrast in high and low ware types in the assemblage that during the period represented by the Chapel Complex ceramics the San Diego Presidio’s population included a sharper contrast of “haves and have nots,” than in prior decades. As noted in Volume 2 (San Diego Presidio History), economic circumstances for presidio inhabitants declined significantly following disruption of the San Blas supply ships in 1810 and the continued inability of the Mexican Government to financially support California’s armed forces after Independence from Spain in 1821. In 1826 Governor Echeandía complained that only his officers had been paid. Two petitions from the soldiers that year claimed they were receiving nothing but their food ration, which had been the case for several years past. In 1827 there were no funds to supply blankets, and both food and money were lacking. Echeandía met this emergency by lending \$600 of his personal funds (Francis 1976:345). It would appear that the concentration of elites living at the presidio at this time, consisting of Governor Echeandía and his cabinet along with the regular presidio officers, did constitute an economically high status group with elevated levels of disposable income. Their situation stood in contrast to the depressed condition of the enlisted men receiving little more than food rations. The former had the ability to set tables with higher priced English and Chinese wares and perhaps some pieces of Mayolica, while enlisted soldier’s families apparently made do with native brownware vessels augmented with older Mayolica, Galera, Tonalá Bruñida ceramics, and perhaps some less expensive English and Chinese wares.

### **Ware Type Functionality**

Finally, unlike the ceramics assemblages from the San Francisco Presidio, functionality for Chapel Complex tableware vessels is diverse in both high and low status wares. Research at the San Francisco Presidio concluded that tableware types fulfilled different functions and were not related to specific differences in economic status (Voss 2002:700, 707, 2008:204-220, 2012). These included “majolica soup plates for serving the stews, beans, and other main dishes; galera *jarros/chocoteros* for hot beverages; Bruñida de Tonalá cups and pitchers for cool beverages; and a selection of galera, majolica, porcelain, faience, and British whiteware bowls and cups for soups, gruels, and assorted beverages” (Voss 2002:700).

This is not the case with the Chapel Complex assemblage where cups, bowls, and soup plates, are well represented amongst the variety of ceramic types identified including Mayolica, Galera Wares, Chinese porcelains, and English whitewares, as well as Native American Brown Wares where the size and shape of unburned vessels has indicated their adaptation to Mexican folk ware vessel functions including tablewares. Regardless of price range, tableware types in the Chapel Complex ceramics are functionally diverse. The only exceptions are European flat plates, which included only English (73 %) and Chinese (27 %) manufactured items.

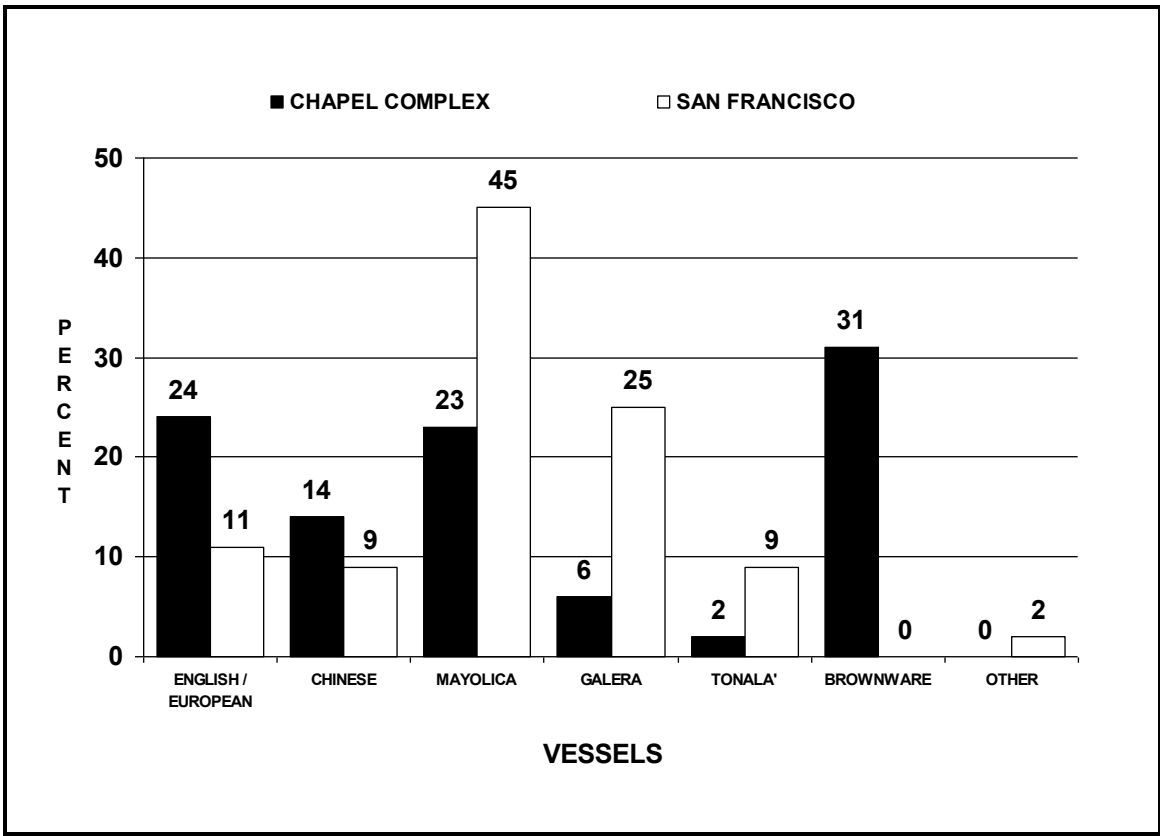


Figure 15: San Diego and San Francisco Tableware Types.



**Table 12: San Diego Chapel Complex Ceramic Wares Economic Index Value Calculations**  
 (Year values from Miller 1980 for 1833 unless noted)

VESSEL	DECORATION	#	VALUE	PRODUCT	NOTES
Cups, Tazas, Jicarras, Pocillos	Brownware	64	0.50	32.00	
	Galera	10	1.00	10.00	
	Painted	12	1.44	17.28	
	Tonalá	3	1.50	4.50	
	Mayolica	19	2.00	38.00	
	Transfer	12	2.57	30.84	
	Chinese Porcelain	21	2.57	53.97	
Bowls, Escudillas	Brownware	44	0.50	22.00	
	English Undecorated	3	1.00	3.00	
	Mocha	3	1.20	3.60	
	Tonalá	5	1.50	7.50	
	Panted	4	1.60	6.40	
	Transfer	7	2.80	19.60	
	Mayolica	43	2.00	86.00	
	Chinese Porcelain	21	2.80	58.80	
Plates	English Undecorated	4	1.00	4.00	
	Edge Decorated	10	1.33	13.30	
	Painted	3	2.17	6.51	1838 VALUE
	Transfer	29	2.67	77.43	
	Chinese Porcelain	22	2.67	58.74	
	English Porcelain	1	7.14	7.14	

Table 12: San Diego Chapel Complex Ceramic Wares  
 Economic Index Value Calculations  
 (Continued)  
 (Year values from Miller 1980 for 1833 unless noted)

Soup Plates, Platos			
Galera	27	1.00	27.00
English Undecorated	4	1.00	4.00
Edge Decorated	8	1.33	10.64
Tonalá	3	1.50	4.50
Transfer	4	2.67	10.68
Mayolica	83	2.00	166.00
Chinese Porcelain	6	2.67	16.02
TOTALS	475		795.99
TOTAL INDEX VALUE		795.99/475 = 1.68	





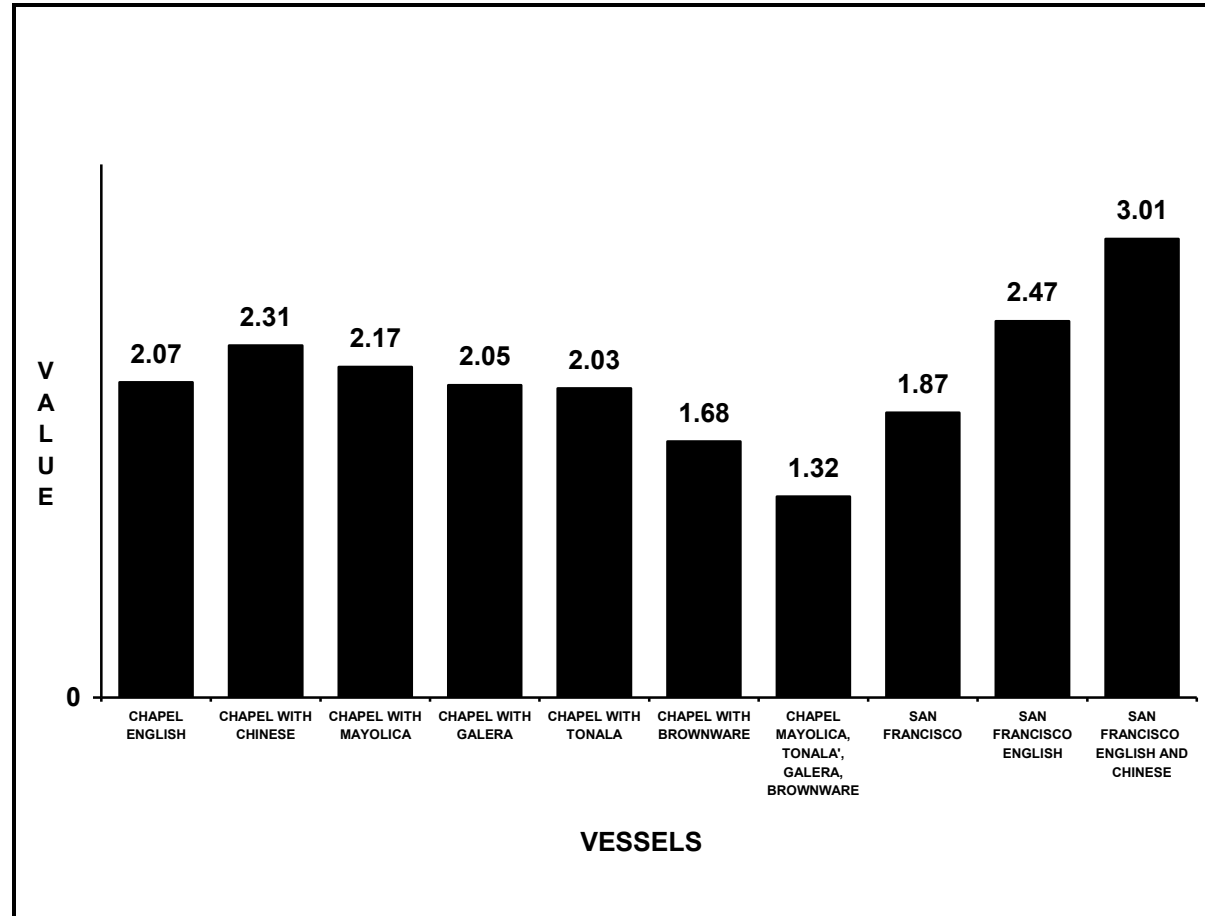


Figure 16: Various Ceramic Index Values Derived for the San Diego Presidio Chapel Complex Compared to San Francisco Presidio Building 13 Midden.

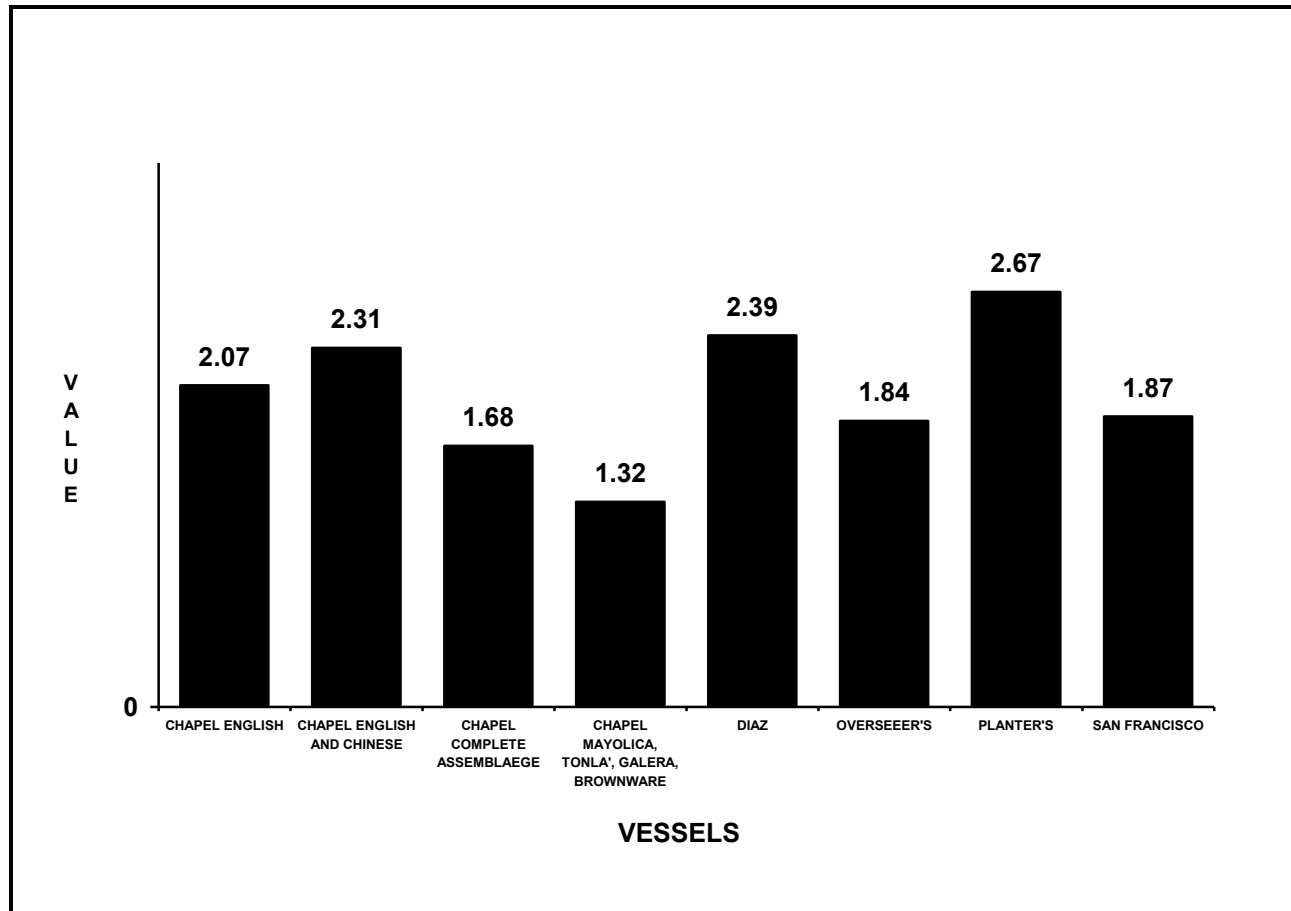


Figure 17: Cross-Site Ceramic Index Values.

## **Gender and Identity**

### **Gender**

Life at the California presidios was largely organized “at the household level, and it is likely that daily choices about dietary practices, material goods, architecture, and spatial use were negotiated within family units among people of varied genders and ages” (Voss 2002:607). Within this context, kitchen and dining areas and the preparation of meals tended to be among women’s spheres of labor (Villa de Prezelski 1996:105; Williams 2003; Reynoso Ramos 2004; Smith-Lintner 2007:179; Voss 2008; Morton 2014:XV). This ceramics study is, therefore, by default an examination of women’s activities and roles at the presidio.

As already noted, at San Diego and California’s other presidios women (presidarias) played as important a function, if not more so, as men in the community’s daily life. They fulfilled obvious roles in establishing and sustaining families and perpetuating Mexican Colonial culture. Through their essential contributions and hard labor as family caregivers, cooks, and house keepers, they developed and maintained presidio communities and were the primary handlers of the cooking, serving, utilitarian, household, and storage vessels that make up the majority of the collection this report is focused on (Casteneda 1990:130, 229; Williams 2003:18, 51).

### **Californio Self Identity**

Food for the Mexican Californios was a strong cultural identifier (Strehl 2003:31). Examination of foodways concluded that presidio families followed culinary customs based on their Colonial Mexican northern frontier roots. These food practices retained strong connections to Mesoamerican origins. The cookware from the Chapel Complex included the comal, and, along with a majority of the tableware, consisted of traditional Mexican Colonial Period Mesoamerican hollowware vessel shapes. This suggests the consumption of tortillas and a predominance of broth-based, slow-simmer foods cooked

in a single pot (Foster 1948:81-85; Felton and Schulz 1983:83-86, 89-90; Fournier 1998:18, 31; Reynoso Ramos 2004:19, 85, 170, 173-174, 2015:253, 262; Newman 2013; Morton 2014:xvii; Mindling 2015:122; Marquieta 2016). As previously noted, in the case of the Mexican Californios this would translate to the serving and consumption of traditional Colonial Mesoamerican broth-based dishes such as sopas and caldos (soups), pucheros, ollas, and guisados (stews) (Revere 1872:184, 1947:218; Wise 1849:61; Lyman 1925:228-229; Dakin 1939:72). Although the European style flat plate was incorporated into the tableware assemblage, when viewed in the context of previous faunal studies from the San Diego Presidio, this does not indicate a change in food consumption practices. Bone specimens are highly fragmented, reflecting Mexican butchering practices where flesh was cut away from the bone in strips with knives, cleavers or axes. The species represented are dominated by beef with lesser amounts of mutton, pork, and goat, as well as chickens, turkeys, and geese (Cheever 1983; Sasson 2014; Buitenhuis 2014:110-112; Sasson and Arter 2020).

Based on these conclusions, there is strong evidence that there were no major dietary changes in the culinary practices of presidio populations in California and that they continued to follow traditional foodways that had been brought north from the frontier regions of Sonora, Sinaloa, and Baja California. It therefore follows that this ceramic analysis has found no evidence for the expression of a Californio self identity that was unique from the regional *gente de razón* culture of the Mexican Colonial northern frontier. Historical documentation of Californio foodways as documented in Volume 2, leads to the same conclusion.

The Chapel Complex assemblage does not differ drastically either in ware types or vessel shapes from ceramic collections found in other northern Mexican frontier sites for the period it represents, and reflects a broader regional pattern documented in other late eighteenth and early nineteenth century northern frontier settlements (Cohen-Williams 1992; Calhoun 1999:340; Fournier 1999:163; Cohen-Williams and Williams 2004; Pavo-Zukerman and Loren 2012; Jenks 2013:17; Fournier Garcia and Zavala Moynahan

2014:157; Williams 2014; Thiel 2017:319-325). Called the Ibo-American Pattern by Jack Williams (2014:312) these assemblages typically include Mexican Mayolica, Galera, and Tonalá Bruñida Wares, and where available, locally produced Native American Brown Wares, with vessel shapes based largely on Colonial Period Mesoamerican types. Deposits dating after 1810, and especially after 1820, include increasing quantities of English and Chinese manufactured ceramics.

These conclusions may be disappointing to some readers who may have been hoping for other results. Ethnogenesis and the examinations of changing group self identities have been a popular trend in archaeological studies over the last several decades and any number of methods have been used to document proposed changes in cultural characteristics (Voss 2002, 2005, 2008, 2012, 2015a 2015b; Smith-Lintner 2007; Hu 2013; Lucido 2014; Gabe 2019). That as the decades passed, pioneer presidio settlers and their offspring formed their own community in Alta California and came to identify as Californios was certainly a reality. This was an identification with a home, regional community, place of birth, and ultimately a political identity (Haas 1995:32-38), not a change of ethnic identification. It is also as much a reality that those changes can not be detected in the ceramic assemblage from the San Diego Presidio Chapel Complex, and rather than suggesting a process by which “a group of people became ethnically distinct,” which is the definition of ethnogenesis (Merriam-Webster 2022), as already stated, the evidence indicates that presidio inhabitants continued to follow the regional culture and foodways of the Mexican Colonial northern frontier gente de razón.<sup>15</sup>

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15 Julia Costello (Written Communication 2023) observed that this interpretation leaves no room “for the substantial integration of Native Peoples into Alta California culture. Not everyone came as ‘pioneer settlers’ from the south. Soldiers’ families included many Alta California native wives/mothers; and the Pueblos contained substantial numbers of Native folk who left the missions or never entered them. There is certain to be some differences between the culture and society of Los Angeles in 1845 and Pueblo, Mexico in the same year. But, as you note, perhaps not visible in the ceramic assemblage.”

## Final Summary and Conclusions

The excavation of the San Diego Presidio Chapel Complex site as a field school for students of San Diego State University was first conceived by Dr. Raymond Brandes in 1964, began by Dr. Donald Brockington in the spring 1965, and carried on under the direction of Dr. Paul Ezell with the help of professor Michel Axford through the mid-summer of 1976. Materials recovered from this project are housed at Collections Management, Department of Anthropology, San Diego State University. The artifacts appear to have been initially deposited between 1820 and 1837 and occurred in undifferentiated midden refuse that consisted of the household trash of Presidio residents, officers, soldiers, and their families.

Analysis of 27,818 sherds, weighing 151.333 kilos, resulted in identification of a minimum number of 1294 vessels. These items represented diverse origins and included locally produced Native American Brown Ware, Mexican ceramics, Chinese ceramics, and English wares. Each of these categories included a variety of types. Data synthesis and interpretations consisted of an examination of the assemblage's composition and cross site comparisons by ware type origins, vessel functions, the relationship between vessel forms and foodways, economic analysis, and statements on the presidio's ceramics associations with gender and cultural identity.

Assemblage composition and cross site comparison by ware type origins showed that in the San Diego Presidio Chapel Complex Assemblage, Native American Brown Ware dominated at 52 percent by minimum vessel count and around 70 percent by weight and sherd counts. At 19 and 20 percent respectively minimum vessel numbers for Mexican and English wares were almost evenly divided. This is also the case for weight and sherd counts that range between 11 and 13 percent. Chinese vessels ranked lowest with a

minimum vessel count that made up 9 percent of the assemblage. Weight and sherd counts for these Asian ceramic sherds were evenly divided at 4 percent each.

There are distinct differences between the ceramic assemblages of the San Diego and San Francisco Presidios that reflect their periods of deposition and geographic location. San Diego Presidio's assemblages are dominated by Native American Brown Ware pottery. The San Francisco collection, on the other hand, is dominated by Mexican wares. This difference is due to the heavy reliance on local Native American pottery for cooking and tableware vessels at San Diego. At San Francisco the natives did not have a traditional ceramic manufacturing industry and Mexican manufactured Galera Ware was the dominant ceramic type used for cooking. This, of course, resulted in the greater quantities of Native pottery in archaeological deposits at San Diego and its decreased presence in place of Mexican Wares in deposits at San Francisco (Voss 2002:684, 690).

The other main difference between the assemblages reflects the time spans represented by the deposits. Mexican ceramics were much more abundant at the San Diego Presidio Gateway and San Francisco middens. Chinese and English-European ceramics occurred in significantly greater amounts in the San Diego Chapel complex deposits.

Refuse at both the San Diego Gateway and San Francisco Building 13 middens was deposited before 1810, when the main source of supply for goods manufactured outside California relied on the San Blas supply ships (Barbolla 1992:140; Voss 2002:695). The Chapel Complex artifact deposits occurred between 1820 and 1837, during the period when the hide and tallow and Eastern Pacific Coastal Trade supplied California, and imported English Ceramics had displaced local manufacturing in most of Mexico and Latin America. These ships, consequently, carried few Mexican made wares and much larger cargos of Chinese, English and other European manufactured goods than had the San Blas ships (Farris 2013). Yet, even though the quantity of Chapel Complex Mexican wares is significantly less than from deposits that date prior to 1810, at 19 percent of the assemblage it could be considered high when compared to other sites deposited during the Mexican Republic period of 1822 to 1840.



Three analyses were used to extract economic status information from the ceramic assemblage: comparisons of relative quantities of tableware types, economic scaling, and ware type functionality. The recovery of exclusively fine grade Mayolica from the San Diego and San Francisco Presidios suggests that as a whole the presidio population represented a “middling” rather than economically depressed class on the frontier. The fact that Mayolica is a significant ware type in the Chapel Complex assemblage, given the time period represented, suggests that many of these vessels had probably been purchased in prior decades and they were appreciated and taken care of.

Identification of Native American Brown Ware and Galera Ware eating vessels at the Chapel Complex, along with significant quantities of Mayolica, Chinese Export and English porcelain, and English transferwares, indicates a wide range of tableware types in presidio households and a range of economic diversity within the population represented. The significant numbers of high value English and Chinese vessels suggested the purchasing patterns of individuals and households with substantial income. In contrast, the equally significant tableware quantities of low valued Native Brown Wares were characteristic of less economically fortunate populations.

This was further confirmed through economic scaling analysis, which showed that in spite of the fact that the Chapel ceramics are from cumulative midden deposits representing various households, consumer choices of higher economic income individuals and families are reflected in the elevated quantities of Chinese porcelain and English transferwares, and the consuming practices of lower status households is shown in the large quantity of Galera Ware, Native American Brown Ware, and older Mayolica in the Tableware assemblages.

Unlike the ceramics assemblages from the San Francisco Presidio, functionality for Chapel Complex tableware vessels is diverse in both high and low status wares. In the Chapel Complex assemblage cups, bowls, and soup plates, are well represented amongst

the variety of ceramic types identified including Mayolica, Galera Wares, Chinese porcelains, and English whitewares, as well as Native American Brown Wares. Regardless of price range, tableware types in the Chapel Complex ceramics are functionally diverse. The only exceptions are European flat plates, which included only English (73 %) and Chinese (27 %) manufactured items.

Examination of gender roles concluded the obvious, which is that the study of presidio ceramics is by default a study of women's activities. In presidio society kitchen and dining areas and meal preparation tended to be female spheres of labor (Villa de Prezelski 1996:105; Williams 2003; Reynoso Ramos 2004; Smith-Lintner 2007:179; Voss 2008; Morton 2014:xv).

Finally an examination of foodways, functional vessel shapes, and expressions of cultural self identity showed that all of the cookwares and most of the tablewares represent traditional Mexican Colonial period Mesoamerican vessel shapes. Although the European flat plate was incorporated into the tableware assemblage, when viewed in the context of previous faunal studies from the San Diego Presidio, this does not indicate a change in food consumption practices. These conclusions, along with an examination of foodways, showed that presidio families followed culinary customs based on their northern frontier Colonial Mexican roots. These food practices retained strong connections to Mesoamerican origins. The cookware from the Chapel Complex included hollowware vessel shapes, and the comal, which indicated the consumption of tortillas and a predominance of broth-based, slow-simmer, foods cooked in a single pot (Foster 1948:81-85; Felton and Schulz 1983:83-86, 89-90; Fournier 1998:18, 31; Reynoso Ramos 2004:19, 85, 170, 173-174, 2015:253, 262; Newman 2013; Morton 2014:xvii; Mindling 2015:122; Marquieta 2016).

The Chapel Complex assemblage does not differ drastically either in ware types or vessel shapes from ceramic collections found in other northern Mexican frontier sites for the period it represents, and reflects a broader regional pattern documented in other late-

eighteenth and early nineteenth century northern frontier settlements (Cohen-Williams 1992; Calhoun 1999:340; Fournier 1999:163; Cohen-Williams and Williams 2004; Pavo-Zukerman and Loren 2012; Jenks 2013:17; Fournier Garcia and Zavala Moynahan 2014:157; Williams 2014). Called the Ibo-American Pattern by Jack Williams (2014:312) these assemblages typically include Mexican Mayolica, Galera, and Tonalá Bruñida Wares, and where available, locally produced Native American Brown Wares.

Based on these conclusions, there is strong evidence that there were no major dietary changes in the culinary practices of presidio populations in California and that they continued to follow traditional foodways that had been brought north from the frontier regions of Sonora, Sinaloa, and Baja California. It therefore follows that this ceramic analysis has found no evidence for the expression of a Californio self-identity that was unique from the regional *gente de razón* culture of the Mexican Colonial northern frontier.

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# **APPENDIX 1**

## **INTRUSIVE ARTIFACTS**

One hundred twenty-three sherds weighing 1.458 kilos, represented a minimum number of 20 items that were manufactured after 1837, and, therefore, are considered to have been deposited on the site after the period of San Diego Presidio's occupation. They are listed on the following table and range in date from circa 1840 through the early twentieth century. The three items that date circa 1840 may have been associated with activities in the chapel during its final years of use from 1838 until 1845. They are considered intrusive due to the fact that, although the Chapel continued in use until 1845, there are no documented residents living within the presidio walls after 1837, so these items do not represent daily activities of presidio families.

## INTRUSIVE CERAMICS TABLE

MNV - CATALOG NUMBER	UNITS	LEVEL - DEPTH	ITEM	TYPE	PATTERN NAME - ID	MANUFACTURER	DATE	REFERENCE	MNV COUNT	SHERDS	WEIGHT
WE # 0042A	S40 E110	II:6-12"	Plate, Large	English Transfer-Black/Grey	Gondola (View #1)	Unidentified; Possibly Davenport	1840 (Circa)	TCC # 6065; Williams & Weber 1978:278	1	2	145
WE # 0042B	Surface	Surface	Plate, Large	English Transfer-Black/Grey	Gondola (View #1)	Unidentified	1840 (Circa)	Williams & Weber 1978:278	0	3	11
WE # 0042C	S40 E100	II:6-12"	Plate, Large	English Transfer-Black/Grey	Gondola (View #1)	Unidentified	1840 (Circa)	TCC # 6065; Williams & Weber 1978:278	0	1	17
WE # 0042D	S40 E95	-	Plate, Large	English Transfer-Black/Grey	Gondola (View #1)	Unidentified	1840 (Circa)	TCC # 6065; Williams & Weber 1978:278	0	2	5
WE # 0043	S40 E110	II:6-12"	Plate, Large	English Transfer-Black/Grey	Gondola (View #1)	Unidentified	1840 (Circa)	TCC # 6065; Williams & Weber 1978:278	1	1	49
WE # 0322A	S30 E30	-	Plate, Large (Probably)	Edge Decorated-Cobalt	-	-	1840+	Hunter & Miller 2009:13	1	2	11
WE # 0322B	S30 E30	-	Plate, Large (Probably)	Edge Decorated-Cobalt	-	-	1840+	Hunter & Miller 2009:13	0	5	15
WE # 0671	-	-	Plate, Small	Glasgow Scotland Undecorated-Hotelware	"Warranted / Stone China / R. Cochran & Co. / Glasgow."; Underglaze Black.	Robert Cochran & Co.	1846-1896 Or 1850-1918	Kowalsky & Kowalsky 1999:115(B598); TCC (Has 1846-1896 In A Chart)	1	30	280
WE # 1607	-	-	Bowl	Transfer-Black	Unidentified Chinoiserie	-	1850+	Krase 1979:Plate Xix, Page 161	1	1	420
WE # 0675	-	-	Cup	English Molded White Ironstone	Framed Leaf	J.W. Pankhurst & Co. Or Samuel Alcock & Co.	1850s Or 1849-1851	Dieringer & Dieringer 2001:82-83; Stoltzfus & Snyder 1997:62; Wetherbee 1985:95 & 1996:84.	1	1	12
WE # 01181A	-	-	Bowl, Deep	Edge Decorated-Cobalt	-	-	1860-1890	McAllister 2001:11	0	1	1
WE # 0321A	S35 E115	-	Bowl, Deep	Edge Decorated-Cobalt	-	-	1860-1890	McAllister 2001:11	1	4	16
WE # 0321B	S15 E50	-	Bowl, Deep	Edge Decorated-Cobalt	-	-	1860-1890	McAllister 2001:11	0	2	12
WE # 0321C	-	-	Bowl, Deep	Edge Decorated-Cobalt	-	-	1860-1890	McAllister 2001:11	0	3	5
WE # 0321D	S15 E70	-	Bowl, Deep	Edge Decorated-Cobalt	-	-	1860-1890	McAllister 2001:11	0	2	5
WE # 0321E	S15 E20	-	Bowl, Deep	Edge Decorated-Cobalt	-	-	1860-1890	McAllister 2001:11	0	1	1
WE # 0321F	-	-	Bowl, Deep	English Edge Decorated-Cobalt	-	-	1860-1890	McAllister 2001:11	0	1	1
WE # 0672A	-	-	Bowl, Large Serving	English Undecorated-Hotelware	"Thomas Hughes / Burslem / 1"; Impressed.	Thomas Hughes	1860-1894	TCC	1	10	184
WE # 0672B	-	-	Bowl, Large Serving	English Undecorated-Hotelware	-	Thomas Hughes	1860-1894	TCC	0	12	120
WE # 0672C	-	-	Bowl, Large Serving	English Undecorated-Hotelware	-	Thomas Hughes	1860-1894	TCC	0	10	99

INTRUSIVE CERAMICS TABLE  
(CONTINUED)

MNV - CATALOG NUMBER	UNITS	LEVEL - DEPTH	ITEM	TYPE	PATTERN NAME - ID	MANUFACTURER	DATE	REFERENCE	MNV COUNT	SHERDS	WEIGHT
WE # 0672D	-	-	Bowl, Large Serving	English Undecorated-Hotelware	-	Thomas Hughes	1860-1894	TCC	0	6	64
WE # 0672E	-	-	Bowl, Large Serving	English Undecorated-Hotelware	-	Thomas Hughes	1860-1894	TCC	0	2	13
WE # 0672F	-	-	Bowl, Large Serving	English Undecorated-Hotelware	-	Thomas Hughes	1860-1894	TCC	0	1	8
WE # 1181A	-	-	Misc. Flat Rim Vessel	Edge Decorated-Cobalt	-	-	1860-1900	McAllister 2001:11	1	1	1
WE # 1181B	-	-	Misc. Flat Rim Vessel	Edge Decorated-Cobalt	-	-	1860-1900	McAllister 2001:11	0	1	1
WE # 0141	-	-	Plate, Large	English Transfer-Brown	Spring	W.H. Grindley & Co.	1866-1908	-	1	2	16
WE # 0544	S30 E35	15-27"	Bowl, Rice/Soup, Large	Chinese Celadon With Overglaze - White Celadon	Celadon, White, with Overglaze	-	1870	Krase 1979:20	1	1	43
WE # 0684	Surface	Surface	Cup	Buffalo, New York: Undecorated-Hotelware	"Buffalo / China / FBM / H"; Underglaze Flow Black.	Buffalo Pottery Co.	1901-1956	Conroy 1999:55-57.	1	1	30
WE # 0122	-	-	Unidentified Flat Vessel	Transfer-Green	-	Unidentified	Early 1900s	Conroy 1999 (Vol. 2):589	1	1	4
WE # 0709	Surface	Surface	Misc. Unidentified Frag.	Undecorated	-	-	20th Century	-	0	1	2
WE # 0687	-	-	Cup	Hand Paint With Luster	-	-	20th Century	-	1	1	2
WE # 0690	S25 E45, West Wall	II: 0-35"	Cup	Porcelain	Decorated With Pink, Red, Green, Black Colors	-	20th Century	-	1	3	42
WE # 0693	S25 E45, West Wall	II: 0-35"	Unidentified Flat Item	Porcelain	Decorated With Blue, Green, Rose, Orange, Black Colors	-	20th Century	-	1	3	3
WE # 0679	Surface	Surface	Bowl, Large Eating	Gilt Decorated	-	-	20th Century	-	1	1	9
WE # 0685	Surface	Surface	Plate, Large	Gilt Decorated	[Same Pattern WE # 697, 885]	-	20th Century	-	1	1	18
WE # 0688	-	-	Saucer	Decal, Underglaze-Hotelware	-	-	20th Century	-	1	1	14
WE # 0689	S25 E65	Surface	Plate, Oval / Platter	Decal, Underglaze-Hotelware	-	-	20th Century	-	1	1	141
WE # 0686	S25 E45, West Wall	II: 0-35"	Plate, Large	Decal & Gilt	-	-	20th Century	-	1	1	15
WE # 1608	-	-	Plate, Unknown Size	Japanese Export Ware	Phoenix Bird	-	20th Century	-	1	1	-
								TOTALS	22	125	1878

## APPENDIX 2

# MAYOLICA CERAMIC INDEX VALUE CALCULATIONS

An average ceramic index value for Mayolica wares was calculated by comparing prices from San Blas shipping lists (Perissinotto 1998:80, 154-155, 174-175, 264 - 265) and the price of undecorated bowls listed on an 1840 manifest for the hide and tallow ship *Alert* (*Alert* Manifest 1840:lot # 18). These calculations are provided in the following two tables. The first table presents Mayolica mean price value conversions from Spanish reales to U.S. dollars. These conclusions are based on the fact that during the late eighteenth and early nineteenth century a Spanish real was equivalent to 12.5 cents of a U.S. dollar. The American dollar at that time was equal in value to the Spanish peso, which was divided into eight reales. Consequently one real was roughly the value of twelve and one-half cents in United States money (Beilharz 1971:40-41). The second table gives the mean price calculations in U.S. dollars for British undecorated CC ware bowls listed in the 1840 *Alert* manifest.

The results determined that that the average piece of Mayolica cost .08 cents, or approximately twice as much as the average undecorated English ceramic bowl carried on the *Alert*. Although based on a limited sample and not accounting for price variation by vessel form, changes in price over time, or the fact that most - if not all - of the Mayolica was probably over a decade old, the results, none-the-less, do give a point with which to begin to assess relative values of Mexican ceramics. Since undecorated English (CC) wares always have an index value of 1.0 in Miller's indices (Miller 1980, 1991), Mayolica vessels were assigned a value of 2.0.



## MAYOLICA MEAN PRICE CALCULATIONS FROM SPANISH REALES TO U.S. DOLLARS

(One Real = 12.5 Cents of a U.S. Dollar)

YEAR	REAL PRICE PER CRATE OF 25 DOZEN ASSORTED VESSELS	DIVIDED BY 25	REAL PRICE PER DOZEN	DIVIDED BY 12	REAL PRICE PER ITEM	MULTIPLIED BY 12.5	DOLLAR PRICE PER ITEM	REFERENCE
1785	3.00	3.00/25 =	0.12	0.12/12 =	0.01	0.01 X 12.5 =	0.13	PERISSINOTTO 1998:80
1790	1.25	1.25/25 =	0.05	0.05/12=	0.004	0.004 X 12.5 =	0.05	PERISSINOTTO 1998:154-155
1790	2.00	2.00/25 =	0.08	0.08/12 =	0.007	0.007 X 12.5 =	0.08	PERISSINOTTO 1998:174-175
1796	1.50	1.50/25 =	0.06	0.06/12 =	0.005	0.005 X 12.5 =	0.06	PERISSINOTTO 1998:264-265
						Total Dollar Item Price	0.32	
						Mean Dollar Item Price	0.32/ 4 =0.08	

British CC Ware Bowls Mean Price Calculations 1840  
(In U.S. Dollars)

DOLLAR PRICE PER DOZEN AT BOSTON	DIVIDED BY 12	DOLLAR PRICE PER ITEM	REFERENCE
0.72	$0.72/12 =$	0.06	<i>ALERT MANIFEST</i> 1840:lot # 18
0.39	$0.39/12 =$	0.03	<i>ALERT MANIFEST</i> 1840:lot # 18
0.28	$0.28/12 =$	0.02	<i>ALERT MANIFEST</i> 1840:lot # 18
Total Dollar Item Price		0.12	
Total Mean Item Price		$0.12 / 3 = 0.04$	