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Material Culture Associated with *Frolic's Cargo*

As mentioned in Chapter 6 the local inhabitants, both Pomo Indians and local ranchers, salvaged a significant amount of cargo shortly after *Frolic* was wrecked. The site was salvaged again nearly a century later by sport divers, who not only collected things from the surface, but also used dynamite to penetrate into the wreck. Salvage and other chemical and bacterial site formation processes have also impacted on its preservation. Because of this, there is much cargo that is only known from historical evidence, including silks, beer, camphor trunks, grass cloth, sweetmeats, sundries, lacquered ware and much of the prefabricated house. Mostly what does remain of these items is fragmentary, usually consisting only of pieces of the containers in which they were packaged. Parts or traces of furniture have been found, such as several types of brass hardware. As for the beer, mostly what survives are fragments of the containers in which they were stored: glass bottles and corks. Their contents are only known through historical documents. The majority of intact cargo that has survived is in the form of silverware and Chinese porcelain.

Layton (2002) has compared *Frolic's* cargo to that of the ship *Eveline*, which was also outfitted by Augustine Heard & Co. and has more detailed invoices than that of *Frolic*. Because *Frolic's* cargo was supposed to be modelled after *Eveline's* cargo, with the Heards purchasing only items that brought 75 percent profit for *Eveline*, Layton has used *Eveline's* manifest to provide details about the sixteen general entries of goods on *Frolic's* bill of lading (Layton 2002:152). This study has used Layton's comparison as a departure point to ask questions about the type, quantity and quality of the goods, as well as the type of packaging in which these consumer goods were shipped.

Alcohol

One of the largest components of *Frolic's* cargo was alcohol – 84 cases of beer. The entry of beer in the manifest, as Layton points out, actually refers to Edinburgh ale (Layton 1997:136). The Heards purchased 24 hogsheads of Edinburgh ale for \$600 as part of outfitting the cargo, and they had it packaged into 509 dozen (6,108) bottles (Layton 1997:136). According to the *Cambridge World History of Food* (Cantrell 2000:619), “Beer and ale are mildly alcoholic beverages made from the action of yeast fermenting a usually grain-based mixture.” Prior to the 1700s the term ale referred to unhopped beer but after the eighteenth century ale was regularly hopped, and the terms ale and beer were used synonymously (Cantrell 2000:619).

The difference in nomenclature between beer and ale, however, creates an issue for calculating the quantity of liquid in a hogshead. For example, *The Young Man's Best Companion: A Systematic Course of Instruction in Correct Pronunciation of Words, Arithmetic, Book-Keeping, mensuration, Geometrical Problems, Mechanical Powers, Geography and Astronomy* (Fisher and Marks 1862:59) indicates that a hogshead of beer was 54 imperial gallons, while a hogshead of ale was 48 imperial gallons. Given that the purchase order was for 24 hogsheads of Edinburgh ale, this study used the latter measurement as the volume of a hogshead. Thus, the Heards purchased a total of 1,152 gallons (5241.6 litres) of ale, which also equals 1.5 barrels. This also means that bottles used for packaging the ale would have had an approximate capacity of 0.19 imperial gallons, slightly less than nine-tenths (0.86) of a litre.

No remains of the cases were recovered, but Layton identified the packaging material through the aforementioned invoice as ironbound cases that each held six dozens (72) bottles (Layton 1997:136). If there were 84 cases of ale in the cargo each holding 72 bottles, then the total number of bottles carried in *Frolic's* cargo was 6,048. This calculation leaves sixty bottles out of the 509 dozen bottles as unaccounted for. These sixty bottles may have been omitted from the final cargo due to breakage or spillage, or they may have been allocated to the crew.

Although it is difficult to comment on the proof or quality of this alcohol, owing to the loss of the ale to site formation processes, contemporary sources describe Edinburgh ale as strong and sweet. For example, Chambers (1847:161) describes it as “a potent fluid, which almost glued the lips of the drinker together, and of which

few, therefore, could despatch more than a bottle.” Knight (1851:14) further describes it as:

Good Edinburgh ale must be allowed time to ripen into excellence. When bottled, it ought to be cloyingly sweet, and so glutinous that when some is poured upon the palm, and the hand held closed for five minutes, immersion in warm water is required before it can be opened again. After bottling, the ale ought to stand five years in a cool dry cellar, and four months near a Dutch oven in frequent use. It is then at its best; but even then it is more like a liquor to be sipped than a liquor to be drunk.

Ale, such as that carried aboard the *Frolic*, and alcoholic beverages in general, probably would have sold well in San Francisco. For example, advertisements in the *Daily Alta California* indicate that there were a variety of liquors available in the San Francisco market at the time, and not just ale. For instance, on 25 September 1850, Dewey and Heiser, located on California Street, advertised in the *Daily Alta California* (25 September 1850):

Wines and Liquors--Madeira in in quarter casks, sherry do, malinsey madeira do, sweet malaga do, port wine do, cherry brandy do, 150 dozen Otard Dupuy brandy, Chatonette, jr., brandy in eighth casks Noyeau, Annisette, raspberry, peppermint cordials in 6 gallon kegs, Stoughton's bitters, lime juice, etc., champagne anchor....

This study did not locate any advertisements for Edinburgh ale in the *Daily Alta California* between June and August, and if *Frolic*'s Edinburgh ale would have made it to San Francisco, then it might have sold well because of its uniqueness in the port.

Although there have been a variety of glass bottles found on the *Frolic* shipwreck, the most commonly found bottle type consisted of 27 bottles classified as mouth (or free) blown very dark green glass, or what is commonly referred to as black glass (see Chapter 4). Black glass contains high levels of iron and manganese impurities, and was the most common type of glass used as a container for different types of spirits and mineral waters during the seventeenth, eighteenth and nineteenth centuries (Jones and Sullivan 1989:13-14; Lorrain 1968:43; Newman 1977:40). The 27 Edinburgh ale bottles consisted of two complete bottles, a minimum of 25 finishes with a down-tooled lip and string rim (circa 1830-1840) and a minimum of 19 bases characterised by a bulged, pushed-up base (see Figure 21 and Figure 22). All of the bottles were cylindrical in shape and had a rounded shoulder form. No mould lines were visible in the database photographs, but based on their overall shape and manufacturing period, they were likely made from a three-piece mould.



Figure 21. Edinburgh ale bottle base (Artifact Number CA.MEN.1947.H.03.092; courtesy PAST Foundation).



Figure 22. Edinburgh ale bottleneck with cork (Artifact Number CA.MEN.1947.H.03.357; courtesy PAST Foundation).

All of the closures associated with the Edinburgh ale bottles were cork stoppers, which is a wooden plug made from the bark of the cork oak tree that is inserted into the neck of the vessel in order to form a seal (Jones and Sullivan 1989:149). By definition, a closure is an item separate from the bottle itself that is used to protect the contents of a bottle from dirt, spillage, evaporation and exposure to air (Jones and Sullivan 1989:149). Twenty-two closures were recovered in total from the shipwreck *Frolic*. Nineteen of the corks were found still intact within the ale bottle necks, while three more were recovered separately from their corresponding bottles.

Camphor Trunks, Furniture and Lacquered Ware

Frolic's cargo consisted of 30 cases of camphor trunks, 54 cases of furniture and 30 cases of lacquered ware. With a few exceptions all that remain of these items is a variety of brass hardware (see Table 7). Also with a few exceptions, it is difficult to pin down which pieces of hardware belonged to the camphor trunks, the furniture or the lacquered ware because, as indicated in Crossman (1972:117-186; 1991:220-288), all would have been adorned with very similar types of hardware. Interestingly, the brass hardware, although exact copies of Western prototypes, was cast in China (Crossman 1991:253). Because they were nearly identical to their Western counterparts, it is difficult to identify those made in China versus those made in the West. The only positive indicator of Chinese manufacture was the presence of a Chinese maker's mark, which sometimes appeared alongside a Western maker's mark as a consequence of the casting process (Crossman 1991:368-369). As Layton (2002) has pointed out, a handle assembly on a campaign desk (discussed below) exhibited such a Chinese maker's mark alongside a Western maker's mark.

Table 7. Furniture hardware from the *Frolic* shipwreck by artifact count, MNA and percentage of MNA.

Furniture Hardware type	Number	MNA	Percentage of MNA
Fleurette Garnish	1	1	0.41
Corner Protector	5	5	2.07
Handle Assembly	183	146	61.67
Knob	10	10	4.15
Hinge	32	16	6.64
Hook	39	33	13.69
Latch Pin	7	5	2.07
Lid Stop	28	9	3.73
Lock Assembly	36	11	4.56
Marble Table Top	1	1	0.41
Roller Bearing Assembly	2	1	0.41
Trimming Strip	17	1	0.41
Total	361	241	100

Frolic's bill of lading lists 30 cases of camphor trunks. Camphor trunks were manufactured in sets of up to five trunks that consisted of a variety of sizes (see Figure 23). If *Frolic's* camphor trunks were sold in sets of five, then that means the ship may have carried a total of 150 camphor trunks. Sometimes camphor trunks were shipped nested inside each other, with the smallest of them holding tea, while, at other times, they were used to pack personal belongings or other consumer goods (Crossman 1991:253-254). Layton finds that there were two types of camphor trunks available during the mid-nineteenth century, and each varied in cost and quality. The more expensive one was made of camphor wood, while the other less expensive one was made of pine rubbed with camphor oil that was then covered with leather, though it is undetermined which of these *Frolic* carried (Layton 2002:162). Additionally, the trunks were often painted maroon, blue, green, brown, dark green black or yellow (Crossman 1991:253; Layton 2002:162). Some camphor trunks also had decorative floral borders painted on them, while others remained plain (Crossman 1991:253). Camphor trunks were popular because they emitted an odour that repelled moths, almost a necessity when nearly every piece of clothing was made from natural fibre (Layton 2002:160-162).

The hardware that was positively identified as associated with camphor trunks only includes five corner protectors, although Layton (2002:160-163) attributes several other pieces of hardware to the camphor trunks, including at least 17 trimming or edging strip fragments, and a minimum of 16 hinges, 9 lid stops, 11 lock assemblies and 52 handle assemblies, consisting of 51 lugs, 45 lug plates (3-hole and 4-hole) and 52 bails. The problem with assigning all of this hardware to only the camphor trunks is that these exact same pieces of hardware often adorned other types of furniture and lacquered wares (see Crossman 1991). For example, handle bails, such shown in Figure 24, would have adorned everything from camphor trunks to chests of drawers.



Figure 23. Camphor Trunks (from a private collection; reproduced from Crossman 1991:245).

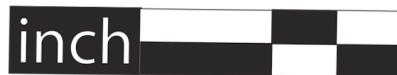


Figure 24. Brass bail (Artifact Number CA.MEN.1947.H.03.427; courtesy PAST Foundation).

Frolic carried 54 cases of furniture and 30 cases of lacquered ware. As for the quality of the furniture and lacquered ware, it seems safe to say that the furniture was of a relatively high quality, because nearly all of the furniture fittings were made of brass, rather than pewter or another cheaper metal. Examples of furniture adorned with brass hardware very similar, if not identical, to the camphor trunk hardware can be found in *Eveline*'s invoice list. These include rosewood writing desks, mahogany writing desks, blackwood tables with marble tops (with a drawer), centre tables with marble tops (also with a drawer), chests of drawers, measuring tables and wardrobes. Other furniture that was constructed without hardware includes spring couch bedsteads, couches, and chairs. Much of the furniture and lacquered ware produced in Canton at this time was copied from Western models sent to China or from designs that could be found in catalogues, newspapers or other types of plans (Crossman 1991:263-264). An interesting point that Crossman (1991:241) makes is that in a contemporary painting (circa 1820), some pieces of furniture appear as though they were painted, rather than left unfinished or varnished (Figure 25). This is indicated by the variety of furniture that appears in colours of green and red in the painting. Historical documents do not indicate if any of *Frolic*'s furniture was in fact painted with a colour, but based on this image it cannot be ruled out.

Although furniture could have been made from any number of Asian hardwoods, lacquered ware was usually made of a light wood that was first covered in grass cloth, then lacquered with the sap of the eastern sumac tree (*Vernix vernicia*), and finally painted in a decorative design adorned with gilding (Crossman 1991:263). *Eveline*'s lacquered ware consisted of forms such as work tables, centre tables, chess tables, writing desks, cabinets with work tables, small cabinets, work boxes, paper boxes, card boxes with counters, cigar boxes, shaving boxes, tea trays, teapoys, tea caddies and plates. Such a range of lacquered ware is illustrated in Figure 26, a painting of a Chinese lacquered ware shop (circa 1840).

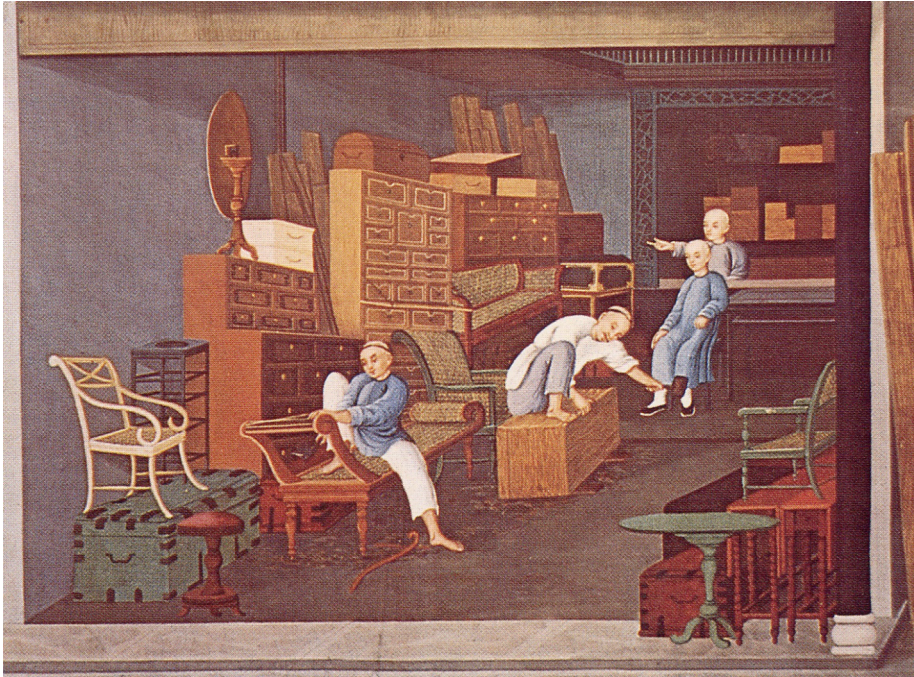


Figure 25. Chinese furniture maker's shop, (circa 1820) gouache on paper by an unknown artists (from the collection of Benjamin Ginsberg; reproduced from Crossman 1991:241).

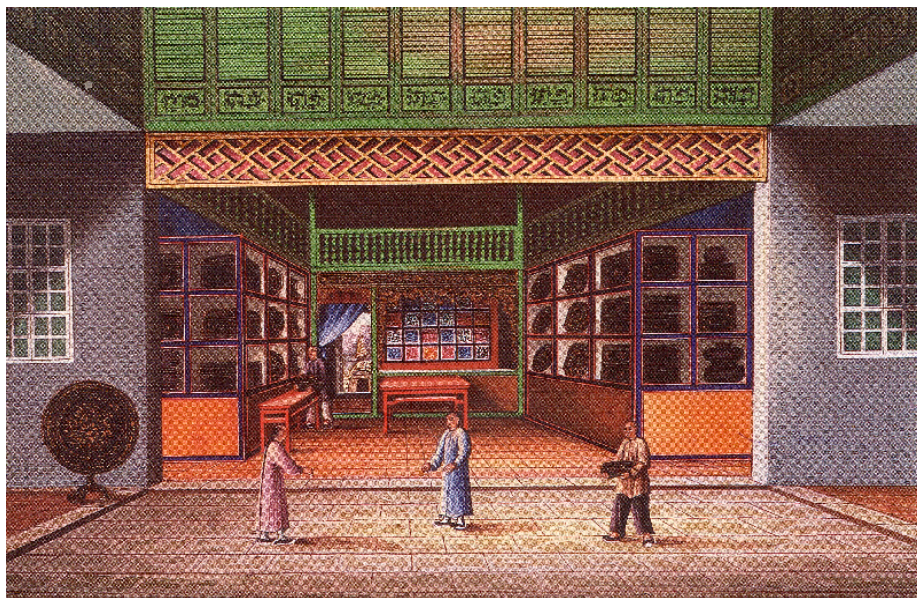


Figure 26. Chinese lacquered ware shop, (circa 1840) watercolour on paper by an unknown artist (from the collection of Mr. and Mrs. William B. Osgood, reproduced from Crossman 1991:265).

Much of the furniture and lacquered ware was most likely made in separate pieces, or sections, which could be assembled after shipment to the West. This sort of shipment method was practical in that it prevented breakage during transit and reduced shipping costs (Crossman 1991:264). It would also prevent the hardware from scratching another piece of furniture as the ship moved through the water. Archaeological evidence supports this method of packaging as many of the bails were found in clumps, suggesting that they were removed from their respective camphor trunks, furniture or lacquered ware before being packed into the hold of the ship (Annalies Corbin, pers. comm., 7 March 2008). If this were the case, then it would make it even more difficult to attempt to attribute specific pieces of hardware to specific types of camphor trunks, furniture and lacquered ware, even if the organic portion of the furniture did not succumb to site formation processes.

There are a few pieces of brass hardware that would have been fitted to furniture and lacquered ware rather than the camphor trunks. Specifically, this includes a fragment of a marble tabletop, a ring pull handle assembly and a campaign desk bail (see Figure 27 and 28). Although it is unknown what type of table the marble adorned, we do know that *Eveline* carried blackwood tables with marble tops and centre tables with marble tops. As for the ring pull assembly, which consisted of a lug, a grommet and a ring pull, it is difficult to positively say what type of furniture or lacquered ware would have been fitted with this sort of handle, but it was most likely a piece that contained either a drawer, cabinet door or other form of compartment. The only furniture piece that can be attributed to a specific type of furniture is a handle assembly associated with a campaign desk (see Figure 28) (Crossman 1991:248, 254-255). Campaign desks were usually constructed from a lighter wood, such as rosewood, padouk or camphor, and were built in two compartments. The top compartment usually had a pop-up storage compartment, whose lid doubled as a writing surface that could be sloped downwards for ease of writing. The bottom part consisted of at least one pull out drawer with a lock. All of the handle bails were recessed into the drawers and the sides in order to prevent the hardware from scratching during transport. Campaign desks became popular in the United States and Europe after the Napoleonic wars, as they were a very practical form of moveable furniture for men in the military service, as well as ship captains and supercargo (Crossman 1991:254).



Figure 27. Drawer Fragment with ring pull still attached (Artifact Number CA.MEN.1947.H.07.005; courtesy PAST Foundation).



Figure 28. Fragment of campaign desk with back plate of handle assembly still attached (Artifact Number CA.MEN.1947.H.03.340; courtesy PAST Foundation).

Chinese Porcelain

Today, the largest remaining part of *Frolic's* cargo is Chinese porcelain (see Table 8). Referred to in *Frolic's* manifest as Chinaware, the Chinese porcelain consisted of 676 rolls and 20 cases. *Frolic's* Chinese porcelain was probably produced in Ching-tê Chên in the providence of Kiangsi (see Chapter 5). Layton (1997:136) has previously identified the rolls as stacks of what is referred to in *Eveline's* invoice as “common” bowls. The rolls consisted of nested bowls with wet clay placed in between each piece to prevent rattling and breaking. Examples of this clay packing material were found during excavation. The clay packed rolls were then covered with a protective wrap or matting and enclosed in a bamboo basket-like sheath for ease of lifting and additional protection (Layton 1997:136). The cases on the other hand

imply forms that were not nested, but were of such a form that they necessitated a box or container for shipment. In addition to “common” bowls, *Eveline* carried a variety of jars, as well as a set of dinnerware decorated in the Canton pattern (see Chapter 5). As discussed below, *Frolic* carried comparable items, and a case probably refers to packaging material for items such as jars that were not suitable for nesting like the “common” bowls.

Table 8. *Frolic’s* Chinese porcelain major and minor decorative types, form, MNV and percentage of MNV.

Decorative Type	Form	MNV	Percentage of MNV
Anchor	Unidentified	1	0.55
Bamboo	Small rice bowl	15	8.20
Bird	Saucer-dish	1	0.55
Canton	Jar	1	0.55
Carp	Unidentified	1	0.55
Catfish	Unidentified	1	0.55
Cloud	Jar	0	0.00
Dragon	Jar	1	0.55
Fu	Family Soup bowl	12	6.56
Ginger Jar	Jar	1	0.55
Peach and Fungus	Large Rice Bowl	51	27.87
Polychrome	Holloware	1	0.55
Rock and Orchid	Saucer-dish	19	10.38
Six Treasures	Saucer-dish	1	0.55
Snail	Soup Plate	76	41.53
Waves	Jar	1	0.55
Total		183	100

With the exception of six sherds (MNV of 1) decorated in a hand-painted overglaze polychrome pattern, all of the Chinese porcelain was hand-painted underglaze in a variety of blue-and-white patterns (see Table 8). All of the blue-and-white Chinese porcelain has previously been identified and discussed by Jones (1992). Five of these decorative types comprise more than five percent of the Chinese porcelain and have been identified as porcelaneous stoneware: Bamboo, Fu, Peach & Fungus, Rock & Orchid and Snail, and will be discussed here in detail. Because of the high frequency with which these decorative designs occurred, it is safe to say that they were part of the cargo. These types were also likely similar to what *Eveline’s* manifest referred to as “common” plates and bowls, and thus were packed in rolls. All of the other Chinese porcelain patterns (Anchor, Bird, Canton, Carp, Catfish, Cloud, Dragon,

Ginger Jar, Six Treasures, and Waves) had a MNV of 1, which equates to less than one percent of the entire Chinese porcelain assemblage. This suggests that: 1) either the cargo did not consist of many vessels decorated in these designs; or 2) these decorative types were personal items of the crew.

Major Chinese Porcelain Decorative Styles

Bamboo

Bamboo was represented in the collection by 61 sherds, and based on the number of bases and nearly complete base fragments, had an MNV of 15. Bamboo, as shown in Figure 29, was classified as a small 4 3/4-inch rice bowl characterised by three circles and a central design motif of what is believed to be a dragonfly (see Jones 1992:31-34). Bamboo also has a blue, double band encircling the central design near the juncture of the cavetto and shoulder, and another blue band on the interior of the rim. Bamboo's exterior decoration has two variations: one consisting of a single band near the rim and two bands at the juncture of the foot and shoulder; and the other having a double band near the rim and a single band at the juncture of the foot and shoulder. The glaze is uneven and pitted, and temper is clearly visible in the body. The colour of the underglaze ranges from a soft, grey blue, to a very deep blue that appears almost black in some cases.



Figure 29. Major Chinese porcelain decorative type: Bamboo (Artifact Numbers CA.MEN.1947.H.03.016 [left] and CA.MEN.1947.H.16.056 [right]; courtesy PAST Foundation).

Bamboo is one of the most common Chinese porcelain types found on overseas Chinese sites between the 1850s and the 1870s (Sando and Felton 1993; Wegars 1993; Williams 2008). This decorative type is also commonly referred to as “Three Circles and Dragonfly,” “Dragonfly,” “Three Circles and Longevity,” and “Swatow” (Sando and Felton 1993:160). Based on inventory records for the Kwong Tai Wa Company, a Chinese store in northern California, Bamboo was one of the cheaper ceramics available to Chinese-American consumers during the nineteenth century (Sando and Felton 1993:160).

Fu

One hundred and forty-nine sherds, having an MNV of 12, were classified as Fu. Figure 30 depicts the Fu decorative type, which was a large 10-inch family soup bowl with the interior characterised by a large central *fu* character. The central *fu* character is encircled with a double band with a large bisque band in between. The bisque band resulted from stacked bowls fusing during the firing process (Jones 1992:38-39). The central motif is flanked on either side by an unknown stylised design. The rim’s interior has a single blue band, as does the outside of the rim, but the outside banding pattern varies from just one single band along the rim to one band along the rim and two bands near the juncture of the shoulder and footring. The colour of the blue underglaze was a soft, grey blue, and the clay body of Fu was somewhat grey and coarse (Jones 1992:18). It should be noted that Jones (1992) refers to Fu as meaning “happiness”; however, according to Sando and Felton (1993:160) “Happiness” is an altogether different decorative type. Instead, Sando and Felton believe Fu signifies prosperity (Sando and Felton 1993:162). Despite this discrepancy, Fu is ironically referred to in the inventory records for the Kwong Tai Wa Company as crude and cheap (Sando and Felton 1993:162).



Figure 30. Major Chinese porcelain decorative type: Fu (Artifact Numbers CA.MEN.1947.H.06.024 [left] and CA.MEN.1947.H.20041.015 [right]; courtesy PAST Foundation).

Peach & Fungus

At least a minimum number of 51 (184 sherds) large 6-inch rice bowls decorated with Peach & Fungus were represented in the collection. Peach & Fungus is also referred to as “immortals’ fungus birthday congratulations bowls” or more simply “birthday bowls” (Jones 1992:35). Figure 31 shows the Peach & Fungus design motif as characterised by a single stylised fungus in the centre of the inside of the vessel encircled by a double blue band. The outside has a stylised peach blossom and a fungus in two tiers. A blue band separates the tiers, while a curved line separates each design element. Both the outer and inner sides of the footring have a narrow double band. An unidentified central design motif adorns the bottom of the exterior of the vessel. Peach & Fungus has a clear glaze with a pale blue-green tinge and blue underglaze decoration that is a dark, rich shade. The body of Peach & Fungus exhibits a white paste, and is of a medium temper (see Jones 1992:18; 35-37).



Figure 31. Major Chinese porcelain decorative type: Peach & Fungus (Artifact Numbers CA.MEN.1947.H.03.013 [left] and CA.MEN.1947.H.03.010 [right]; courtesy PAST Foundation).

Rocks & Orchid

The fourth major decorative type of *Frolic's* Chinese porcelain is Rocks & Orchid, which was represented by a shallow 6-inch dish-saucer, as shown in Figure 32 (Jones 1992:25-29). One hundred and thirty-one sherds representing a minimum number of nineteen vessels belong to this sherd type that is characterised by a centrally placed rock, or group of rocks, with foliage, or an orchid, sprouting from it. To the left of the rock are plum blossoms and to the right was a stylised chrysanthemum. A narrow band of blue encircled the central design motif, and a second band adorned the inside of the rim edge. The outside of the vessel had another thin blue band around the rolled rim, and three equidistant objects on the sides that Jones (1992:27) identified as small boats. Two more small blue bands encircled the juncture of the footring and the shoulder. An unidentified Chinese character sat in the middle of a blue band inside the footring. The glaze of Rocks & Orchid was tinged a pale blue-green, and the blue underglaze had a deep and rich blue colour, appearing almost black on some pieces. It had thinner walls and was glazed completely, suggesting that it was of a higher quality than Fu and Snail (Smith 2006:54; Jones 1992:18).



Figure 32. Major Chinese porcelain decorative type: Rocks & Orchid (Artifact Numbers CA.MEN.1947.H.09.001 [left] and CA.MEN.1947.H.10.123 [right]; courtesy PAST Foundation).

Snail

Snail was represented by a soup plate and consisted of 375 sherds having a MNV of 76. Although significant variations occurred in the Snail design, including at least two different sizes (a larger 8.5 inch bowl and a smaller 7 inch bowl), in general Snail was characterised by a central circular medallion surrounded by a bisque ring, a blue band near the juncture of the cavetto and shoulder and a blue band around the interior of the rim (see Figure 33). Between the two blue bands were two stylised snails. The blue underglaze was a soft, grey blue, and the clay body of Snail was somewhat grey and coarse. Jones (1992:40-51) has divided the Snail type pattern into five varieties (A, B, C, D and E) based on the placement and design of the underglaze patterns on the cavettos, the arrangement of the underglaze bands, footring treatments, and body thickness and glaze application. A few of the Snail vessels, specifically varieties A, B and E, have tally marks inscribed on the interior, which was probably a simplified method of counting stacks of vessels. Similar to Fu, Snail would have been characterised as crude and cheap due to the presence of the unglazed bisque bands (see Sando and Felton 2008:160).



Figure 33. Major Chinese porcelain decorative type: Snail (Artifact Numbers CA.MEN.1947.H.05.722 [left] and CA.MEN.1947.H.10.004 [right]; courtesy PAST Foundation).

Based on *Eveline's* invoices, Layton (2002:151-157) has determined the quantity of a roll of porcelain as based on the size of the bowls which it was contained. *Frolic* carried six different sizes of bowls: 6-inch Peach & Fungus bowls, 4.75-inch Bamboo bowls, 10 inch Fu bowls, 8.5-inch large Snail bowls, 7-inch small Snail bowls and a 6-inch Rocks & Orchid bowls, with each roll ranging between twenty and forty bowls per roll. If this is the case, *Frolic* carried over 15,000 individual pieces of Chinese porcelain.

Minor Chinese Porcelain Decorative Styles

Anchor, shown in Figure 34, consists of only one (MNV of 1) very small sherd. It is of an undetermined hollowware and has a rich, blue underglaze colour and a clear glaze with a smooth surface texture on a thin body.

Four sherds, representing an MNV of one shallow bowl, were attributed to the decorative style labelled Bird (see Figure 35). It should be noted that Jones (1992:123) identified the decoration on these sherds as “dragon feet”. However, considering that there is another decorative type labelled Dragon (discussed below), where the feet also appear bird-like and there is no evidence that the vessel actually depicts a dragon, it was decided that Bird would be used for clarification. This thick-bodied shallow bowl was characterised by a bird as a central interior design motif surrounded by a bisque ring in between two blue bands. The glaze was tinged blue-grey and the underglaze colour was a rich, dark shade of blue. The sides of the interior were also decorated with at least one other stylised bird, possibly more; however, due to incompleteness the exact number could not be determined.

Ten sherds (MNV of 1) were identified as the decorative type labelled Dragon, as shown in Figure 36. This vessel was adorned with an animal that was clearly a dragon and not a bird. It was also distinctive from Bird in that it had a relatively thin body, and a bright blue underglaze colour with a clear glaze, suggesting that it was of higher quality. Layton believes the Dragon ware was most likely some sort of large shallow platter. It should be noted that a few of the Dragon ware sherds also exhibited part of a design motif on a jar that Jones (1992:122) referred to as “cloud.” The cloud was probably a cloud of smoke coming from the nostrils of the dragon. Two body fragments were identified in the artifact database as cloud, but, as indicated above, these body fragments were in fact part of the Dragon vessel, and not a separate decorative type. As such, the sherds exhibiting the cloud were included in the Dragon MNV. It should be noted, however, according to Smith (2006:55-56), that the Dragon sherd recovered during the 2004 artifact collection was found in the stern. Considering this as well as its rarity in the collection, Smith believes that the Dragon ware belonged to officers, and was not part of the cargo.



Figure 34. Minor Chinese porcelain decorative type: Anchor (Artifact Number CA.MEN.1947.H.13.036; courtesy PAST Foundation).

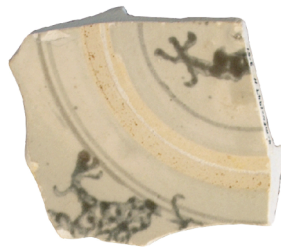


Figure 35. Minor Chinese porcelain decorative type: Bird (Artifact Number CA.MEN.1947.H.03.051; courtesy PAST Foundation).



Figure 36. Minor Chinese porcelain decorative type: Dragon (Artifact Number CA.MEN.1947.H.27.004; courtesy PAST Foundation).

The *Frolic* artifact database contained one sherd (MNV 1) identified as Canton. Canton was one of the most common types of Chinese export porcelain produced for the export market (Mudge 1962:141). Canton wares contained decorative patterns that consisted of islands, trees, bridges, boats and sometimes human figures (Mudge 1962:140). The border of Canton ware “customarily had a dark-blue lattice or network border on a solid light-blue ground with a wavy or scalloped line above” (Mudge 1962:140). Jones (1992:55-56) identified this as a “rain and cloud” border. A willow tree often appeared in the Canton central design, and because of this its English knock-off was often referred to as Willow Ware (see Chapter 4) (Mudge 1962:140). The Canton design was considered a traditional one, but the details often varied from set to set, as it was never a standardised decoration (Mudge 1962:140). Mudge (1962:140) argues that these were the most popular export wares because their forms imitated those of the English and they were the least expensive. Additionally, they did not require a special order and, thus, were readily available at Canton when desired.

Layton, on the other hand, has identified at least two porcelain sherds, one a fragment from a large platter and the other a fragment from a lid, decorated in the Canton style (Layton 2002:156). The database, on the other hand, only contained one entry for a thick-bodied base fragment identified as Canton. Unfortunately, the photograph of this sherd (see Figure 37) depicted inside the vessel and, thus, no decoration was visible. Complicating matters even further, the description in the database actually describes this sherd as a base fragment of a ginger jar, but as discussed below, Jones (1992) identified Ginger Jar (Figure 38) as a separate type, even though it was decorated in the Canton pattern. A thin body, not a thick body such as the aforementioned Canton sherd, and a distinct border style, characterised Ginger Jar.

Due to the function of Ginger Jar, its thin body and its distinct border style, it was decided to continue referring to this decorative style as Ginger Jar. This, as the name implies, referred to the function of containing ginger or other pickled foodstuff. Ginger Jar’s border, which was a “straight line,” was distinctive from the other type of Canton border that consisted of a “rain and cloud” (Jones 1992:55-56). The Ginger Jar decorative type had a relatively thin body and showed no signs of pitting, suggesting that it may have been of a higher quality.



Figure 37. Minor decorative type: Canton (Artifact Number CA.MEN.1947.H.10.127a; courtesy PAST Foundation).



Figure 38. Minor Chinese porcelain decorative type: Ginger Jar (Artifact Number CA.MEN.1947.H.24.001; courtesy PAST Foundation).

Layton (2002:157) has also attributed the remains of the decorative type Ginger Jar to the sweetmeats, but even though there were eighteen sherds associated with this vessel type, it only had an MNV of one. As will be discussed below, *Frolic* carried 100 boxes (600 jars) of sweetmeats, and for this amount an MNV of one was a relatively small sample size. It may have been the case that sweetmeats were transported in the Ginger Jar vessels, and the small sample size in the collection was due to the local inhabitants' salvaging activities. A closer look at *Eveline's* invoice indicates that *Eveline* actually carried a variety of sugar jars, barrel jars, jelly jars and

vases, and that the jars belonging to the minor Chinese porcelain decorative types, such as Ginger Jar, could have been any one of these.

Two different types of decorative fish were also included as separate decorative types in the collection. Carp (Figure 39) was represented in the collection by only four small ceramic fragments (MNV of 1). An underglazed rich blue stylised carp, of which fish scales and an eyeball were identifiable, characterises it. Its form was undetermined. Catfish (Figure 40), on the other hand, was represented in the collection by only one small base fragment, suggesting that this vessel was some sort of flatware or shallow bowl. It was characterized by an underglazed rich blue stylised catfish, of which fish scales, gills and an eyeball were identifiable.



Figure 39. Minor Chinese porcelain decorative type: Carp (Artifact Number CA.MEN.1947.H.03.058; courtesy PAST Foundation).



Figure 40. Minor Chinese porcelain decorative type: Catfish (Artifact Number CA.MEN.1947.H.03.054; courtesy PAST Foundation).

The collection only contains one complete shallow saucer plate decorated with Six Treasures, though no photograph was included in its artifact database file. According to Jones (1992), identified design elements in this vessel type consist of a harp or rhinoceros horn, a peach, a gourd, a sword and two butterflies. The underglaze colour was classified as dark grey-green to black and the glaze colour is clear grey with hints of an unidentified rose colour on the back.

Waves (Figure 41) was a decorative style identified previously by Jones (1992:122), and was represented in the database by three body fragments and one base fragment, giving this decorative type an MNV of one. The Wave decorative type had a relatively thick body, clear, grey glaze and a rich blue underglaze colour. It was thick bodied and exhibited a very stylised painting style. Wave was a basal fragment to a jar that was distinct from the Canton and Ginger Jar mentioned above.



Figure 41. Minor Chinese porcelain decorative type Waves (Artifact Number CA.MEN.1947.H.10.147; courtesy PAST Foundation).

There were two rim fragments and three body fragments of Chinese porcelain decorated with an overglaze banded polychrome floral design. Only one photograph, depicted in Figure 42, was present in the database. This vessel was an unidentified hollowware, most likely a deep-sided bowl or teacup. Overglaze polychrome wares not only differed from underglaze blue-and-white wares in that their decoration was painted over the glaze, but they were usually shipped by sea to Canton where the final overglaze decoration was applied (see Chapter 5) (Howard and Ayers 1978:40). For this reason, overglaze polychrome wares required an extra firing after the decoration had been applied, and, as such, were often more expensive than blue-and-white porcelains (Miller and Stone 1970:86; Mudge 1962:142-143).



Figure 42. Minor Chinese porcelain decorative type: polychrome (Artifact Number CA.MEN.1947.H.10.130; courtesy PAST Foundation).

Silk and Grass Cloth

Frolic carried 243 cases of silks and 18 cases of grass cloth. Layton has found historical evidence of Pomo Indian women wearing silk shawls and selling bolts of cloth nearly ten years after *Frolic* was wrecked (Layton 2002:159). If any of these textiles remained on the shipwreck after salvaging activities, they have succumbed to natural site formation processes. However, using historical documents, questions can be asked about the packaging, type and quality of fabric that *Frolic* carried. Chinese silk was a cloth desired by the wealthy, who fashioned the finest clothing from it (see Chapter 5) (Larkin 1988:184). Textiles, in particular the more expensive ones like silk, were usually packed in lacquered boxes (Layton 2002:159). A lacquered box could have been considered a case. Since we know that *Frolic* carried 30 cases of lacquered ware, some of these may have been lacquered ware boxes not only intended for sale in San Francisco, but also used as packaging material for *Frolic*'s fabric cargo.

Eveline carried an assortment of fabrics, and since *Frolic*'s and *Eveline*'s silk cargo cost about the same, Layton maintains that they were probably comparable (Layton 2002:159-160). *Eveline*'s invoices for the purchase of silks at Canton included a wide variety of colours, sizes and forms, including sarsnets, camlets, silks, velvet,

embroidered crepe shawls, silk gauze, silk dresses, satin damask, and fine sewing silk, among others (Layton 2002:223-229).

Grass cloth, on the other hand, was a Chinese fabric woven from ramie. Ramie was a fibre obtained from the stems of plants belonging to the nettle family, *Boehmeria nivea* and *Boehmeria tenacisema*. These plants were native to tropical Asia but they were cultivated in Europe and the Americas for the last few centuries. Ramie produced a white, lustrous fibre that dyed well and was resistant to mildew and insects. It has been used for fabric since prehistoric times, but its other uses included paper, twine, fishnets and thread (Cole 1892). According to George Cole (1892), most silk exported from China was a mixture of silk and ramie, but this fact was not discovered for a long time because, when spun, woven and dyed properly, ramie could be just as elegant as silk when properly finished. Ramie was mixed with silk because it was stronger than silk by itself, but it did not provide as much warmth (Cole 1892). Again, no archaeological examples of silk or grass cloth remained preserved, and these items could only be speculated upon based on comparative historical documents.

Sweetmeats

Frolic carried 100 boxes of sweetmeats. According to contemporary sources, a sweetmeat is “any shaped piece of confectionary, whether made primarily of sugar, or chocolate, or of fruit” (Feeding America 2005). Using *Eveline*’s manifest as a comparison, Layton has equated *Frolic*’s 100 boxes of sweetmeats to *Eveline*’s 100 boxes of preserves. Advertisements in contemporary newspapers indicate that Chinese preserves were readily available in San Francisco at this time. For example, Makee, Anthon & Co. advertised in the *Daily Alta California* (7 August 1850), “New goods – the subscribers offer for sale the cargo of ship *Flavius* [sic], from China, consisting of...China preserves, lemon syrup, lime juice...pickles...” Another merchant, E. Mickle and Co., located on Clay Street, advertised the sale of Chinese preserves and pickles on 25 September 1850 (*Daily Alta California* 25 September 1850). Unfortunately, like *Frolic*’s bill of lading, these advertisements offer little information regarding the type of preserve for sale. Each of *Eveline*’s preserves, on the other hand, consisted of six jars: two jars each of ginger, kumquats and citron (Layton 2002:157). If Layton’s interpretation of sweetmeats is correct, then *Frolic* carried at least 200 jars of ginger, 200 jars of kumquats and 200 jars of citron.

Archaeologically, none of the sweetmeats have survived and thus it is difficult to comment on their quality. The survival of the sweetmeat packaging, however, is more open to contestability. Layton has attributed the remains of the Chinese porcelain decorative type Ginger Jar to the sweetmeats, but this decorative type only has an MNV of one (Layton 2002:157). The numerical discrepancy between the low MNV for Ginger Jar and the 100 boxes of sweetmeats listed in the manifest as part of *Frolic's* cargo can be partly explained in at least three ways. First, the sampling method used to collect Ginger Jar was minimal, involving the collection of only one per archaeological unit (see Chapter 6), while the collecting activities of the sports divers probably did not differentiate between different decorative types. Second, it may have been the case that the sweetmeats were transported in the Ginger Jar vessels, and the small sample size in the collection relates to the salvaging activities by local inhabitants immediately after the wrecking event. If the sweetmeats were stowed away near the top of the cargo, for instance, then they may have been the first items salvaged. Still a third possibility is that the 100 boxes of sweetmeats were of a solid form that more commonly would have been packaged for transport in containers, such as wooden boxes or paper, both of which would be less evident archaeologically. In this case the sweetmeats could have been stowed away near the top of the cargo, rendering them more accessible in a post-wrecking salvage event.

This last possibility is related to the difference in nomenclature between a sweetmeat and a preserve. Contemporary sources define a sweetmeat as a shaped piece of confectionary, usually made of fruit. The key word here is 'shaped.' A preserve, on the other hand, according to the *Oxford English Dictionary* (2008), is "any food (chiefly fruit) which has been preserved by being cooked in sugar; the foodstuff resulting from this process; jam, marmalade." Thus, a sweetmeat is a shaped piece of preserved fruit, while a preserve is fruit that is processed into a gelatinous form.

A few contemporary recipe books, including *Sweetmeat-Making at Home* (Rattray 1922), *Seventy-five Receipts for Pastry, Cakes and Sweetmeats* (Leslie 1836), and *The Lady's Receipt-Book* (Leslie 1847) provide more insight as to the character of a sweetmeat. For example, *The Lady's Receipt-Book* (Leslie 1847:165-167) gives detailed cooking directions for citron sweetmeats:

Pare a sufficient number of citron-melons, and cut each melon into four thick quarters. Weigh them, and put them over-night into a tureen, or a large white-ware pan or basin. Prepare some very weak brine, allowing a table-spoonful of salt to a quart of water, for every pound of citron. Pour the salt and water over the citron; cover it, and

let it stand all night to draw out the sliminess. Prepare some alum-water, allowing to each quart of water a bit of alum about the size of a grain of Indian corn. In the morning, drain the citron from the brine, and wash every piece separately in the alum-water, which will green and clear it. After it has lain half an hour in the alum-water, drain the citron, and put it into a porcelain preserving-kettle, allowing to every four pounds of the citron a large half pint of clear fresh water. There must be water enough to cover the citron, and keep it from burning. Add to every four pounds, the yellow rind of a large lemon, grated, or pared off very thin, and cut into shreds. Set the kettle over a clear fire, and boil it slowly, till the citron is tender enough to be easily pierced through with a large needle. If it seems to be boiling dry, add a little more cold water. When all are quite tender, take out each piece separately with a fork.

Spread them out on a large dish. Then strain and measure the liquid; and to each pint allow a pound of the best double-refined *loaf-sugar*; not the sugar that is sold ready-powdered, as that is so adulterated with ground starch, that it has little or no strength, and sweetmeats made with it are sure to spoil, unless four times the usual quantity is put in.

Having broken up the loaf-sugar, add it to the liquid in the preserving-kettle, and let it boil (skimming it well) till it becomes a thick, rich, jelly-like syrup. It will most probably be boiled sufficiently in about half an hour. Next put in the pieces of citron, one at a time, and boil them ten minutes, or more, in the syrup, till it has thoroughly penetrated them. Afterwards take out the citron; spread it on a dish to cool; and transfer the syrup to a large pitcher. When cold, put the citron into glass jars, and pour the syrup over it. Cover the tops with white paper, dipped in brandy, and tie closely over each another covering of the bladder, that has been previously soaked in water. The covers of lacquered tin, that belong to glass jars, seldom fit perfectly tight, and are not to be trusted without another covering over them.

This will be found a very fine sweetmeat. To dry it, in imitation of foreign citron, select some of the finest pieces; spread them on a dish; and set them for three days in the hot sun, turning each piece several times a-day. Then make a hole near the end of each piece; run a twine string through them, and hang them on lines, across an open, sunny window. When sufficiently dry, put them into tight jars, or boxes, and keep them to use, as citron, in cakes or mince-pies.

Preserved citron may be candied, (after it has lain five or six months in the syrup,) by taking out the pieces, spreading them on a dish, and boiling the syrup again, till it is as thick as possible. It may require some additional sugar. Then pour it on the citron; and when it has

grown cold, and has dried on the pieces, put them into a jar. When giving the citron its first boiling, in the lemon-peel and water, you may add, to every four pounds of citron, half an ounce or root-ginger, (if green and tender, it will be better) or else a few pieces of preserved ginger.

Thus, according to this recipe, sweetmeats were prepared in a variety of different ways, but they were always shaped. Traditionally a citron sweetmeat, for instance, is a citron-melon slice preserved in a jar with sugar syrup. Sweetmeats can also be dried in imitation of foreign citron sweetmeats, in which case they would have been packaged in either jars or boxes. Alternatively, preserved sweetmeats may also be candied after several months with ginger to give them extra flavour. *Frolic's* sweetmeats could have been any of a number of variants, but the paucity of archaeologically recovered sherds may imply that these sweetmeats were in fact of a more solid, shaped character packaged in boxes and/or paper, rather than Chinese porcelain jars.

Paintings

Frolic's cargo included four cases of paintings. Chinese painters working for the export market produced a variety of oil, watercolour and gouache paintings. These paintings range from depictions of port scenes to ship paintings, landscapes, seascapes, portraits, still-life and various genre scenes, such as silk, rice, tea and porcelain production, as well as the Canton street trades. Many of these were sold as sets or books, such as those found in the Peabody Essex Museum (Crossman 1991:173-178). Most of the painters did not sign their work, and as such remained anonymous unless their name was found on an invoice, shipping document, diary or some other form of correspondence (Crossman 1991:173).

No archaeological evidence was found that could be attributed to paintings, and thus it is difficult to comment on the quality and packaging. However, through a sales order, Layton has identified the paintings carried in *Frolic's* cargo as originating from the workshop of Tinquá. Tinquá (also spelled Tingqua or Tingqoua) was a well-known artist who operated a studio in Canton between 1830 and 1870 (Crossman 1991:186, 407). Figure 43 depicts Tinquá's studio (circa 1855). This painting indicates that Tinquá had several assistants working under him. Tinquá's studio specialised in mass-producing Chinese landscape watercolours, miniatures, and gouaches on pith papers (Crossman 1991:407; Layton 1997:136). Chinese

paintings such as these were not unusual in the San Francisco consumer market. For example, Makee, Anthon & Co. advertised in the *Daily Alta California* (7 August 1850) for the sale of landscape paintings from the cargo of the ship *Flavius*, direct from China. The popularity of landscape paintings in San Francisco and the specialisation of Tinquá's studio in these works may imply that at least some of the paintings in *Frolic*'s cargo were landscapes.



Figure 43. *Tinquá*, (circa 1855) gouache on paper by Tinquá (from a private collection; reproduced from Crossman 1991:186).

Prefabricated House

Frolic also carried 101 packages comprising one prefabricated house. Prefabricated houses were a popular item in California because they did not require much skilled labour or raw materials, both of which were difficult to find in Gold Rush San Francisco. Additionally, they could be assembled and disassembled quickly, as well as moved from place to place easily (Hattori and Brigham 1990:36). Prefabricated houses were readily available in San Francisco, as Salmon & Ellis advertised in the *Daily Alta California* (30 September 1850): “60 houses of various dimensions, 3 inch planks and a general assortment of lumber.” Wooden prefabricated buildings lost their appeal to brick buildings after the great San Francisco fire of May 3 – 4,

1851, as these sorts of buildings burnt quickly and were thought to have accelerated the fire (Hattori and Brigham 1990:36).

Layton (2002:179-186) has identified the packages of the house as consisting of beams, boards, planks, four doors, eight columns and twenty oyster shell windows. The prefabricated house is listed as being shipped in a package. Since the prefabricated house consisted of large bulky items, such as boards, columns and doors, it seems fair to say that a ‘package’ likely refers to an oddly shaped item that could not otherwise fit into in a box or container and instead was bound together in some fashion using rope. Like the furniture and lacquered ware, its constituent pieces were probably grouped together for shipment. Based on an extant Chinese prefabricated house at Double Springs Ranch, California, Layton contends that *Frolic*’s prefabricated house would not have been assembled with nails or screws, but instead fitted together via mortise and tenons. Each timber would have been inscribed with a Chinese character that stood as a sort of code for assembling the house.

Although Layton had access to a window sash with an inset oyster shell window (see Layton 2002:181), all that remains identified (either through description or photographs) of this house in the artifact database are 12 oyster shell window fragments. At least two of these fragments are straight with a rounded corner (Artifact Numbers CA.MEN.1947.H.03.371 and CA.MEN.1947.H.09.031), indicating they would have sat in the corner of the window (see Figure 44). The collection does contain at least one ceramic doorknob and accompanying brass housing that could have been associated with the prefabricated house; however, these items could also have adorned doors within the ship itself.



Figure 44. Oyster shell window fragment from the prefabricated house (Artifact Number CA.MEN.1947.H.09.031; courtesy PAST Foundation).

Scales and Weights

Frolic carried nine cases of scales and weights in its cargo (Layton 2002:169). Although it is difficult to say exactly how many scales and weights the nine cases contained, based on archaeological evidence, there were three different types of scale and weights: nested weights, bell-shaped weights, and small, square dram weights. The nested weights would have been shipped in sets, each one nested inside the next. Both the square dram weights and bell-shaped weights would have been shipped in boxes, though the square dram weights would have fit more snugly. The bell-shaped weights probably would have required packing material to prevent shifting during transport. While little can be ascertained about the total number of scales and weights in the cargo, the number of nested weights ranged anywhere from seven to nine pieces; weight ranged from five dram to three pounds. However, Layton believes the Chinese foundry men who manufactured the weights probably knew little about Western weights and measures, as when the weights were weighed on a scale, they were either too light or too heavy for their specified weight (Layton 2002:169-170).

Silverware

Frolic's cargo included a total of three cases of silverware. Silverware as understood at the time included cutlery, such as forks and spoons, as well as personal items, such as jewellery, suspender clasps and shirt studs. Interestingly, *Frolic's* manifest lists two separate entries for silverware; one for a single case and the other for two cases. Layton (2002:170) suggests that the double entry for silverware in the manifest was because the silverware was purchased from two different suppliers at two different times. *Eveline's* silverware was purchased from the Chinese silversmiths Wongshing and Cutshing (Layton 2002:170). Based on *Frolic's* extant silverware identified as cargo (some silverware was associated with the crew, while some was unidentified due to the lack of sufficient description or photograph in the database), at least one spoon came from Wongshing, while at least two spoons and one fork were manufactured by a completely different Chinese silversmith, Khecheong. Additionally, at least two forks and one spoon were unmarked but identified as Chinese export. The presence of the Khecheong cutlery, in addition to the unmarked silverware, may invalidate Layton's comparative analogy between the double entry in *Frolic's* bill of lading and the double entry in *Eveline's*. Instead of signifying

separate buyers, the double entry could, for instance, refer to a categorical bifurcation between different types of silverware, with the cutlery comprising either one or two boxes, and the jewellery, suspender clasps and shirt studs accounting for the rest.

All of the silverware was manufactured in a variety of sizes and in what Layton has previously identified as the plain fiddle pattern (Layton 2002:171-173). This type of decorative pattern is also referred to as fiddle thread and Old English (Burns 2003:68). Similar silverware has been found on other shipwreck sites, such as a silver plated spoon found on the Norwegian shipwreck *Catherine* in Pensacola, Florida, a testament to the popularity of this decorative type (Burns 2003:68).

Although not identified in the collection through description or photograph, Layton has identified at least one silver dessert spoon, marked with a “W,” as being forged by Wongshing (Layton 2002:171). His mark was also accompanied by copies of three British hallmarks: the “lion passant,” the “leopard’s head” (or “king’s mark”) and the “sovereign’s head” (Layton 2002:171-172).

At least one silver dessert spoon, one silver dinner spoon and one silver dessert fork was marked with “KHC.” Khecheong was one of the most prolific Chinese export silversmiths working in Canton between 1830 and 1870, and it has been suspected that he had many assistants working for him (Crossman 1991:352-358). He was known to have produced entire sets of high quality silverware for foreigners living in Canton and abroad (Crossman 1991:352).

A minimum of two unmarked dessert forks and three unmarked dinner spoons were nearly identical to the high quality silver cutlery mentioned above, with the exception that they bore no maker’s mark, were slightly wider and had a brassy tint. Additionally, they were not actually silver. Layton (2002:173) has identified these as paktong metal. Paktong was a copper, nickel and zinc alloy used extensively for small export items (Crossman 1991:367). It is unclear who manufactured these paktong silverware pieces, but they were cheaper than silver and they did not tarnish (Layton 2002:173).

In addition to silver and paktong, Chinese silversmiths worked with gold and pewter metals to manufacture various forms of consumer goods including a variety of jewellery and clothing accessories, like shirt studs and suspenders clasps (Crossman 1991:366). All of the gold jewellery found on the *Frolic* shipwreck was classified as filigree, which was a process by which gold wire was twisted and pinched into

decorative designs. The filigree jewellery included a minimum of two scent box brooches, six fragments of gold chain, 13 gold stickpins and a variety of earrings, as well as three types of pendants – one fish, one rope and one unidentified. The earrings consisted of a minimum number of five flower hinge back earrings, two French back earrings with inset aventurine stones and 11 earring loops. Similar Chinese gold earrings have been found on an archaeological site at Lovelock, Nevada, for instance, as well as a variety of other sites, in addition to Chinese produced earrings that are not gold (see Wegars 1993:243). Because the earrings and other jewellery carried as part of *Frolic*'s cargo were gold, they were probably expensive and of a high quality. In addition to gold jewellery, the *Frolic* collection includes at least one scalloped shaped silver tinderbox pendant (although Layton's work, which includes private collections, has identified three) (Layton 2002:173). Layton (2002:173) believes that the tinderboxes were impractical as devices for lighting a fire, and, instead, would have been worn as jewellery. Because there was no maker's mark on any of the jewellery, it is unclear from which silversmith the jewellery was purchased.

In addition to the jewellery, the *Frolic* silverware also included several gold and silver clothing accessories, including at least one silver suspender buckle and thirteen gold shirt studs. The shirt studs included seven plain round studs, two decorative round-rectangular studs and four unidentified studs. The plain round studs, however, might actually have served as the base upon which the decorative rectangular filigree was attached.

Sundries and Merchandise

The last three entries of *Frolic*'s manifest represent the items of the cargo that we know the least about. These include 174 packages of sundries, 23 cases of merchandise and 33 packages of merchandise. According to the *Oxford English Dictionary* (2008), sundries are "small articles of a miscellaneous kind; *esp.* small items lumped together in an account as not needing individual mention." Likewise, merchandise could have referred to any number of objects. While some of the sundries and merchandise was probably made of organic material that did not survive underwater, Layton (1997; 2002) suggests that *Eveline*'s invoices provide some descriptions as to the types of objects that these entries may have included. Additionally, the shipwreck artifacts provide clues to some of the consumer goods

included as part of the sundries and merchandise, as sometimes the sheer numbers of one type of artifact can indicate it was part of the cargo. Owing to the overall lack of archaeologically recovered artifacts, however, it is debatable as to whether some of these artifacts were part of the cargo, or belonged to the crew.

First, however, the distinction between the different types of packaging needs to be addressed. All of the sundry items were packaged in cases, while merchandise was packaged in both cases and packages. Based on other cargo items that are listed specifically as being packed into cases, which includes silks, grass cloth, paintings, lacquered ware, scales and weights, Chinaware, silverware, camphor trunks, furniture, and beer, cases implies something packed into a box or container. The prefabricated house is the only other item listed as being shipped in a package. Since the prefabricated house consisted of large bulky items, then, as mentioned previously, a package probably represents any oddly shaped items that would not fit in a case.

Based on archaeological evidence, and also included in the bill of lading under sundries and merchandise, the cargo included a minimum of 20 ivory handled knives and five unidentifiable mother of pearl cutlery handles. The ivory handled knives were fitted with an iron blade, though the blades have badly deteriorated in the underwater environment. Figure 45 shows one of these ivory knife handles split in half, with a broken piece of metal still in the core which would have held the blade. The five mother-of-pearl handle fragments, on the other hand, represented another type of cutlery, albeit unidentifiable due to its poorly preserved and fragmentary nature. Since the handles of both types of this cutlery were made of bone and mother of pearl, they were probably of a higher quality than the paktong cutlery, but not the silver cutlery. Similar to the silverware, this cutlery most likely would have been packaged in cases.

Frolic carried at least three types of consumer goods associated with ladies' fashion: a parasol, a purse and an ivory fan. At least one parasol was represented by several brass parasol tines, a fragment of a tortoiseshell staff and several fragments of a carved ivory handle. Traditionally, Chinese parasols such as these would have been adorned with silk, and parasols with ivory handles were considered quite fashionable during this time (Crossman 1991:380; Kunciov 1971:166). *Eveline's* invoice includes silk parasols in a variety of colours, with a "tortoise shell staff, ivory handles & lots of chowchow fringe" (Layton 2002:224). If *Frolic's* parasols were similar, then they were actually quite fancy. The purse (Figure 46), on the other

hand, consisted of two rectangular pewter parts. The two frame parts probably would have been attached and adorned with leather or a fine fabric such as velvet, but due to site formation processes these organic portions are not visible archaeologically (see Kunciov 1971:24). The carved ivory fan, which would have had silk stretched between the ribs, was identified by Layton (2002:189-190) as consisting of at least three fan ribs attached via a hinge and carved with a stylised flower or star. Because *Frolic's* crew was entirely male, the argument can be made that these items were part of the cargo. However, since it was not uncommon for officers and seamen to purchase items such as these as gifts to women, their character as cargo is not certain. Because the purse and fan were small in size and comparatively fragile, these items were most likely packed in cases. It is more difficult to comment with any conviction on the parasol's packaging due to its awkward shape.



Figure 45. Ivory knife handle split in half with central drilled core (Artifact Number CA.MEN.1947.H.05.766; courtesy PAST Foundation).



Figure 46. Purse Frame (Artifact Number CA.MEN.1947.H.16.102; courtesy PAST Foundation).

Archaeological evidence also indicates that *Frolic* carried a number of gaming pieces: four ivory checkers, one small ivory dice and a round ivory puzzle piece. Checker sets as well as dice were sold in Canton (Crossman 1991:295). The round ivory puzzle piece probably came from a puzzle box similar to the one presented in Crossman (1991:296). *Eveline* did carry as cargo one box of checkers and dice and two boxes of dice, each box containing 100 dice (Layton 2002:212). It is, however, unclear whether *Frolic*'s gaming pieces were part of the cargo or belonged to the crew. At the very least, several ivory dominoes were found on the shipwreck *Rapid* (see Chapter 5) (WAMM 2007), supporting the argument that these games were commonly played for leisure aboard ships.

Frolic also carried as part of its sundries and merchandise a great many false pearls. False pearls were actually beads produced by mixing "macerated scales of carp with fish glue" and heating glass in the paste, which gave it an iridescent coating resembling that of a pearl (Layton 2002:158). According to Smith (2006:58), the false pearls "reflects the luxury item market in booming San Francisco market and the fact that women were present in large enough numbers with enough disposable income to attract market attention." Based on *Eveline*'s bill of lading, Layton determined that the beads were packed and shipped in picul boxes, each containing one hundred thousand beads (Layton 2002:158). If *Frolic*'s false pearl cargo was similar to this, then *Frolic* carried over six hundred thousand of them. However, only 841 whole beads were represented in the *Frolic* shipwreck assemblage. This may be due to the fact that the false pearls are lightweight and could move a great distance on the seabed. Additionally, since they are small, they are also difficult to locate underwater.

The *Frolic* assemblage also includes at least four shoes. The shoes from the *Frolic* shipwreck range from several leather fragments to a vamp (Figure 47) and a complete shoe. The type of leather treatment given to these shoes was unknown, but some of the leather shoe fragments still had visible sewing holes. Due to the deterioration of the leather in the marine environment, it is difficult to comment on the type or quality of the shoes. *Frolic*'s shoes may have belonged to the crew, and at least one complete shoe has been identified by Smith (2006:49) as belonging to an officer. At the same time, shoes were manufactured in Canton during the nineteenth century, and *Eveline* carried 52 pairs of patent leather boots (Layton 2002:220). Shoes required reasonably complex industrial production and were commonly transported by ship to less industrialised regions, as evidenced in the artifacts associated with the steamboat *Bertrand* (Corbin 2000) and *Sydney Cove* (Nash 2001;

Staniforth 1999, 2003). Additionally, a variety of types of shoes were found during the archaeological excavations at Hoff's store, although many of these were likely manufactured in Boston (Huddleson and Watanabe 1991). Moreover, Backus and Harrison advertised in the *Daily Alta California* (17 August 1850) for the sale of "200 pairs of European shoes" from the ship *Sir George Pollock*, which had recently arrived in the Port of San Francisco from Hong Kong, China. This advertisement supports the observation that shoes were commonly shipped to San Francisco from China. Tangentially, barring the transshipment of the *Sir George Pollock*'s shoes from Europe to the Americas by way of China, advertisements such as this imply that shoes labelled as 'European' more likely referred to particular style rather than their point of origin.

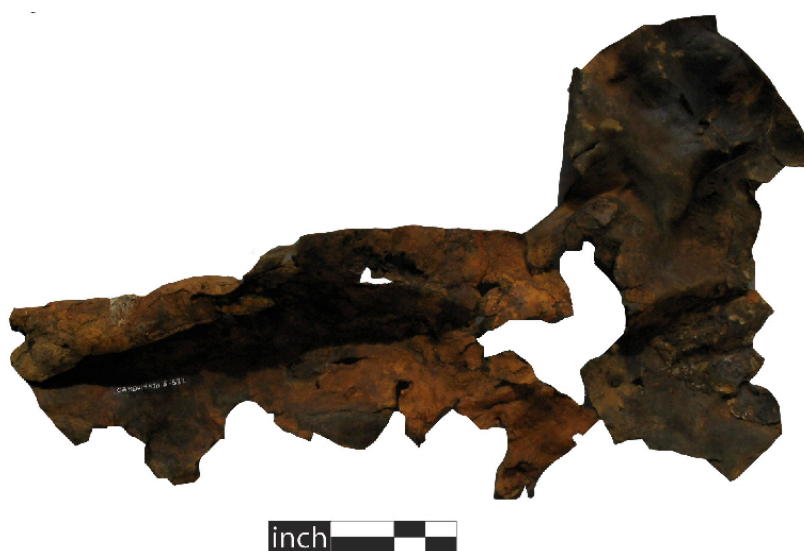


Figure 47. Shoe vamp (Artifact Number CA.MEN.1947.H.05.532; courtesy PAST Foundation).

Three different types of artifact were associated with hygiene-related activities: two bone combs, one hinged ivory razor handle and a bone toothbrush. Similar bone combs have been recovered from the San Francisco waterfront, and Wegars (1993) believes they are evidence for the presence of Chinese women in San Francisco. *Eveline* carried a variety of combs, including bamboo combs, tortoiseshell toilet combs, ladies' side combs and ladies' hair combs (Layton 2002:213-214, 216). Because *Frolic*'s combs were fragmentary, it was difficult to determine its precise type and thus quality, but it does appear to have closely set teeth, indicating that it may have been used for removing lice or dandruff rather than serving a more decorative function. As for the razor, on the other hand, its ivory handle indicates it

was of reasonably high quality. Layton (2002:194) has suggested that the razor and toothbrush were actually part of a lacquered ware shaving kit, of which *Eveline* carried 24. If this is the case, then the shaving kit itself was in a lacquered box, and these boxes would have been packaged together in a case. Alternatively, it is also possible that the razor and toothbrush belonged to one or more crewmembers. Supporting this possibility, for instance, is the presence of similar bone toothbrush fragments found on the shipwreck *Rapid* (see Chapter 5). Since *Rapid* was inbound to Canton when it wrecked, these toothbrushes likely belonged to its crew (WAMM 2007).

One final group of artifacts plausibly attributed to either *Frolic*'s sundries or merchandise cargo is a number of different types of brass and pewter clothing hooks (see Figure 48 and Table 9). Although there were a variety of hooks in the assemblage, based on the numbers alone, the hooks attributable to cargo were moulded with either an acorn (MNA 15) or a diamond finial (MNA 4). While it is possible that the other types of hooks may also have been part of *Frolic*'s cargo, their low numbers hint otherwise. Some hooks likely adorned the inside of the ship for the crew's use. Although their presence aboard ships was made necessary by other materials' susceptibility to corrosion, such as iron, their presence in households was less common, as hooks manufactured from brass were probably perceived as somewhat of a luxury at the time. Instead, any number of cheaper metals, such as iron and pewter, were commonly used instead of brass for hardware in households. Thus, it is likely that at least some of these hooks were used in the ship, with different types of hooks added as needed, and they were not part of the cargo. Those hooks that were included in the sundries and merchandise cargo, especially the acorn and diamond finial hooks, would have likely been packaged in cases due to their number and small size.



Figure 48. Acorn finial brass hook from the *Frolic* shipwreck (Artifact Number CA.MEN.1947.H.07.045; courtesy PAST Foundation).

Table 9. Hooks recovered from the *Frolic* shipwreck by type, number, MNA and percentage of MNA.

Type of Finial	Number	MNA	Percentage of MNA
Acorn	15	15	45.45
Diamond	4	4	12.12
Clothing	4	1	3.03
Coat	1	1	3.03
Cup	1	1	3.03
Embossed	1	1	3.03
Eyelet	1	1	3.03
Knobbed	2	2	6.06
Knobbed large	1	1	3.03
Pewter	1	1	3.03
Plain	1	1	3.03
Unknown	7	4	12.12
Total	39	33	100

Conclusion

Frolic carried a wide range of consumer goods that varied in type and quality. This range can be seen in the juxtaposition of low quality Chinese porcelain (Fu and Snail) with higher quality Chinese porcelain (Canton and enamelled wares), as well as in the juxtaposition of the low quality paktong cutlery with more valuable silver cutlery. These consumer goods were packaged in different ways, some in cases and some in packages. Archaeological evidence from the *Frolic* shipwreck and historical evidence from its sister ship *Eveline*'s bill of lading suggest that smaller, more uniformly shaped fragile items were typically packaged in cases, or boxes. Larger, more unwieldy items, on the other hand, were shipped in packages, likely bound together. Similarly, archaeological evidence suggests that some of *Frolic*'s items were disassembled and packaged with like components for shipment.