

KRAAK WARE

Kraak ware was produced at Jingdezhen in the late Ming dynasty from around 1570 to 1650, primarily during the Wanli period (1575 to 1622) and shortly thereafter up to the Chongzhen Period (1628 to 1644). It was manufactured chiefly as export ware destined mainly for the European market, but also including Southeast Asia and Japan. In the early Qing dynasty during the Kangxi period (1662 to 1722) and the Yong Zhen period (1723 to 1735) Kraak style wares enjoyed a short lived revival, but were soon replaced with other motifs.

Kraak ware is characterized by underglaze blue décor, thin potting, use of molds in production, wedge or “V” shaped thin footrims often with adherent kiln sand, chatter marks on the glazed base, mouthrims sometimes exhibiting *mushikui* (moth-eaten edges), and décor (often floral, landscape, diaper, symbols) typically divided into decorative panels. The great majority of forms produced were plates and dishes, but also included were *klapmutsen*, bowls, vases, kendis, cups, covered bowls, and cover boxes. The name Kraak was long thought to derive from the Portuguese vessels, *carracks*, which early on transported the wares to Europe. However, more recent research suggests the possibility that the name may actually derive from Irish trading ships called *curachs*. These trading ships operated between Ireland and England; and they were known to the Dutch traders who used a similar word, *craquen* (*carrack*), in reference to the Portuguese trading ships.

Kraak ware was very popular in the Netherlands and large quantities were shipped there through the VOC (Verenigde Oostindische Compagnie) entrepot (trading post) in Batavia (present day Jakarta). In fact today about 75 percent of all extant Kraak ware is preserved in Dutch collections. Numerous shipwrecks dating from the third quarter of the 16th century to the first quarter of the 18th century contained Kraak type ware as part of their cargo. These include the

following 28 wrecks, which are arranged in chronological order with the date of sinking indicated:

Shipwrecks with Kraak Type Ware

- San Felipe wreck (1576)**
- Santo Alberto shipwreck (1593)**
- San Augustin shipwreck (1595)**
- M1J Shipwreck, Malacca (late 16th century)**
- Ko Si Chang One Wreck (late 16th/early 17th century)**
- Nan'ao No. 1 Shipwreck (Nan Ao, Nanao) (late 16th/early 17th century)**
- San Diego shipwreck (1600)**
- North Reef No. 3 Shipwreck (circa 1600)**
- Santa Margarita shipwreck (1601)**
- Nossa Senhora dos Mártires (Pepper Wreck) (1606)**
- Mauritius shipwreck (1609)**
- Witte Leeuw wreck (1613)**
- Banda (& perhaps Geunieëerde Provinciën) (1615)**
- Nossa Senhora da Luz wreck (1615)**
- Ternate - Tidore shipwreck (1610 to 1620)**
- Vietnam Unidentified Wrecksite No. 5 (1620)**
- Santa Margarita (1622)**
- Wanli Shipwreck (1620 to 1625)**
- Sao Goncalo wreck (1630)**
- Nuestra Señora de la Concepción shipwreck (1638)**
- Nuestra Señora de la Limpia y Pura Concepcion (1641)**
- Hatcher Ming wreck (Hatcher Junk) (1643)**
- Santa Maria Madre de Deus wreck (1643)**
- Santíssimo Sacramento wreck (1647)**
- Avondster shipwreck (1659)**
- Beeswax Wreck (Santo Cristo de Burgos) - late 17th century**
- Kangxi Indonesia wreck (1710)**
- Ca Mau shipwreck (1725)**

Further details on the 28 wrecks, including location of sinking, date of discovery, and Kraak wares recovered are provided below in the last section of this Paper. The Ceramics Catalogue and the

Shipwrecks Section includes Kraak type wares from five of these shipwrecks, along with a Swatow *klapmutsen* form deep dish in Kraak style from the Swatow Indonesia shipwreck. The five shipwrecks are: Banda (1615), Vietnam Unidentified Wrecksite No. 5 (1620), Wanli Shipwreck (1620 to 1625), Kangxi Indonesia wreck (1710), and Ca Mau shipwreck (1725).

In the Ceramics Catalogue there are 77 Kraak type wares representing dishes, plates, *klapmutsen*, bowls, cups, vases, and covered bowls. They are catalogued under 18 M (Ming) series numbers comprising 39 items, and under 7 C (Qing) series numbers comprising 38 items. Additionally, there are also 524 Banda Shipwreck Kraak shards catalogued under M-510 to M-513. Each are described in detail including the Catalogue Number, description, size, dating, provenance (origin, place and date of acquisition, cost), and any references to comparable examples. These items are briefly described as follows:

Acquired at Sotheby's, New York (ex - S. Merchant & Son, London) - M-029 - dish, foliated rim, octagonal medallion with garden scene.

Acquired from Georges deBatz Collection -

M-047 - covered bowl, hexagonal shaped, molded panels of potted plants on three legged tables alternating with peony sprays.

Acquired in Amsterdam -

M-061 - dish, foliated rim, octagonal medallion with leaf, ball & flask.

M-069 - *kraaikoppen* (crow-cup), peach and daisy sprays on sides.

Acquired in Makassar, South Sulawesi, Indonesia -

M-221 - dish, deer in landscape scene, floral spray panels on cavetto.

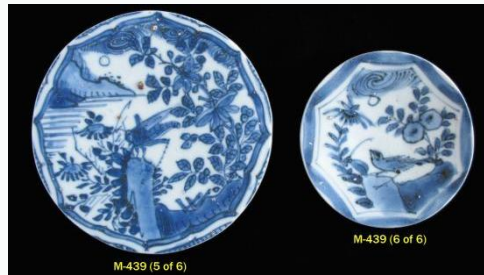
Acquired from a dealer in America -

M-361 - Swatow *klapmutsen* dish emulating the Kraak genre (bowls with a flat rim are traditionally called *klapmuts* in Dutch, comparing the shape with a cap with flaps)

Wanli Shipwreck (acquired directly from the shipwreck excavator Sten Sjostrand of Nanhai Marine Archaeology, Malaysia) -

M-362 (3 of 3 - Kraak medallions) - decorated with avian, floral, and deer motifs in a brilliant tone of underglaze blue.

M-439 (6 of 6 - Kraak medallions) - decorated with avian, floral, and cricket motifs in a brilliant tone of underglaze blue.



M-445 - plate, deer in landscape, peach spray panels on cavetto.

Banten, West Java excavations, Indonesia -

M-424 (36 and 60 of 69 - two shards) - lotus scroll, pagoda, flame elements, floral sprays, scalloped rim; molded *ruyi*-head scroll, mum scroll reserved in white on a blue ground in the center.



M-433 (37 of 46 - one shard) - scalloped rim, cavetto molded with two bands of leaf forms; crab on rock flanked by birds, floral sprays and clouds above.



M-507 (1 to 14 of 14) - all are shards in a variety of motifs including deer in landscape, bird, duck, various symbols, floral sprays, Artemisia leaf, diaper patterns, medallions, and vase with flowers. The tone of the underglaze blue décor ranges from strong and vibrant on shards No. 6 and No. 8 to more subdued on shards No. 5 and No. 9. The nominally convex glazed bases all contain varying degrees of adhesions of kiln grit ranging from pronounced on the

dish at No. 4 to barely discernible on the cup at No. 12. The shards range from very thinly potted with fine grained white colored body (Nos. 6 to 8 and 12) to significantly more heavily potted with fine grained cream colored body (Nos. 3 to 5 and 13). Also included is a Japanese Arita Kraak style dish shard (No. 14) with a vase containing flowers. This Arita shard is distinctive with a slightly different hue of blue in a somewhat “blackish” tone and three small circular spur marks.



Swatow Indonesia wreck -

M-496 - Swatow *klapmutsen* form deep dish in Kraak style; the central medallion contains a ball, gourd bottle, tassels, and scroll; steep cavetto adorned with four large ogival medallions containing alternately twin floral sprays, and a combination of a scroll, tassel and ribbon - the medallions are separated by pairs of overlapping *ruyi* heads; the broad flattened rim is decorated with a scroll comprised of eight large blossoms with sharply pointed leaves.



Vietnam Unidentified Wrecksite No. 5 (dated to 1620) -

M-497 - plate fragment from a previously unrecorded wrecksite; decorated in underglaze blue, the center with two birds in a garden setting flanked by three large chrysanthemum blossoms and rocky outcropping to the left, with swirling clouds above. The central

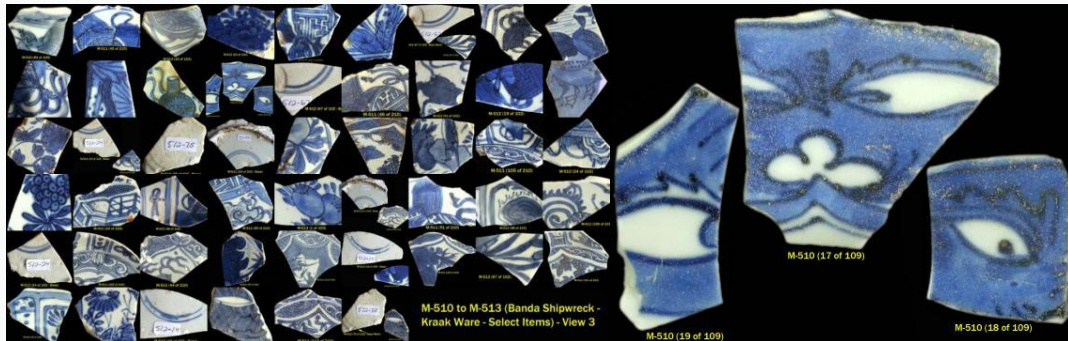
medallion with an octagonal border encircled by four panels of diaper pattern filler with small overlapping circular motifs shaded blue, alternating with panels of swastika symbols. On the cavetto wide and narrow panels filled alternately with a floral spray, two swastika symbols, an auspicious symbol with tassel and ribbons, and diaper pattern filler. The intact plate would have contained sixteen such panels alternately wide and narrow. The underside is similarly divided into alternately wide and narrow panels with sparse perfunctory line and circle décor.



Banda Shipwreck Kraak Shards (dated to 1615) -

M-510 to M-513 - Kraak ware study collection shards (524) from the Banda shipwreck with forms represented consisting of dish, plate, *klapmutsen*, cup, and bowl. The shards include five with double circle base marks, a very unusual feature rarely encountered on Kraak wares. The elements of the décor and motifs of this large quantity of Kraak shards include a variety of Diaper Patterns (14), Auspicious Symbol motifs (37), and other motifs of floral, avian (in a variety of species, postures and sizes), animal, scenic and decorative nature including the following: peach spray, peony blossom, chrysanthemum blossom, lotus seed pod, lotus blossom, various floral or leaf sprays in variety of motifs, foliage in circular form, *lingzhi* fungus, a variety of birds, duck, possibly crane or heron, butterfly, horse, aquatic animal (perhaps a seal), flaming sunburst element, flaming spiral form, landscape scene, trefoil roundel, scrolling element, cloud forms, lattice work element, interior scene, large rocks with blue shading, water forms, indefinable form (possibly animal snout), hanging bow, beaded pendants shaded in blue and aligned in a column. Diaper décor is typically found in

narrow panels surrounding the central medallion and in vertical panels on the side and cavetto. The mouthrim, M-510 (1 to 109), and side portion shards, M-513 (1 to 103), are typically decorated on the exterior with panels containing a variety of filler elements. (Acquired from previous owner in the United Kingdom who gathered them in the 1970's from rockpools at low tide at Albion beach on the west coast of the island of Mauritius in the Indian Ocean).



From an old Japanese collection –

M-515 - *klapmutsen* with four large *taotie* monster masks at the flattened rim with foliated edge, alternating with narrow panels containing bows with pendant ribbons. These four narrow panels extend to the sharply curved cavetto and are interspersed with ogival shaped medallions filled with sunflowers (peach sprays). A large Artemisia leaf amid swirling ribbons adorns the center.

M-517 – dish with cricket amid flowering plants surrounded by 4 narrow panels of diaper and floral sprays in central medallion, on molded cavetto and foliated flattened rim 8 large panels with floral sprays or emblems alternating with 8 narrow panels each with 4 circular motifs; underside also with 8 alternating large and narrow panels cursorily filled with circles and dots and single vertical strokes respectively; unusual feature of a base mark in form of underglaze blue double circle.



M-519 - dish with central décor of deer (2) in landscape, gnarly pine with swirling cloud forms above, the foliated flattened rim encircled with water fowls among sprays of foliage in a pond, cavetto is plain; the reverse decorated with bird perched on a twig, and sprays of water plants.

M-521 - dish decorated with a riverine scene of a mallard perched on a rocky ledge amid lotus and other flowering plants, and with swirling clouds above - all within an octagonal medallion; the steep sides lightly molded into eight peach-shaped sections further embellished with painted peach-shaped roundels enclosing precious objects alternating with roundels enclosing peach sprays or floral sprays. The precious objects include Artemisia leaf and ribboned conch. A spiky scroll element just under the mouthrim joins each of the roundels.

The Qing dynasty Kraak style items included are as follows:

Kangxi period ware from the Kangxi Indonesia Shipwreck -

C-214 (2 of 2) - pair of plates decorated with eight panels each containing one of the eight trigrams (*Bagua*) and separated by panels of tall sunflower sprays alternating with panels of ribboned double gourds; central medallion contains a flowering carnation bush with two blossoms and a darkly shaded scalloped border, and further encircled by demi-panels of diaper pattern filler.



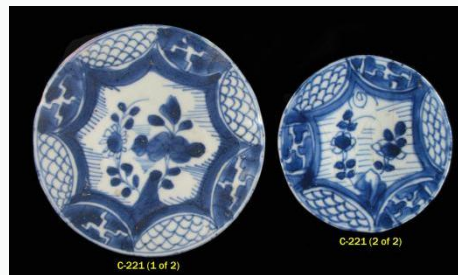
C-215 (2 of 2) - pair of plates decorated with eight panels each containing the symbol for *Qian* (Heaven), one of the eight trigrams and separated by panels of tall sunflower sprays alternating with panels of ribboned gourds; central medallion with a cricket in a

garden setting amidst a large flowering peony bush and tall leafy plants emerging from ornamental rocks and surrounded by a darkly shaded scalloped border echoed by a border reserved in white.

C-216 (2 of 2) - pair of plates decorated with sixteen panels containing a variety of motifs; in the center a cricket in a garden setting amidst a large flowering peony bush and blossoming carnations emerging from an ornamental rock and surrounded by a darkly shaded scalloped border echoed by a border reserved in white.

Yong Zheng period wares from the Ca Mau shipwreck in Vietnam -

C-221 (2 of 2 - medallions) - decorated in the center with two flowering bushes emerging from a rocky base against a background of horizontal line accents, and further surrounded by a darkly shaded scalloped border.

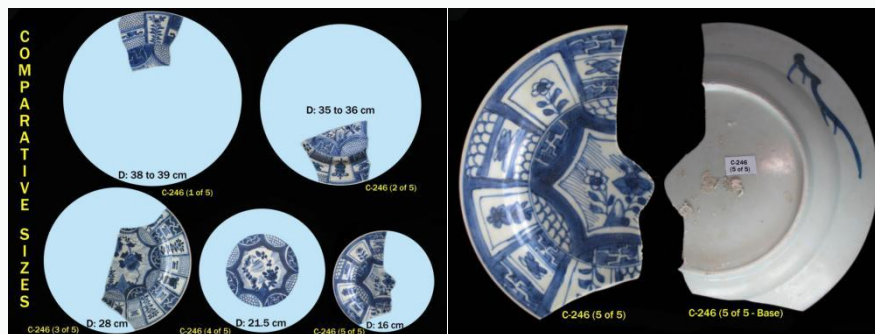


C-223 (2 of 2 - medallions) - decorated in the center with two flowering bushes emerging from a rocky base against a background of horizontal line accents, and further surrounded by a darkly shaded scalloped border.

C-241 (23 of 23 - medallions) - decorated in the center with two flowering bushes emerging from a rocky base against a background of horizontal line accents, and further surrounded by a darkly shaded scalloped border; on 11 of the medallions an insect (beetle, cricket, butterfly or bee) amid the blossoms of the bushes.

C-246 (5 of 5 - plate fragments) - the center decorated en suite with the other Ca Mau examples; cavetto and flatted rim adorned with a four panel series in various combinations filled alternately with daisies, two swastika symbols reserved in white on a mottled blue ground with a bannered symbol or trigram in-between, a parasol, and diaper pattern filler in overlapping small circular motifs with a

bannered symbol or trigram in the middle; are from five plates in graduated sizes and represent a complete set of plates in the series.



Shipwrecks with Kraak Wares - details include location of sinking, date of discovery, and Kraak wares recovered.

San Felipe wreck (1576) in 1997 Chinese blue and white porcelain shards were found on the beach in Baja, California, somewhere south of Tijuana and north of Cabo San Lucas. This resulted in ten Mexico - United States archeological expeditions from 1999 to 2011 and led to the discovery of the wrecksite offshore. The San Felipe is the earliest known shipwreck of the eastbound Manila galleons. The few Kraak shards recovered include fragments of plates with plain white cavettos and flat up-turned rims decorated in underglaze blue with landscapes or pond scenes within the central medallions, and fragments of small bowls with their exteriors divided into panels (some of them with the panels molded in relief) by single or double blue lines and their interiors with continuous designs of flowers and scrolling foliage. Most of the porcelain shards recovered, however, were not Kraak ware.

Santo Alberto shipwreck (1593) was a Portuguese carrack that sank on its homeward journey near shore off the eastern coast of South Africa. The actual wrecksite has never been discovered; however, over the years numerous shards have been found on the beaches in the vicinity of the presumed location at present day Sunrise-on-Sea. The shards recovered included many Kraak wares with underglaze blue decoration including butterflies, insects, birds, deer, nature

scenes, and pagodas. They are meticulously painted in a bright cobalt blue. The shards were predominately from plates and saucer dishes, but also included parts of frog shaped kendis.

San Augustin shipwreck (1595) sank in Drake's Bay, California and with study of porcelain findings going back to the early 1940's. However, it was not until 1980 – 1981 that the entire corpus of porcelain fragments recovered was systematically analyzed by both an Oriental art historian and an historian-archeologist. The wrecksite yielded a variety of Chinese blue and white porcelains including Kraak fragments and a number of Swatow shards, all of which evidence water and sand abrasion. Other more intact specimens are presumably from the Golden Hinde (1579) or of uncertain origin.

M1J Shipwreck, Malacca (late 16th century) - a shipwreck just off of St. Paul's Hill Malacca, Malaysia between Pulau Jawa and Pulau Upeh, at a depth of 32 meters, was discovered by Micheal Flecker in 2005 (more precise dating not provided). (The designation M1J represents Malacca, survey 1, anomaly J). Preliminary research suggests it is a Portuguese ship lost in an explosion in March 1583. Among the limited findings was 1 shard of Kraak porcelain with paneled décor dateable to the Wanli period (1573 to 1620), perhaps from dishes used by the ship's officers (Flecker, reference cited). No further information is available, and this wrecksite has never been excavated.

Ko Si Chang One Wreck (late 16th/early 17th century) located off of Chonburi Province in the Gulf of Thailand and discovered in 1982. Recoveries included Chinese blue and white porcelains including numerous Kraak ware fragments, a bowl with Wanli mark, and some Swatow ware. The Kraak ware included numerous shards from dishes, plates, and bowls. Also recovered were Thai wares including large jars similar to Bang Rachan, Singburi Province material.

Nan'ao No. 1 Shipwreck (Nan Ao, Nanao) (late 16th/early 17th century) - discovered in May 2007 off the northeast coast of Guangdong Province just south of Nan'ao island at a depth of about 27 meters; and with archaeological excavation conducted April through July 2010. Most of the porcelain recovered is blue and white Swatow ware consisting primarily of utilitarian items such as plates, dishes, bowls, cups, and jars. Reportedly recoveries also included a very limited number of Kraak porcelains as part of the cargo; however, there do not appear to be any published examples of these findings.

San Diego shipwreck (1600) sank near Fortune Island to the west of Batangas Province, Luzon, Philippines, and archeological exploration was done in 1991 and 1992, with excavation activities conducted in 1992 and 1993 at a depth of 50 meters. The majority of the recovered ceramics was Kraak ware made in the kilns in Jingdezhen such as bottles, vases, kendis, ewers, plates, dishes, bowls, cups, and some jars. Design motifs include flora and fauna, auspicious emblems and geometric motifs. Zhangzhou (Swatow) wares were also recovered in limited quantities.

North Reef No. 3 Shipwreck (circa 1600) found in early 1999 near the Xisha (Paracel) Islands in the middle of the South China Sea and yielded some Kraak porcelains decorated in deep shades of underglaze cobalt blue, which included fragments from bowls and dishes (Vinhais, 2008).

Santa Margarita shipwreck (1601) sank near the island of Rota in the Northern Mariana Islands between Saipan and Guam; cargo reportedly included numerous Kraak porcelains and some Swatow wares many identical to those of the sister ship the San Diego, which sank earlier in late 1600 near Fortune Island to the west of Batangas Province in the Philippines. The Seattle, Washington based company IOTA Partners found the wrecksite in 1995 and obtained a permit to salvage the Santa Margarita on 15 September 1997. Some

excavation work has been conducted over the years and several pieces of ivory, porcelain, and gemstones have been recovered. However, legal and other problems have been encountered including destruction in 2001 of part of the reef where the Santa Margarita is located. There is no currently available information with regards to more recent or current status of recovery efforts and findings.

Nossa Senhora dos Mártires (Pepper Wreck) (1606) was lost at São Julião da Barra on the Tagus River sandbar near Lisbon, Portugal; the wrecksite has been looted repeatedly over the years and several archeological surveys have also been undertaken including one in 1993 sponsored by the government. The various Kraak wares which have been recovered include seven intact porcelain plates found stacked with a layer of straw in between each one of them; shards of Kraak pear-shaped bottles, dishes and plates have also been found.

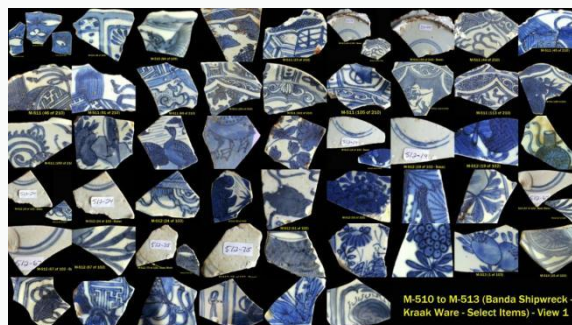
Mauritius shipwreck (1609) sank in the Gulf of Guinea (central east Africa) and was excavated by Michel L. Hour in 1985. The ship contained various commodities from the Far East and only a small supply of porcelain, probably a private purchase or a private order. Of the approximately 215 pieces of porcelain about 165 pieces are of Kraak ware type including plates, dishes, and cups. Additionally 7 to 16 Swatow (Zhangzhou) ware items may also have been recovered (reports vary). The Mauritius is the earliest VOC (Verenigde Oostindische Compagnie) shipwreck to have been discovered. (Other reports speculate that the porcelain may have been captured by the Dutch in 1605 from the Portuguese ship the Sao Antonio. However, this would appear to be rather unlikely given the four year difference in timing, i. e. 1605 vs. 1609 [Campen and Eliëns, 2014]).

Witte Leeuw wreck (1613) a VOC ship, which sank in the Bay of Jamestown near St. Helena Island off the southwest coast of Africa, and was discovered in 1976 at a depth of 38 meters. The wrecksite yielded a considerable quantity and wide variety of Kraak wares

including kendi, teapots, covered bowls and vases along with the more customarily encountered plates, dishes, *klapmutsen* and bowls.

Banda (1615) sank in a hurricane in March of 1615 off the west coast of the island of Mauritius, near present day Albion, in the Indian Ocean about 2,000 kilometers off the southeast coast of the African continent. The shipwreck was officially excavated in 1979 and Kraak plates, dishes, *klapmutsen*, a vase, and a large jar cover were among the approximately 90 intact porcelains recovered. Also recovered from the Banda was Jingdezhen mainstream ware including small white cups with semi-pierced swastika or *wan* lattice decoration with underglaze blue base mark in seal mark form, as well as diminutive finely potted wine cups with flame motifs above a band of scrolls encircling the foot. The porcelain is believed to have included the property of Pieter Both, the first Governor-General of the Dutch East Indies (1610 to 1614), who perished in the shipwreck of this VOC (Verenigde Oostindische Compagnie) vessel.

Over the years, primarily around hurricane season, quantities of shards have also been recovered from Albion beach including approximately 10,000 shards collected from around the 1970's to 1990's and studied in 2002. Although specific details are not available, these Banda shards were reportedly almost all from Kraak ware. Also possibly included among shards attributed to the Banda may be some specimens from the *Geunieëerde Provinciën*, the sister ship of the Banda, which sank in the vicinity of the Banda during the same storm. However, concrete proof of this is lacking - although this observation may be more relevant with respect to Swatow shards than Kraak shards.

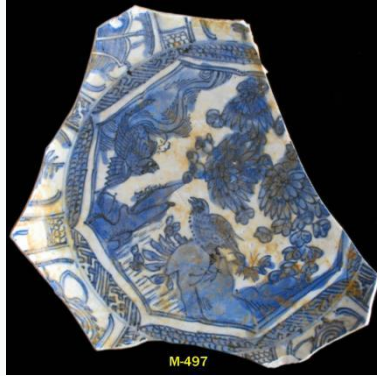


Nossa Senhora da Luz wreck (1615) sank near Faial Island, Horgta, Azores, located 1,097 miles west of the mainland of Portugal, and was discovered in 1999. Kraak ware fragments were salvaged from the wrecksite in very limited numbers and included those from plates, bowls, and vases decorated variously with deer, auspicious symbols, and floral motifs. Recoveries included a plate fragment with a base mark in the form of an underglaze blue double circle, an unusual feature for Kraak ware. Also recovered was a single fragment in blue and white décor believed to be that of Swatow ware.

Ternate - Tidore shipwreck (1610 to 1620) this wrecksite is located south of Tidore Island off the coast of Tongowai village, approximately 100 meters to 150 meters from the nearest land. The depth of the wreck is about 50 meters to 70 meters. Ternate and Tidore are situated just off the west coast of the larger island of Halmahera in the North Moluccas (Maluku) province, east-central Indonesia. Ternate Island lies about 2 kilometers northwest of Tidore Island. Tidore at 116 square kilometers is somewhat larger than Ternate's 76 square kilometers. These small isolated islands, once the world's single major producer of cloves, have been described by some as "the end of the world."

The wrecksite was originally salvaged in 1999 and again in 2002 when among the recoveries were a limited number of Kraak ware type porcelains. During the later survey in 2002 many Swatow wares were also recovered including Swatow blue and white dishes (large and medium sized), bowls, and a bottle vase, as well as monochrome white fragments of a jar. Also included among the Swatow wares was a most interesting large blue and white plate. This plate featured a central decoration of a harbor scene, along with 4 medallions containing Arabic script alternating with 4 floral spray medallions in the cavetto, and 8 more smaller floral spray panels on the flattened mouthrim.

Vietnam Unidentified Wrecksite No. 5 (1620) is reportedly located off of Phu Quoc Island, Kien Giang Province, southern Vietnam (near Cambodia) and was discovered by a trawling fisherman in early 2012. Recovery was limited to blue and white Kraak ware dated to the late Wanli period (1572 to 1620) – approximately 1620. There is no further information available with respect to this wrecksite.



Santa Margarita shipwreck (1622) sank, along with her sister ship the Nuestra Señora de Atocha and four other ships in the 1622 Spanish Treasure Fleet, off the Marquesas Keys, some 40 miles west of Key West, Florida in about 20 feet of water. Over the years since discovery of the wrecksite five porcelain shards have been recovered, all Kraak ware (2 dish fragments and 3 cup or bowl fragments). The panel décor of the shards includes deer, floral sprays and scrolls. This extremely limited quantity recovered indicates the porcelain was not actually part of the cargo but rather the personal possessions of those onboard.

Wanli Shipwreck (1620 to 1625) wrecksite is located in Malaysia's territorial waters near the coastal district of Dungun about six nautical miles outside Tanjong Jara off the Terengganu coast of north-east peninsular Malaysia at a depth of 40 meters. The actual location of the wrecksite was determined in 2003 with excavation conducted in 2004 and 2005. Much of the ceramic cargo consisted of approximately 21,000 pieces of Kraak ware and primarily included plates, dishes, *klapmutsen*, wash basins, covered boxes, covered jars, kendis and gourd-shaped bottles. Recovered ceramics totaled 37,300 items including 7,434 porcelains which were less

than twenty-five percent damaged and were formally registered as Wanli artifacts. About 90 percent of the porcelain is broken, fragmented, or totally pulverized - the apparent result of an explosion onboard the ship. Only about 800 pieces of the registered artifacts were totally intact. Additionally ten tons of broken, fragmented, and pulverized porcelain pieces were also recovered. One Swatow fragment, only one, a small shard from a blue and white dish was also recovered from the wrecksite.



São Gonçalo wreck (1630) sank near Port Elizabeth in Plettenburg Bay near the tip of South Africa. Although the shipwreck itself has not been discovered and positively identified, shards from the cargo have been collected on the beach over many years by various individuals. Most importantly, the main deposit of porcelain shards was discovered in 1979 when the owners of land near the beach cleared the site to build a house. A considerable quantity of Kraak ware has been recovered from the cargo of the São Gonçalo including shards of dishes, bowls, *klapmutsen*, and cover boxes.

Nuestra Señora de la Concepción shipwreck (1638) was shipwrecked in Agingan Bay at the southern tip of the island of Saipan in the Northern Mariana Islands north of Guam. The shipwreck was discovered in 1987 with excavation work continuing to 1988. A considerable portion of the cargo consisted of Kraak wares, which comprised over half the porcelain salvaged. Kraak recoveries were limited to shards, primarily from dishes and small bowls, but also including fragments of bottles, jars, covered bowls and wine pots. Additionally, further recoveries consisted of 156 intact storage jars almost exclusively of South China origin, but including nine

specimens of Singburi storage jars from the Mae Nam Noi kilns in Thailand. Also recovered were four shards from the base of a Swatow dish (Rinaldi, 1990).

Nuestra Senora de la Limpia y Pura Concepción (1641) grounded and wrecked in an area now named the Silver Shoals about 90 miles north of the coast of Hispaniola, just east of another shoal, known as the Abrojos Reef, which is situated northeast of what is now called the Dominican Republic. A lumber trader from Massachusetts named William Phips managed to get financial support from the King of England, James II, and in 1687 was the first to find the wrecksite with the help of a Spanish survivor of the shipwreck. Many years later in 1978, nearly 300 years after the salvaging by Phipps, Nuestra Señora de la Concepción's remains were rediscovered deeply embedded in the coral reef by Burt D. Weber, Jr. of Seaquest International. Inc. Recoveries over the years have included a limited number of a variety of Kraak wares that were fairly intact and which consisted of dishes, cups, bowls and vases; a variety of Kraak shards have also been salvaged.

Hatcher Ming wreck (Hatcher Junk) (1643) found in 1983 reportedly in international waters on a reef in the South China Sea, but actual site is undocumented and the location is still undisclosed. However, the location of the wreck is thought to be just off of the Stelingworth Reef, which is southeast of Bintan Island, Indonesia. The bulk of the cargo was recovered in June 1983 and the great majority of the recovered ceramics were Jingdezhen blue and white wares in a very wide range of shapes and decorative motifs. This included over 2,600 *Kraak* items - consisting predominately of plates and dishes, but also including bowls, covered bowls, *klapmutsen*, vases, kendis, and cover boxes (betel boxes). A number of later Swatow wares were also recovered. A total of 22,178 of the recovered ceramics were sold by Christie's Amsterdam in 4 sales from December 1983 to February 1985. Additionally, most of the 2,000 items salvaged by Hatcher after the main recovery effort were sold through the London

dealer Heirloom and Howard, including approximately 300 Swatow pieces.

Santa Maria Madre de Deus wreck (1643) sank near the city of East London in Bonza Bay off the southeast coast of South Africa; a great number of small shards have been collected over many years on the beach. Findings include various Kraak shards consisting of fragments from dishes and from a large vase.

Santíssimo Sacramento wreck (1647) wrecked just off Schoenmakerskop outside Port Elizabeth near the southern tip of South Africa; recoveries over the years have included shards of Kraak wares with paneled borders consisting of jars, lids, plates and dishes. (Although the Santissimo Sacramento was wrecked in 1647, the porcelain she carried was of Ming dynasty date. The ship was loaded and ready to sail before the end of the Ming dynasty in 1644, but prevented from doing so because of the blockade of the harbor of Goa on the Malabar Coast by the Dutch fleet [Esterhuizen, 2001].)

Avondster shipwreck (1659) a former British ship captured by the Dutch and in the service of the VOC, sank in Galle Harbor on the south-western coast of Sri Lanka, and was discovered in 1997; excavations were conducted from 2001 to 2004. The very few Kraak ware fragments recovered were personal possessions, not actually part of the cargo. Kraak ware fragments found include those from a plate and covered box (apparently heirloom items).

Beeswax Wreck (Santo Cristo de Burgos) - late 17th century - a shipwreck off the northern coast of Oregon in the vicinity of the area encompassing Manzanita, Nehalem Bay, Netarts Bay, and Tillamook Bay has long been known as the Beeswax Wreck. Over hundreds of years large blocks of beeswax from the wrecksite have washed ashore in the area. The current assessment is that the shipwreck is that of a Spanish galleon, most likely the Santo Cristo de Burgos which sank in 1693. Many small shards of Chinese porcelain,

predominately blue and white, but also including Batavia type wares with brown glaze, polychrome wares, and monochrome white porcelain have also been found on the beach and in tidal areas. Porcelain shards reported to be recovered include 5 with typical Kraak paneled motifs and characteristics, along with 6 others identified as from *klapmutsen* which is a typical Kraak form. Although the results of study and research are not conclusive, a strong possibility exists that latter Kraak type wares were in fact part of the cargo.

Kangxi Indonesia wreck (1710) (Batam Kangxi Wreck, Pulau Numbing Kangxi Wreck) was discovered in early 2013 at a depth of about 34 meters near Pulau Numbing in the Riau Islands east of central Sumatra and just southeast of Singapore. The extensive array of porcelain in the cargo included Kraak style plates with radiating panels along with flattened rim and cavetto decorated in a variety of motifs, a floral spray with or without cricket in central medallion, and flower scroll or floral sprays on the underside. All of the Kangxi Indonesia wreck Kraak style plates contained base marks which included an Artemisia leaf, lozenge with ribbons and streamers, a *ding* (ancient vessel), *lingzhi* fungus, or a seal mark.



Ca Mau shipwreck (1725) discovered in the summer of 1998 near Ca Mau Island about 90 nautical miles south of Cape Ca Mau, southern Vietnam. Extensive porcelain cargo included limited quantities of Kraak style plates in sets of five graduated in size and with the central medallion surrounded by a border pattern, the cavetto and rim with panel décor. Also recovered was another series of Kraak

style plates with no border around the central medallion, the cavetto and rim also with panel décor. None of the Ca Mau Kraak style plates contained base marks.



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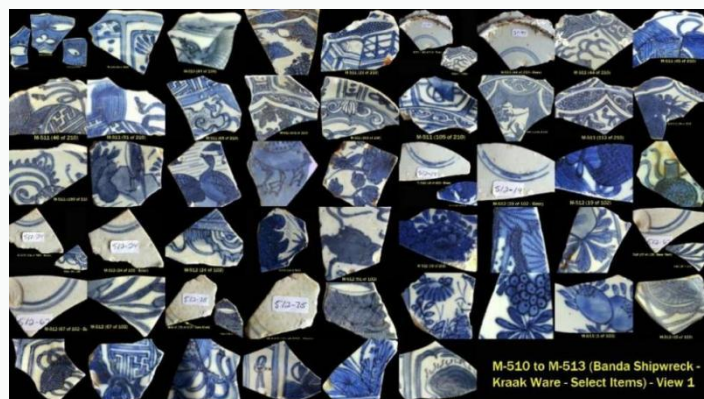
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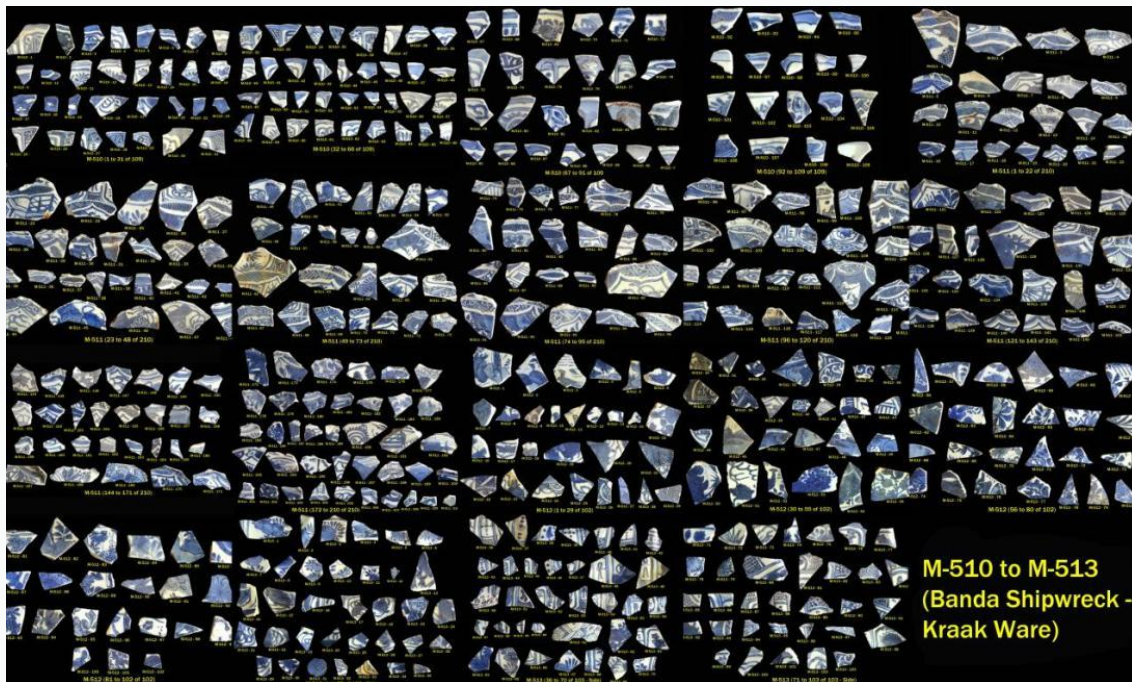
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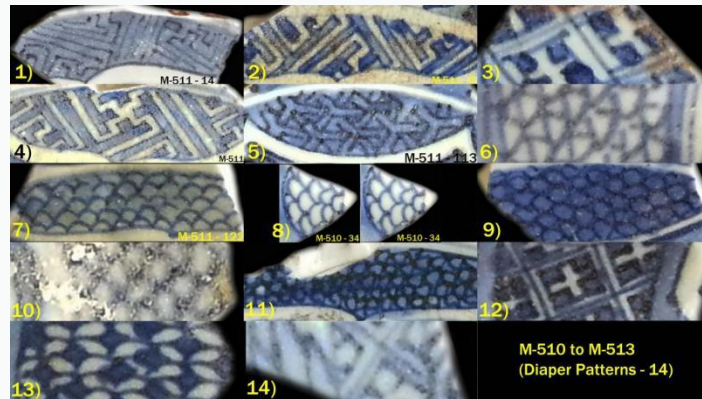
BANDA SHIPWRECK KRAAK SHARDS (SELECT ITEMS)



BANDA SHIPWRECK KRAAK SHARDS (ALL 524 SHARDS)



Banda Shipwreck Diaper Patterns - M-510 to M-513 (14)



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