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An Annotated Bibliography of Selected Sources on the Archaeology of Old World Dutch Material Culture in the 16th, 17th, and 18th Centuries

Paul R. Huey

Anyone analyzing the results of archaeological excavations in colonial Dutch sites, whether they are in Africa, North America, the Caribbean, Sri Lanka, Taiwan, or any other area colonized by the Dutch in the 16th, 17th, or 18th centuries, will require a basic reference library of sources documenting the results of excavations of sites from the same period in the Netherlands. The following bibliography lists and describes some of the many sources that relate to the archaeology of the Netherlands of the 16th, 17th, and 18th centuries; wrecks of Dutch ships of this period en route to or from the Netherlands are also included. The abstracts reflect only the content of the sources that relates to excavations in the Netherlands or of Dutch vessels sailing to or from the Netherlands, and the abstracts are free of editorializing or correction (except where indicated in brackets). The term "Bellarmine," however, has been consistently used instead of "bartmann." Every effort has been made to summarize accurately in English the relevant contents of the items that are written in Dutch, and this compiler apologizes for any errors or misinterpretations that may have occurred.

This bibliography was initially prepared for the Dutch-American Material Culture Workshop sponsored by the Council for Northeast Historical Archaeology for its 1996 Annual Conference, October 18, 1996. It is a very incomplete bibliography and represents only a sampling of the extensive literature that is steadily growing. Many of the reports are publications of The Foundation for the Promotion of Archaeology (SPA), and they are available for purchase from Stichting Promotie Archaeologie (SPA), Lijnbaan 103, 8011 AP Zwolle, the Netherlands, phone NL-038-4212299. The compiler is indebted to many people for their patient help with this project. Special thanks go to Jan M. Baart, Eric Nooter,

Michiel H. Bartels, Janny Venema, Charles Gehring, Joseph M. Thatcher, Joseph E. McEvoy, Robert S. Neyland, John McCashion, Charlotte Wilcoxon, James Bradley, Joseph Diamond, Alexandra van Dongen, Barnes & Noble Booksellers of Albany, New York, the David Brown Book Company of Oakville, Connecticut, and McIntyre and Moore, Booksellers, formerly of Cambridge, Massachusetts, for their assistance and support.

Ahlström, Christian

2003 *The Vrouw Maria of 1771—An Example of Documentary Research*. In *The Marine Archaeology of the Baltic Sea Area*, Volume 3, 2000, ed. by Carl Olof Cederlund. Södertörns högskola, Huddinge, Sweden. <http://www.abc.se/~m10354/publ/vr_maria.htm>.

The Baltic Sea is a unique resource for the archaeologist because of its low salinity and because of the thorough Sound Registers maintained by Denmark, an almost complete record of shipping from 1490 through 1856. One ship recorded in the registers was the *Vrouw Maria*, which sailed from Amsterdam in 1771. It carried a shipment of merchandise and art treasures to be delivered in St. Petersburg. The art treasures included "numerous crates of paintings" purchased from a Dutch art collector by the Russian Empress, Catherine the Great, for her own collection. Unfortunately, the ship was damaged by storms and sank near the islands of southwestern Finland. The wreck was discovered in 1999 and was found to be filled to capacity with crates, barrels, and boxes in the hold. So little space between the cargo and the deck above makes it nearly impossible to enter the ship or unload any of the cargo. The first artifacts to be retrieved included an 18th-century Gouda clay pipe, an ingot of zinc metal, and a wax seal with the initials of a Leiden textile manufacturer. The cargo hold in the bow of the ship contains piles of clay pipes.

Anderson, Arne Bang

1974 A Dutch Galliot Which Struck a Rock in 1677. *The International Journal of Nautical Archaeology and Underwater Exploration* 3 (1): 91–100.

In 1669 the excavation of the ship, wrecked off the

coast of Norway, was started. The wreck contained an amazing quantity of ceramics and clay pipes. The ceramics include Bellarmine jugs and earthenware skillets, pipkins, and bowls, all illustrated. There are also North Holland slipware bowls and blue and polychrome decorated faience plates. The clay pipes have various marks.

Anonymous

n.d. *Nederlandsch Historisch Scheepvaart Museum: Provisional Catalogue of Exhibits With Descriptive Notes*. Nederlandsch Historisch Scheepvaart Museum, Amsterdam.

A piece of eight on the exhibit was recovered in 1962 from the wreck of the *Vergulde Draeck*, sunk in 1655. This coarse piece of eight, representing eight pesos worth of silver, was the most common coinage in world trade.

1999 Discoveries: Crates May Hold Art Trove. *Immersed* 4 (4): 8.

Divers believe they have found the wreck of the Dutch merchant vessel *Vrouw Maria*, sunk in 1771, near Jurmo Island southwest of Finland. The ship, en route to St. Petersburg, was carrying a cargo for Catherine the Great, believed to consist of art works from the estate of Gerret Braamcamps, a prominent Dutch collector. Officially coffee and sugar were listed as the only cargo on the 82-foot vessel, but the high intensity of diplomatic correspondence regarding the ship suggests otherwise. Under Finnish law, the ship and its contents belong to Finland.

2003 Westerseweg 2: Onbekend steenhuis ontdekt. *July. Stichting Monument & Materiaal, Westerbinnensingel 48, 9718 BV Groningen*. <<http://www.stichtingmenm.nl/explorer/earcheo/earcheoframes.htm>>.

Excavations at Westerseweg 2 in Groningen revealed evidence of a brick house. There was a clay-filled trench on which masonry once stood. The brick house was built probably in the 13th century and measured presumably 10 by 7 m overall. It would have had two floors above a cellar. It stood, with barns and outbuildings, surrounded by a double ditch. In the 16th century, the brick house was replaced by a so-called Groningen Long House, a long farmhouse with the roof projecting above the barn. The foundation trench of this farmhouse was found filled with demolition rubble of the brick house. The third farmhouse on the spot was built in 1857. Written in Dutch.

2003 Opgraving in de Konijnenstraat. October 10. Bureau Monumenten en Archeologie, Amsterdam. <<http://www.bmz.amsterdam.nl/adam/nl/archeologie/konijnstr.html>>.

In 2003 demolition and new development prompted archaeological investigation on the Konijnstraat, located in the middle of the Jordaan between the Elandsstraat and the Lauriergracht. This area became part of the city in the beginning of the 17th century, starting about 1612. The Jordaan became a new district between the Prinsengracht and the Lijnbaangracht. This had been a polder area, and the later ditches and streets of the Jordaan followed the pattern of long linear strips of meadow ground and farmland. Maps indicate that the excavations were conducted in a field named the Margrietepad. It was bounded at the north by the Hospital, or Saint Pieterssloot, and on the south by the Sint Margrietensloot. In the middle of the excavation site, at Numbers 11 and 13 Konijnenstraat and half way between the Elandsstraat and the Lauriergracht, a ditch was found, shown on maps as the Hospital ditch that marked the north border of the Margrietepad. In the bottom of the ditch, artifacts were found from the end of the 16th century. The lot separations appeared packed with sand and wood branches presumably to fill the area during the city expansion of 1612. In the ditch, remains of a single goat's horn and a bull skull were found with butcher waste. At the south side of the ditch lay a sizable deposit of leather waste. These remains provide a connection with past activities here, a location known for the establishments of leatherworkers and skin merchants. Besides the Konijnenstraat are other reminiscent street names, such as Hazen-, Beren-, Wolven- and Huidenstraat. Significantly, the only archaeological traces of leather working date from the pre-city phase, and evidence from the 17th and 18th centuries is missing. Illustrates artifacts from Privy 5, dating 1600 to 1660. Behind the houses built after 1612 six privies were found. Most trash pits dated from the early phase of the occupation (1615 to 1640). From the excavated material it appears that the first inhabitants of the Konijnenstraat enjoyed reasonably good health. One privy served a number of houses. Possibly these inhabitants used the two privies behind Number 7 Konijnenstraat. With these privies were also three cisterns in a simple wooden building, forming a collective bathroom, a rare phenomenon in Amsterdam. Written in Dutch.

2004 Opgraving bij Huis Frankendael. February 6. Bureau Monumenten en Archeologie, Amsterdam. <<http://www.bmz.amsterdam.nl/adam/nl/archeologie/frankendael.html>>.

In 2003 remains of an old wall were discovered in the garden of the Frankendael country seat at the Middenweg in the Watergraafsmeer. The walls appeared to be from a small building of about 15 by 7 m, lying about 4.5 m under NAP. It appeared to be a symmetrical building with a plan consisting of two parallelogram spaces on each side of a smaller

square space. The southern points of both spaces were connected by a straight wall, while between both ends was a wall forming a quarter circle. The floors of the spaces were tiled with unglazed orange tiles. The building floor level was sunk about 60 cm below the surface of the garden. The space within the curved wall was filled with two long brick vaults. Against the south wall of the building was a cistern. The size of the brick, the use of lime mortar, the tiles, and the type of cistern suggest an 18th-century date. The bricks are identical to the bricks used in the expansion of the main building between 1720 and 1747. The most recent objects in the earth and rubble that lay over the wall remnant date from the beginning of the 19th century. Thus it appears that the structure was demolished around 1820. The shallow foundation indicates that the building was a light wooden structure, probably provided with glass. With its location and orientation at the north-west side of the garden, guaranteeing as much sunlight and heat as possible, it might have been part of a winter garden. The walls are unique remains from the original 18th-century garden of the Frankendael House. It will be left intact and reburied. Written in Dutch.

2004 Actuele opgravingen: Hoge der A Vinkhuizen. Gemeente Groningen, Groningen. <<http://www.groningen.nl/functies/pagfunctie.cfm?parameter=1091>>.

The excavations at Westerseweg 2 in Groningen have been completed. Late last year remains of a previously unknown brick house of about 10 by 7 m built probably in the 13th century were uncovered. It had two floors above a cellar. On the site of this brick house was built a farmhouse in the 16th century. It was a Groningen longhouse with the roof of the *voorhuis*, or front part, projecting over the barn. The foundation wall trench of this farmhouse was filled with demolition rubble from the earlier brick house. A third farmhouse was built on the site in 1857. It was a "head-neck-body" type of farmhouse with a high Frisian barn. Four different wells were found. The casing of one well consisted of stacked wooden barrels. A brick well had connected to it a drain built of wooden wheel hubs laid in a line. Written in Dutch.

Arts, N.

1999 Archeologie en de laatmiddeleeuwse boerderij Maaskant 5 te Vessem. In *Historisch boerderij-onderzoek, 1999: De Noord-Brabantse Kempen*, ed. by E.L. van Olst, 55–62. Stichting Historisch Boerderij-Onderzoek, 6800 AP Arnhem.

The archaeological study of the old farmhouse at Maaskant 5 in Vessem occurred from 1992 to 1996. The old farmhouse is oriented east and west. At the east end was a later addition. A total of seven

trenches was excavated inside the house. The first find was a fragment of floor in the center of the old part of the house. In another trench on the south outside wall was found a postmold that probably belonged to the original wood wall. Elsewhere, three trenches revealed where the posts of the frame construction, all standing on the ground, rest on underground brick footings. It is noteworthy that later, during restoration in 1995, large pieces of iron ore were found under other posts. Under the later addition east of the house was found a shallow late-medieval pit. South of the pit were small postmolds that were not, however, from a wooden structure; beyond the postmolds was a filled trench or ditch. Evidence of a well was not found. Yet, there must have been one near the house. Further archaeological testing of the area will surely be planned. The existing well possibly had one or more predecessors in its vicinity. Finding an earlier well is important in understanding the dating also of the construction of the farmhouse and its predecessors. Ceramics from the site include a fragment of a red earthenware *vetvanger* (fat pan) from the 15th to the early 16th centuries and a Siegburg stoneware jug fragment from the 15th century (illustrated with line drawings). The fragment of a *vetvanger* is surprising because this type of vessel in archaeological contexts in this region has been known until now exclusively from elite sites such as manor houses. A total of 95 ceramic sherds was recovered. Of these, 4 are Siegburg stoneware, 8 are gray-bodied earthenware, and 83 are red earthenware. The sherds of the gray-bodied ware are from the shallow pit and represent a type not used in this area after about 1500. Most of the ceramics date from the 16th and 17th centuries, and there was also a 17th-century pipe stem. Written in Dutch.

Aten, Nico, Jaap Hagedoorn, Wilbert Bouts, Trinetje Constandse-Westermann, Tjeerd Pot, and Harrie Verhoeven

1991(?) *De doden vertellen: Opgraving in de Broerenkerk te Zwolle, 1987–88*, ed. by Hemmy Clevis and Trinetje Constandse-Westermann. Stichting Archeologie IJssel/Vechtstreek, Kampen.

The decision was made to conduct archaeological excavations in 1987 and 1988 prior to the last phase of the restoration of the Broerenkerk. Few could have surmised how great the interest and publicity would be. In the three coldest months of the year more than 39,000 people viewed the excavations. The burials that were excavated reveal information about a group of Zwolle inhabitants of the late 18th and early 19th centuries. A total of 144 burials could be identified from information in the church grave register from 1819 to 1828. The church dates from the 15th and 16th centuries and was built in three phases. The skeletons in the burials usually lay on

their backs, usually with the feet to the west. Illustrates solid metal buttons from a piece of clothing, a gold ear pendant, pins used on a burial shroud, and two silver hairpins [bodkins]. Illustrates an *in situ* skull with coins in its eyes. Also illustrates carved gravestones from the 17th and 18th centuries from the floor of the church. Extensive analysis of the skeletal remains produced direct evidence for diagnosing diseases and causes of death. An especially detailed analysis of the teeth produced additional information. Written in Dutch.

Baart, Jan M.

1974 Waar stond de Waag op de Dam?: Fundamenten opgraven. *Ons Amsterdam* 26 (10).

With the replacement of paving and construction of a sewer on the Dam, remains of the foundation of the Weigh House, built in 1565, were encountered. This was the first monumental Renaissance building in Amsterdam, and for the first time the location of this building could be determined. It was found that the building stood only 47 m from the Palace. The building had two floors with walls of sandstone blocks. The foundation walls were still in good condition. The wall was 80 cm thick, built with bricks of 20 by 9.5 by 4.5 cm in size. Beneath was a grid of oak beams between which the spaces were filled with birch trees. Written in Dutch.

1981a Weserware in Amsterdam. In *Coppengrave: Studien zur Töpferei des 13. bis 19. Jahrhunderts in Nordwestdeutschland*, ed. by Hans-Georg Stephan, 138-141. *Materialhefte zur Ur- und Frühgeschichte Niedersachsens*, ed. by Martin Claus and Reinhard Maier, heft 17. Verlag August Lax, Hildesheim.

Excavations in Amsterdam reveal that the import of ceramics from Germany occurred during all periods. Most recently the origin in Germany of Weser ware and other goods that have been found in Amsterdam has been identified as Coppengrave and other towns in that vicinity. The earthenware from Coppengrave falls into two categories: brown and green decorated ware and yellow and green decorated ware. The deposits in which the Coppengrave earthenware is found in Amsterdam date generally between 1580 and 1630. None was found in the large number of ceramics excavated from the site of the Carthusian Monastery at Delft dating ca. 1574. In Amsterdam, Weser ware occurs in deposits from before ca. 1630, whereas Werra ware appears in deposits only after ca. 1630. Written in German.

1981b Spin en weefgereedschappen en loden afkomstig van het Amsterdamse stadskeronderzoek. In *Verslag van de Textiel dag op 24 November 1979 in het Amsterdams Historisch Museum te Amsterdam over archeologische tex-*

tiel, 3-14. Publicatie van de Textielcommissie Musea, Commissie tot het Behoud van Museaal Textielbezit.

The development of medieval industry in particular must focus on cloth making. Archaeological research provides information through the discovery of textile fragments, combs, spools, spindles, shuttles, spindle whorls, bale seals, and other objects. One source for the investigation of the technical aspects of the textile trade is the 1,531 lead cloth seals that the excavations in Amsterdam have produced. These date primarily from the 16th and 17th centuries. Although 1,440 of the seals are Dutch, 73 are English, and 11 are German. Of the 214 Dutch seals that can be identified by city, 74 are from Leiden, 50 are from Amsterdam, 25 are from Haarlem, and 23 are from Amersfoort. Three qualities of textile were established in 1584. Illustrates in black-and-white photographs examples of bale seals, spindle whorls, combs, spindles, a shuttle, and other objects. Written in Dutch.

1983 Kook- en eetgerei de middeleeuwen. In *Brood, aardappels en pata: eeuwen eten in Amsterdam*, ed. by Renée Kistemaker and Carry van Lakerveld, 71-91. Amsterdams Historisch Museum/MUUSSES, Purmerend.

Illustrates in color an 18th-century three-legged red earthenware pipkin, a 17th-century red earthenware jug with slip decoration, a wooden plate from the second half of the 16th century, a Dutch majolica mug of the 16th century and plate of the 17th century, a 16th-century stoneware jug, and glass roemers and beakers, all from excavations. Written in Dutch.

1985 Ho-de-no-sau-nee en de Nederlanders: De wisselwerking tussen de materiële culturen van autochtonen en allochtonen in 17e-eeuw Nieuw-Nederland. *New Netherland Studies: Tijdschrift van de Koninklijke Nederlandse Oudheidkundige Bond*, Jaargang 84, nummer 2/3, Juni, 89-99.

Comparison of European material from Iroquois sites with material excavated in Amsterdam. Illustrates beads from beadmaking sites in Amsterdam and a lead bale seal and an "EB" marked tobacco pipe both found in Amsterdam. Written in Dutch with English summary.

1986a Een 16de-eeuws leren wambuis naar land-sknechten-mode. In *De smaak van de elite: Amsterdam in de eeuw van de beeldenstorm*, ed. by Renée Kistemaker and Michiel Jonker, 68-77. Amsterdams Historisch Museum/ De Bataafsche Leeuw, Amsterdam.

In 1978 during dredging in the Oudezijds Achterburgwal in Amsterdam a crumpled piece of leather clothing was hauled up. This was a soldier's leather jacket, so complete that it was possible to

reconstruct a reproduction of it. It has two connecting front pieces and two separately cut ruffs. In the spring of 1981 a second leather jacket was uncovered in Groningen. Meanwhile, during the excavation from 1979 to 1982 of the English ship *Mary Rose*, sunk in 1545, a large number of leather jackets was found. In their cut they are related to the Dutch examples. The example found in Amsterdam can be dated to between ca. 1550 and 1570. Written in Dutch.

1986b Italiaanse majolica en faïence uit de Amsterdamse bodem: het tafelgoed van de geëoede burgerij. In *De smaak van de elite: Amsterdam in de eeuw van de beeldenstorm*, ed. by Renée Kistemaker and Michiel Jonker, 78–92. Amsterdams Historisch Museum/ De Bataafsche Leeuw, Amsterdam.

Excavations have revealed that in the 16th century in Amsterdam many prosperous citizens possessed one or more majolica dishes. The first certain appearance of Italian majolica in an Amsterdam excavation was in a deposit from the period 1450 to 1500. This was a small fragment of a plate. On the basis of its detailed decoration, this fragment can be attributed to one of the kilns around Florence, such as at Montelupo. One of the finest pieces of majolica imported from Montelupo and found in the Netherlands in this period is a jug found in an excavation in Haarlem (illustrated). From a deposit in Amsterdam dating to the second quarter of the 16th century came once again sherds of Italian majolica plates and bowls. The decoration is primarily in blue and is borrowed from Persian porcelain. Fragments of Italian majolica plates from Montelupo have likewise been found in Utrecht from this period. From Genoa came three types of Ligurian faïence. The most extensive group, not only in a deposit of 1593 to 1596 but also in the entire period of Italian imports to the Netherlands, was entirely blue-glazed and decorated in a darker blue. Kiln waste of this ware has been found in Savona and Genoa. A second group of Ligurian ware from the deposit dating 1593 to 1596 likewise has blue. This ware has, however, a white ground. The front side has a blue-painted circle with a four-part decoration. The last group of decorated faïence usually attributed to Italy, excavated in various Dutch towns and earlier represented in various Dutch museums, consists of dishes, plates, and jugs with a decoration of putti surrounded with a wreath of overlapping plumes or peacock feathers in blue, yellow, and orange/brown. Usually the place of origin for these is given as Faenza. This would be a third center for the export of Italian ceramics. An entirely separate group of Italian ceramics are the dishes, plates, porringers, and salt cellars entirely covered with white tin glaze. In addition to Italian majolica and faïence, there is still another Italian product, which was red-bodied and lead-glazed. It is

called "marbled" earthenware, and the red body is covered over with white clay. This gave the colors brown, white, or yellow. The colors black and green could also be added. This ware is found at the end of the 16th or beginning of the 17th centuries. The red-firing clay suggests a manufacture at Pisa. Italian influences on Dutch majolica and faïence manufacture consisted of the use of new techniques and of decorative influences. Written in Dutch.

1986c Materiële cultuur in de late 16de eeuw: het milieu van een molenaars-weduwe. In *Huisraad van een molenaarsweduwe: Gebruiksvoorwerpen uit ween 16de-eeuwse boedelinventaris*, 93–103. Museum Boymans-van Beuningen, Rotterdam/De Bataafsche Leeuw, Amsterdam.

Italian and Spanish majolica was universally known but appears in relatively small amounts in household goods excavated in Amsterdam. Mostly there are only fragments of a plate. The plates were frequently broken. Some fragments were jugs or pipkins. From the excavations it can be supposed that in some households there were one or two pieces of majolica. These dishes were for the rest not particularly expensive. Written in Dutch with English summary.

1987a Dutch Material Civilization: Daily Life Between 1650–1776, Evidence from Archaeology. In *New World Dutch Studies: Dutch Arts and Culture in Colonial America*, ed. by Roderic H. Blackburn and Nancy A. Kelley, 1–11. Published by Albany Institute of History and Art, Albany, N.Y.

Discussion of ceramics and textiles as archaeological evidence of daily life. Illustrates Italian faïence and majolica, Chinese porcelain, Dutch faïence and majolica, Dutch red earthenware, and Westerwald and Frechen stoneware from excavations. Bale seals provide evidence of textiles. Illustrates bale seals.

1987b Portugese faïence uit Amsterdamse bodem. In *Portugese faïence, 1600–1660*, 19–92. Secretaria de Estado da Cultura, Lisbon/Amsterdams Historisch Museum, Amsterdam.

In 1981 and 1982 Portuguese ceramics were excavated in Amsterdam from the Vlooyenburg section, occupied by Portuguese Jews in the 17th century. In other places in North Holland, however, Portuguese faïence has also been found, such as at Graft. The Portuguese faïence dates from various times in the first half of the 17th century, but much of it dates to the 1640 and 1650 period. After about 1625 the decoration imitates that of Chinese Ming porcelain of the Wan Li period. Illustrates more than 50 examples in black-and-white and color photographs. Written in Portuguese and in Dutch.

- 1988 Niederrheinische Keramik des 18. Jahrhunderts in den Niederlanden. In *Keramik vom Niederrhein, Die Irdenware der Duppen- und Pottbäcker zwischen Köln und Kleve*, ed. by Joachim Naumann, 159–165. Veröffentlichungen des Kölnischen Stadtmuseums, Köln.

Among the many artifacts from the 18th century that are excavated in Amsterdam, one again and again encounters ceramics imported from Germany. These can be divided into two groups: simple dishes for serving and dining, that is plates and bowls made of red-firing clay; and above all food preparation dishes, pans and pots, made from white-firing clay. They are designated as red or yellow earthenware. When the red earthenware body was covered with a lead glaze, a bright red product resulted. The same lead glaze on white-firing clay body produced a yellow color. The plates, usually small examples with flat bottoms, appeared in Amsterdam sites for the first time around 1700. They frequently appeared in the first quarter of the 18th century. The plates have about the same form as the typical Delft plates of that time. That suggests that the German plates also served as breakfast plates. They have a simple decoration of white slip applied on a red body, generally consisting of simple geometric, decorative designs consisting of rows of lines and points. A second decoration that also occurred frequently is the so-called marbled pattern. The Amsterdam excavations indicate that these imports reached a peak between 1700 and 1730. The Dutch sources for these wares for everyday use in this period were the municipal markets of Bergen op Zoom, Gouda, Ochtrup (Germany), Cologne, and Frankfurt. A third group of the same sort of plates comprises those which are not so richly decorated, however. In the center, these plates do not have the points and strokes, but rather usually a simple tendril and flowers or a date that reveals that the ware was produced around the middle of the 18th century. The writer has analyzed five archaeological assemblages that come from four houses in the Oostenburgermiddenstraat, located near the dockyard of the East India Company. The inhabitants were ordinary city citizens, certainly not of the upper class, and not even of the middle class. The five assemblages are of various periods dating between 1708 and 1805. The porcelain vessels found here perhaps represent pieces used for show. The second group of German earthenware products comprises white-firing earthenware pots, pans, chamber pots, ointment pots, and even toys. Although this so-called yellow earthenware was produced in Frankfurt itself, it came chiefly out of the surrounding pottery centers. All these products were designated in the Netherlands after the city Frankfurt as "Frankfurt ware." Despite attempts at

regulation, import duties remained low. The archaeological evidence indicates that in Amsterdam the yellow Frankfurt ware constituted about 10% of the total imported earthenware during the 18th century. Written in German.

- 1990 Ceramic Consumption and Supply in Early Modern Amsterdam: Local Production and Long-distance Trade. In *Work in Towns: 850–1850*, ed. by Penelope J. Corfield and Derek Keene, 74–85. Conference Reports: Social and Economic Study of Medieval London, 9–11 July 1987. University of London, Leicester/London/New York.

Prior to 1500 most of the earthenware used in Amsterdam was locally produced, made from local clays. Between 12 and 25% of the remaining earthenware was imported from Germany, and a small amount also came from Spain. In the 16th century and even more so in the 17th century there is a much larger variety of products from a much wider range of sources. In addition to products from the Netherlands, there were ceramics from Italy, Spain, Portugal, France, England, Germany, Denmark, China, and Japan. Italian majolica was imported to Amsterdam from Montelupo, near Florence, and soon the products of Liguria were also imported. French refined earthenware from Saintonge also was imported, but never in as great a quantity as the Italian. In the later 17th century the production of faience at Delft enlarged on an extraordinary scale and brought an end to the imports from Italy, France, and Portugal. The import of Chinese porcelain, however, steadily increased and eventually constituted some 30 to 40% of the total consumption of ceramics in Amsterdam. Germany was the source for pitchers and storage jugs, but the manufacture of red earthenware cooking pots became concentrated at Bergen op Zoom by about 1500. Cheaper red and white earthenwares came from Germany. As in medieval times, red earthenware continued with a high rate of use in the 16th century (about 80%), but it dropped in the 17th century to about 50% and in the 18th century to no more than 10 or 20%. Cheap, black, hand-shaped cooking pots were also imported to Amsterdam in the 16th, 17th, and 18th centuries from Denmark. Clay pipe manufacturing was a 17th-century industry established by English soldiers who had been pipe makers. The Dutch ceramics industry began to falter in the later 18th century, and after 1750 English wares are found in Amsterdam.

- 1993 The Price of Pottery. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 171–175. Stichting Promotie Archeologie, Zwolle.

Around 1300 Mediterranean majolica first appears

in the Netherlands and elsewhere in northwest Europe. The price of a Spanish majolica jug in the 14th century must have been higher than that for one of German stoneware. Thus, there were larger concentrations of majolica excavated in the context of the rich St. Pieter hospital in Amsterdam compared to only a single piece per house elsewhere. This majolica is also found in larger amounts in Sluis, because Sluis was an important harbor for importing this ware. Similar patterns occur with the distribution of 17th-century Chinese porcelain and of faience from Portugal and Italy. When Dutch faience is produced on a large scale around the middle of the 17th century, however, it appears associated with all economic levels.

1994 Dutch Redwares. In *Medieval Ceramics*, number 18, 19–27. Medieval Pottery Research Group, c/o Museum of London Specialist Services, London.

Plates with thumbled feet were produced after 1300 and in the 15th and 16th centuries were extremely popular and widespread, reflecting a change in dining practices. Food was served at dinner on dishes rather than on trenchers. Around 1500 some plates were coated with slip and then sgraffito-decorated. The origins of highly decorated wares seem to be the production of Flemish pottery in Bruges. By 1500 most urban settlements had potters. Illustrates a complete typology of Dutch red earthenware vessel forms from 1200 to 1700.

1995 Combs. In *One Man's Trash is Another Man's Treasure*, 175–187. Museum Boymans-van Beuningen, Rotterdam, and Jamestown Settlement Museum, Williamsburg, Va.

Combs have been found in 17th-century graves excavated in the Church of Our Lady in Antwerp. Comb cases have been found in Amsterdam and in Dordrecht. After the 14th century bone or ivory combs were gradually superseded by boxwood combs. Around 1625 boxwood went out of fashion, and combs made of walrus ivory were produced in quantity. Illustrates combs made of boxwood and of walrus ivory. Written in English and in Dutch.

1997 Post-medieval Archaeology in Holland. In *Archeologia postmedievale: l'esperienza europea e l'Italia*, ed. by Marco Milanese. *Archeologia postmedievale*, volume I, 37–49. Edizioni all'Insegna del Giglio, Firenze.

Many Dutch towns and cities have established archaeological programs to study not only medieval history but also post-medieval history. The construction of a subway in Amsterdam from 1972 to 1979 prompted extensive excavations of post-medieval remains. From 1979 to 1994 excavations of post-medieval sites has occurred in many parts of the city. When the city constructed a new city hall/music

theater at Waterlooplein, for the first time a complete 17th- and 18th-century residential quarter of four blocks, consisting of about 150 houses, was systematically excavated. Above the remains of houses dating from about 1600 and 1610, somewhat larger houses were constructed between 1610 and 1625. Some of these larger houses even had so-called summer kitchens at the back. The painting of an "inner yard" by Pieter de Hooch shows such a summer kitchen with cellar [*Courtyard with Lady and Serving Maid* of ca. 1661 or 1663 by Pieter de Hooch in the National Gallery, London]. A cellar typically contained a variety of jugs of Westerwald and Frechen stoneware, delft, and Amsterdam and Bergen op Zoom earthenwares. Such jugs were used to contain beer, milk, or water. With comparison of the artifacts from different excavated households, social stratification is revealed. The poorest households had large amounts of locally produced, cheap red earthenware and limited tableware. There was little tin-glazed Dutch majolica and no Chinese porcelain or any Italian, Portuguese, or Spanish faience. Drinking glasses were also few. Privies of more prosperous households were made of wood or stone and contained red earthenware with buff slip decoration as well as Dutch majolica, Portuguese earthenware, green-glazed German earthenware, Italian faience, and Chinese porcelain. There were also numerous drinking glasses. The comparison of households also reveals changes through time. A household from the 1600 to 1610 period had mostly red earthenware, with a Cologne stoneware jug with a few dishes of Dutch majolica, German Werra earthenware, and Chinese porcelain. There were few drinking glasses, all imported from Germany. A household of the period 1650 to 1670 demonstrates the immense impact of Dutch tin-glazed earthenware (delft). There was a great decrease in the use of red earthenware. Food was served on delft dishes, and drinking glasses made in Amsterdam were present in large numbers. Sites dating from 1675 to 1700 reveal the great importance of tea and coffee cups, with many vessels of delft and porcelain. In the 18th century locally made red earthenware was still the least expensive ceramic ware, about the same as the white earthenware imported from Germany. Decorated delft was more expensive and competed with English ceramics. Chinese porcelain also became a popular tableware, though relatively expensive.

2000a Japanese Porcelain Finds in Amsterdam. In *The Voyage of Old-Imari Porcelains*, 211–220. The Kyushu Ceramic Museum, Kyushu.

During excavations in the Netherlands, relatively little attention has been devoted to the presence of Japanese porcelain, which is usually catalogued as Chinese porcelain. An interesting find in Amsterdam in 1973 was an Arita porcelain salve pot or *albarello*

in a fill deposit from 1660. There are records of the export of these pots from Batavia in the 1650s. It has the same shape and decoration as pots that were made as tin-glazed copies in Dutch potteries. This pot is the earliest known archaeological occurrence of Japanese porcelain in the Netherlands. When the imports of Chinese porcelain to the Netherlands stagnated in the 1640s, the Verstraetens of Haarlem began to specialize in the production of copies of Chinese porcelain because of the increased demand. Gerrit Verstraeten concentrated exclusively on faience imitations of Chinese porcelain, while his father continued to make Dutch majolica with Italian decoration. A trend for large tin-glazed dishes was set in Haarlem around 1650, and in 1662 examples were sent from Batavia to Deshima to be used as examples for the potters in Arita. In Amsterdam fragments of large plates from Japanese kilns have been found dating between 1660 and 680. The rim of one plate had eight panels filled with symbols, while the center of the plate had a landscape with one or several birds. Copies of *kraakporselein* saucers, with decoration consisting of a bird on a rock and flowers, were also produced at Japanese kilns and are found in Amsterdam from this period. One privy in Amsterdam contained five Arita porcelain wine cups decorated with miniature landscapes. Similar cups appear in Dutch still life paintings. Next appear plates dating between 1690 and 1725, often with six panels around the rim and the VOC emblem in the center. Most of the Japanese porcelain found in Amsterdam dates from this period. One factor was the massive increase in tea drinking; the ceramics recovered from privies is almost entirely tea ware. Most of it is Chinese porcelain, with a small percentage of Japanese tea ware. There is a great diversity of decoration in the "Imari" style. Fragments of three Imari-style barber basins have been excavated in Amsterdam.

2000b Het ontstaan van het 'Hollants porceleyn'. In *Gevonden voorwerpen/lost and found: Opstellen over middeleeuwse archeologie/Essays on medieval archaeology for H.J.E. van Beuningen*, ed. by D. Kicken, A.M. Koldeweij, and J.R. ter Molen, 51-61. *Rotterdam Papers*, 11. Museum Boymans-van Beuningen, Rotterdam.

Excavations in cities since the Second World War have provided new sources in the study of the development of the Dutch majolica and faience industry. Van Dam in his publication *Geleyersgoet en Hollants porceleyn* in 1982 refers to "the remarkably slow transition of majolica to fayence between 1625 and 650." De Jonge in 1947 in her comprehensive *Oud-Nederlandsche majolica en Delfts aardewerk* also dates the transition in the second quarter of the 17th century. Excavations in Amsterdam and other Dutch cities, however, give another view. The stimulus for faience production came from Italy and China.

Excavations in Amsterdam in components from before the last quarter of the 16th century have uncovered imported Italian products that are plates and bowls completely covered with blue tin glaze. These objects come from the Albisola area and were known as "Ligurian blue." Amsterdam was a center of distribution for these wares, not only for the Dutch cities and the countryside, but also for Scandinavia, Germany, and Poland. After 1600, especially, the entirely white faience also came to Amsterdam. However, these Italian faience imports apparently were not the direct stimulus for the start of the Dutch faience or even "*Hollants Porceleyn*" as it became known in the contemporary sources. The excavations point to Chinese porcelain as the inspiration. Italian faience had, however, set the trend and the taste for this ware. Large amounts of Chinese porcelain, captured from Portuguese ships, for the first time came on the market in 1602 in Middelburg and in 1604 in Amsterdam. The excavations on the Waterlooplein, however, have furnished the first concrete evidence. In fill deposited between 1593 and 1596, fragments of Chinese porcelain were found; there were fragments of two plates and a bowl. A larger number of pieces of Chinese porcelain can be connected with the first more sizable import of 1602 and especially 1604. They are discoveries from a privy with material from the first decade of the 17th century. The date of both groups can be placed between 1575 and 1605. From the same archaeological contexts as the Chinese plates come plates indisputedly made in the Netherlands, not entirely covered with tin glaze, but still with *proenen* and fired in saggars. Such products are excavated in Amsterdam in different places, while these plates also have been found in Haarlem, Harlingen, Arnhem, and Maastricht. Further examples are still to be expected in other cities. It appears that the distribution is one and the same as that of majolica production. Experimentation to imitate Chinese porcelain undoubtedly took place in existing majolica potteries, not necessarily only at Delft but also in Haarlem and Amsterdam. The first attempts can be classified as transitional majolica/faience since it is not majolica but also is not yet faience. On the plates are recognizable three *proenen*. The backs are decorated with panels with five dots, the so-called "jewels." The designs are from 16th-century Wan Li plates. One unusual rim is decorated with loops in zig-zag form; Portuguese imports of faience possibly served as the model for this rim. From approximately 1600 there appeared relatively large quantities of Portuguese faience imported to Amsterdam. The earliest group that dates between 1600 and 1625 consists of other plates with such loops on the rim, with a much freer interpretation of Wan Li designs than in the case of the first Dutch products. Both these groups, copied from Chinese dishes of around 1600, can probably be dated to

between 1602 and 1608. It means that nearly immediately after the arrival of the first large quantity of porcelain these imitations were made. There is an excavated plate of this transitional majolica/faience that has on the back the date 1608. This transitional majolica/faience ware first appeared in Haarlem. A plate with the same rim decoration as the plate with the year 1608. Since this decoration also is on majolica fragments in among Haarlem pottery wasters, the hypothesis is suggested that this plate is a Haarlem product. The transition to a complete production of faience, fired in saggars on pins, did not take long. It can be dated from 1610 and definitely by 1619. There are two plates made completely in faience with the year 1619 on the back. One specimen was dug up on the Waterlooplein in Amsterdam. This plate is in the same style as the specimen with the date 1608. In Utrecht in the privy of the artist Bloemaert was found exactly the same kind of plate also with the back dated 1619. Among the Amsterdam discoveries are several other plates that point to this early faience production, in the period 1610 to 1620. The conclusion clearly indicates that a "remarkably slow transition of majolica to faience between 1625 and 1650" is incorrect. Dutch majolica potters reacted immediately upon the first massive import of Chinese porcelain. They pushed themselves to bring a competitive article to the market and sought a product that as much as possible appeared like the Chinese porcelain. Written in Dutch.

2001. Nieuwe inzichten in oude huishoudens. *Drieënegentigste jaarboek van het Genootschap Amstelodamum*, 195-209. Genootschap Amstelodamum, Amsterdam.

New city hall and music theater construction on the Waterlooplein offered the Archeology Division of the Amsterdam Beheer the unique chance to excavate an entire quarter of the city. In 1981 and 1982 about 150 houses from the 17th and 18th centuries were demolished. It was the first time in the history of Dutch archaeology such a sizable investigation could dare to tackle such "recent" sites. Archaeological investigation projects usually were left off at the end of the late Middle Ages. The inspiration for these new initiatives, termed in the Netherlands "Archeology of Recent Times," came from America and England. Amsterdam, with its sizable urban expansions in the 17th century, offers special opportunities for investigation of this period. Excavations of unbroken house rows, subdivided by streets and house blocks, furnish the most information. Entire assemblages from houses can be compared and also sometimes may allow the identification of individual characteristics, especially with the excavation of such house assemblages in different parts of the city. In 1981, for example, four houses on the East India Company island of Oostenburg were

examined, and in 1984 excavations uncovered sites of houses in the western part of the city in the Taanstraat. Excavations reveal the original building plans as well as evidence of expansions and repairs, while in the back yards privies often furnish rich evidence of the food and drink associated with accompanying households. From cheap red earthenware to expensive porcelain, all kinds of ceramics were found in the excavations. The earliest Chinese porcelain in Amsterdam was found in a layer of urban trash deposited between 1593 and 1596 as fill material for the construction of the Vlooyenburg island, the later Waterlooplein. Three types of households can be distinguished: those in which no porcelain was found; those with one to ten pieces; and houses with more than ten examples. Almost no porcelain was found in the smaller houses situated in the cross streets. In middle class houses, lying on the Amstel and the Zwanenburgwal, porcelain was just rarely missing, but households with a minimum of ten pieces, such as that of the merchant and art collector Coert van Diepenbroeck on the Kloveniersburgwal, are not represented by the Waterlooplein privies before 1675. After about 1700, however, porcelain occurs in nearly every household. Recent historical and archaeological investigation has also yielded new data concerning the import of Japanese porcelain. Although the Republic officially was at war with Spain and Portugal, this scarcely deterred imports from those countries. During the Waterlooplein excavations, for the first time in the Netherlands a substantial amount of *terra sigillata* from Estremoz and faience from Lisbon was retrieved. The *terra sigillata* cups, small jugs, vases, and plates were modeled after antique examples or have Moorish decoration, consisting of inlaid pieces of white stone. It is very elegant tableware that was perhaps a curiosity. Interestingly a *terra sigillata* fragment was found in the privy of Rembrandt's house. It is also known that he owned a collection of rarities. Portuguese faience includes tableware that dates mainly from the first half of the 17th century. Neither local nor Portuguese faience production could satisfy the demand created by rapidly increasing population towards the end of the 16th century, and this opened a market for Italy, where ceramic production was already well developed. During the first half of the 17th century Italy continued to furnish faience. The entirely white faience was especially popular, but there were also fine marbled Italian bowls, plates, serving jugs, and bottles. Furthermore, Bergen op Zoom was an important producer, because of the local clay convenient for the production of slipware. Red earthenware in all households formed the cheapest and simplest cooking and eating utensils. A variant on this simple ware was the green colored earthenware, made from white-firing clay. Frechen in Germany was a great producer of this earthenware, but, with imported

clay, it was made in various Dutch cities. As with red earthenware, the green was found in excavations at all households. As earthenware in the course of the 18th century was replaced with brass cooking utensils, the percentage of red earthenware falls back to only 10 to 20%. Written in Dutch.

n.d. Het Hollants porceleyn, 1600–1660. *Mededelingenblad Nederlandse vereniging van vrienden van de ceramiek*, 180/181, numbers 1–2, 56–65, 87–88.

The book *Schildersboek* by Karel van Mander in 1604 refers to porcelain painting in the Netherlands. Excavations in recent years in Amsterdam, Delft, Haarlem, Hoorn, and Utrecht have yielded much new information on the early faience made in the Netherlands. Examples made early in the 17th century, covered entirely with tin glaze but not yet fired in saggars, were inspired by Chinese porcelain. There were also pieces made with a slightly thicker body and glaze, which includes a piece dated 1608. Three other plates, all dated 1619, were fired in saggars and are similar to examples of ca. 1620 to 1640 found in Amsterdam and in Delft. The earliest known documentary reference in an inventory to Delft "porcelain" is of a merchant in Delft dated 1625. In 1624 Willem Jansen Verstraeten was referred to as a "porcelain maker." By 1629 he was in Haarlem with two kilns, three mills, and 40 to 50 workers. His products must have included both faience and majolica. In 1642 his son took over the business to produce faience, while he set up a separate factory for majolica. In 1628 Abraham Pietersen in Delft was also described as a "porcelain maker." Recent finds in Delft show that the plates and dishes produced by Delft potters in the period ca. 1640 to 1660 were similar to those found in Haarlem. Written in Dutch with an English summary.

Baart, Jan M., Wiard Krook, and Ab C. Lagerweij
1984 Der Gebrauch von Glas in Amsterdam im 17. Jahrhundert. In *Glück und Glas zur Kulturgeschichte des Spessartglases*, 34–47. Haus der Bayerischen Geschichte; Verlage Kunst & Antiquitäten, München.

Evidence of the use of glass in Amsterdam in the 17th century was provided by excavations in 1972 for the subway and also for the new city hall. There are two groups of glass for the periods 1610 to 1625 and 1675 to 1700. A house on a canal was compared with a house on a street. The house on the street (Korte Houtstraat 26) had only one small plain crystalline beaker. The house on the canal had at least 16 *berkemeier* glasses from Germany and eight glasses that were made in Amsterdam. Glass from Germany was inexpensive, but the price increased because of shipment and labor costs. Illustrates excavated privies and examples of beakers, *berkemeiers*, a flute, *roemers*, and other glassware. Written in German.

1986a Herstellung und Gebrauch von Trinkglas in Amsterdam (1580–1640). In *Spechtersgläser: Ausstellung im Glasmuseum Wertheim*, 55–85. Glasmuseum Wertheim, Wertheim.

A large deposit of glassmaking waste was found in Amsterdam on the Keizersgracht at numbers 263–273. Glassmaking waste, very small beads, and small fragments provide evidence of the varieties of production. Glassware dating between 1580 and 1596 was found on the Waterlooplein, excavated in 1980 and 1981. Four groups of decorated beakers can be defined. Crystalline glass beakers are not found in Dutch sites predating ca. 1580, such as the Carthusian Monastery excavated in Delft. The evidence of bead manufacturing represents many types, including beads for local use as cheap jewelry but also for use in foreign trade, as with the American Indians. Illustrates glassmaking waste from the manufacture of *vetro a fili* beakers and other types of Venetian glass, *passgläser*, *berkemeiers*, and tubular and rounded polychrome beads. Written in German.

1986b Opgavingen aan de Oostenburgermiddenstraat. In *Van VOC tot Werkspoor*, ed. by J.B. Kist, 81–142. Matrijs, Utrecht.

In 1982 excavations in Amsterdam were conducted as part of a multidisciplinary study of the Oostenburg, Kattenburg, and Wittenburg, which were areas of ships' wharves, trades buildings, magazines, and houses and were some of the most varied industrial complexes of 17th-century western Europe. Selected for thorough study were numbers 20, 22, 24, and 26 Oostenburgermiddenstraat. The construction date of the house was between 1707 and 1738/42. Illustrates site plans, quantitative data in charts and graphs, and drawings of clay pipes (including 160 pipe makers' marks), shoes, and ceramic and glass vessel forms. Black-and-white photographs illustrate a wide variety of 18th-century ceramics, bricks, bottles and other glassware, beads, shells, seeds, nuts, textiles, coins, wood gaming pieces, toys, knife handles, spoons, a candle snuffer, buttons, a buckle, a comb, a tobacco box, and a heather broom. Written in Dutch.

1990 *Italianse en Nederlandse witte faience (1600–1700)*. *Mededelingenblad Nederlandse vereniging van vrienden van de ceramiek*, 138, number 2.

Lunsingh Scheurleer was the first to identify Italian *bianchi di Faenza* as the model for plain white Delftware, and he dated the beginning of Dutch production at around 1600. In the last quarter of the 16th century there was a great increase in the import of *bianchi di Faenza* to Amsterdam from Liguria and, in the first half of the 17th century, also from Venice. The earlier ware, from about 1600 to 1625, has creamier glaze with a body that is often pink, while

the later ware from about 1625 to the 1650s has a whiter glaze and a body that is more often yellow. Lobed dishes were the most popular pieces for export to Amsterdam. Plates, cups, porringers, salt cellars, mustard pots, and oil and vinegar jugs are also found. Dutch white faience begins to appear in Amsterdam excavations during the 1640s, represented by lobed dishes. The earlier lobed dishes have narrow lobes in imitation of the Italian form. Those with very wide lobes are typical of the second half of the 17th century. Plates were especially common between 1675 and 1725. Also in the second half of the 17th century there are many bowls, porringers, and large platters. Jugs began to be produced in the Netherlands around 1660. The archaeological evidence suggests that white faience from about 1660 to 1675 was expensive. After 1675 it was more often used as kitchen and tableware and remained popular until about 1725. Written in Dutch with English summary.

Baart, Jan M., Wiard Krook, Ab C. Lagerweij, C.A. Ockers, Gerard W. Stouthart, and Monika van der Zwan

1974 Knopen aan het Hollandse kostuum uit de zestiende-en zeventiende eeuw. *Antiek* 9 (1): 17-49.

For the study of 16th- and 17th-century costume history in the Netherlands, consideration of small accessories such as buttons is very important. The 159 buttons from Amsterdam excavations are divided into four chronological groups: 1500-1575, 1575-1600, 1600-1660, and 1660-1700. Only three examples in the first group are known; two are made of pewter, and one is bronze. Small opaque round dark green glass buttons belong to the second period and have been found in Nova Zembla, Amsterdam, and Haarlem. Illustrates many examples. Written in Dutch.

Baart, Jan M., Wiard Krook, Ab C. Lagerweij, Nina Ockers, Hans van Regteren Altena, Tuuk Stam, Henk Stoepker, Gerard W. Stouthart, and Monika van der Zwan

1977 *Opgravingen in Amsterdam*. Fibula-Van Dishoeck, Haarlem.

Discussion of previous excavations in Amsterdam with an overview of other urban archaeological projects beginning with work in Novgorod and continuing in Gdansk, Budapest, Lübeck, Bergen, Dublin, Winchester, London, Dordrecht, and other cities. Construction of a subway in Amsterdam in 1972 prompted full-time archaeological work that included not only medieval sites but also post-medieval sites. On the Damrak in 1972 the outline of a house from the second quarter of the 16th century was exposed. At the rear of the house a privy was found that was built of brick. There was a tiled cellar from the first quarter of the 17th century and a

kitchen supported by pine timbers and a drain built of planks both from the 18th century. In the privies of houses along the Nieuwendijk no material earlier than the 17th century was found. There were round as well as square privy pits, and in contrast to the much older privies in Lübeck, they were not deeper than 3 m below the street level. The wells, on the other hand, were as much as 6 m in depth but contained no artifacts. Illustrated chapters on leather shoes and other objects, textiles, lead bale seals, spindle whorls, combs, pins, needles, scissors, thimbles, jewelry, buckles, buttons, beads, rings, ceramics, spoons, knives, spigots, keys, locks, graphite pencil holders, spectacles, book clasps, tools, faunal remains, parasites, and much more represent the full range of material culture from the 13th to the 18th centuries. Written in Dutch with English summaries.

Baker, Patricia E., and Jeremy N. Green

1976 Recording Techniques Used During the Excavation of the *Batavia*. *The International Journal of Nautical Archaeology and Underwater Exploration* 5 (2, May): 143-158.

A variety of recording techniques have been used on this wreck. A photomosaic has been made of the timber layer. The stern post has been raised.

Bartels, Michiel

1999 *Cities in Sherds: Finds from Cesspits in Deventer, Dordrecht, Nijmegen and Tiel (1250-1900)*. Two volumes. Stichting Promotie Archeologie en de Rijksdienst voor het Oudheidkundig Bodemonderzoek, Zwolle.

Comprehensive, monumental description, analysis, and catalogue of artifacts excavated from rubbish pits and privies, resulting from a project to study and compare the material contents of both types of features through statistical analysis. Includes general chapters on the excavations, types of privies, stoneware, gray-bodied earthenware, red earthenware, white-bodied earthenware, Werra and Weser earthenwares, porcelain, majolica and faience, "industrial" ceramics, glass, metals, stove tiles, clay pipes. The contents of 176 privies are listed in artifact inventories, with the approximate dates, location, and description of each. Analysis reveals five general cultural periods. The first, from about 1275 to 1425, was a period in which glassware was rare. There were no ceramic plates, cups, or bowls, and red and gray-bodied earthenware, like stoneware, was virtually universal. In the second period from about 1425 to 1540, objects such as stoneware are decorated with color and applied ornament, indicating increased attention to the appearance of objects. There are the first imports of Spanish majolica and glass. From about 1540 to 1690 there is a shift to mass production instead of craftsmanship, with a trend toward simplicity and refinement.

Imports not only of porcelain from China but also of ceramics from areas of northwest and southern Europe steadily became less exclusive. In the period from about 1690 to 1780 the use of tobacco for smoking entered virtually all households. Drinking included tea, coffee, and mineral water in addition to beer, wine, and spirits. Finally, from about 1775 to 1914 there was the change to complete industrialization. Virtually all households switched to using English ceramics. After 1850 consumers began to use the products of Maastricht. The catalogue includes black-and-white photographs and line drawings of every ceramic vessel type and form, with approximate dates. A section on glass is illustrated with line drawings, and there are sections with drawings and photographs of metals, clay pipes, and stove tiles. Written in Dutch with English summary and English translations of captions.

2002 Deventer, Polstraat 38 (nr. 229), juni: Jaaroverzicht 2002. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*, p. 20. Stichting Promotie Archeologie, Zwolle.

The digging of a pond in a garden at Polstraat 38 uncovered remnants of approximately 25 *patacons*. These are ceramic bread decorations from the 16th to the 19th centuries. These *patacons* can be associated with Hendrick Lindeman, an 18th-century Deventer industrial entrepreneur and hydraulic engineer. Written in Dutch.

Bartels, Michiel, and Norbert Eeltink

2003 Deventer, Rielerenk (nr. 226), 9 juli–23 augustus: Jaaroverzicht 2002. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*, 17–20. Stichting Promotie Archeologie, Zwolle.

In a field which will become the site of the new Deventer Hospital, hobbyists with metal detectors have recovered many metal artifacts. The largest quantity consists of late medieval and post-medieval coins. Many copper but also silver coins were found, especially from Overijssel and Gelderland as well as from more distant places such as Prussia. Written in Dutch.

Bartels, Michiel, and Thomas Spitzers

2003 Deventer, Kleine Overstraat 81 (nr. 159), 21–25 oktober en eind december: Jaaroverzicht 2002. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*, p. 11. Stichting Promotie Archeologie, Zwolle.

The present cellar and house were constructed in the second half of the 15th century or the early 16th century. The barrel vault in the cellar incorporated stone from portions of a large Norman church demolished between 1458 and 1617. The excavations in the cellar revealed remains of worked cow bones, presumably

from which all sorts of implements were made in the 16th century. Written in Dutch.

Bartels, Michiel, Norbert Eeltink, and Jeroen Krijnen
2003 Deventer, Smedenstraat 46 (nr. 230), 11–22 november: Jaaroverzicht 2002. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*, 20–23. Stichting Promotie Archeologie, Zwolle.

Dated 1634 on the rear gable, the building was built upon traces of the medieval 9th-century embankment and two city walls. The cellar consists of two unequal parts. Under the floor two ash pots of Frisian and West Brabant red earthenware were excavated. An inner wall was constructed with mud and wattle. In the front room a test square was laid out and excavated to a depth of 2.2 m. This revealed a complete stratigraphy from the 13th to the 17th centuries. Various floor and burn levels were visible. The thick layers of slag, cinders, and smithing waste show that iron was worked using coal as fuel as early as the 14th century. Written in Dutch.

Bartels, Michiel H., and Léon M. van der Hoeven

2003 Familie, vrienden en zaken: Een onderzoek van het sociaal-economische netwerk van de familie Van Lidth de Jeude (1701–1778) te Tiel aan de hand van lakzegels uit een beerput. In *Bijdragen en Mededelingen Gelre: Historisch jaarboek voor Gelderland*, Deel 94, 7–25. Vereniging Gelre.

The Public Archaeological Service (ROB) in March and April 1995 performed an archaeological investigation at the Koornmarket in Tiel with the goal of understanding the 10th- and 11th-century trading settlement there. Above those remains approximately 3 to 4 m were excavated below the street level. Here were found remains from the 12th to the 19th centuries. The 17th- and 18th-century remnants consisted of a garden wall, a foundation wall of a house, a well, a cistern, and a rectangular privy. The content of this privy, and in it particularly the lacquer seals found in it, is remarkable. These small red seals were remains of letter seals. From historical investigations it became clear that the readers of the letters could be identified as members of the regent Van Lidth de Jeude family. The seals were the imprints of seal stamps and seal rings. They come from the entire occupation period of the house. Many seals can be dated precisely by decade. The origins of the seals provide a complete view of the family's communication network and the names of the different families with whom the family communicated. Written in Dutch.

2005 Business from the Cesspit: Investigations into the Socio-economic Network of the Van Lidth de Jeude Family (1701–78) in Tiel, the Netherlands, on the Basis of Shellac Letter-

seals from a Cesspit. *Post-Medieval Archaeology* 39 (Part 1): 155–171.

Small red objects found during the excavation of an 18th-century privy in Tiel are the shellac seals from letters, discarded with refuse by the upper-class Van Lidth de Jeude family who lived there. The seals, with various impressed coats of arms, were on letters received by the family. On this basis about 40 persons and families who corresponded with the Van Lidth de Jeudes have been identified, representing three socio-economic groups. These were (1) a network of officials, (2) family, and (3) relatives. A fourth group consists of official and semi-official contacts in Utrecht. The seals can be used to distinguish between family, relatives, marital status, and gender, thereby throwing light on the nature of the family correspondence and possibly revealing a gender-based network between the Van Lidth de Jeude ladies and their female relatives in other towns and cities.

Bartels, Michiel, Winnie von Ende, and Dirk Schütten

2003 Broodversiering uit de Koekstad, achttiende-eeuwse *patacons* uit een kuil aan de Polstraat te Deventer. *Westerheem* 52 (3): 95–107. Archeologische Werkgemeenschap voor Nederland. <<http://www.deventer.nl/Frm/Frm.stadencultuur-home.html>>.

During the digging of a pond at 38 Polstraat in Deventer in July 2002 a large number of broken white pipeclay ceramic fragments decorated with figures in relief were found in a pit about 2 by 3 m in size at a depth of 20 to 50 cm. The objects are all about 12 by 15 cm in size, with a thickness between 9 and 12 mm. The images are secular as well as religious, including horse and rider(s) and Adam and Eve. The side with the image in relief often has a cream-colored or light red slip. The undecorated back side is generally smooth. Considering the style of clothing of some of the figures, the date for these objects is in the period 1675 to 1750. This type of object is identified as a *patacon*, a type of pipeclay plaque used to decorate bread made for special events or holy days such as New Year's, Christmas, and Easter. They were originally painted, but the colors have disappeared because of burial in the ground. The *patacons* were left after the bread was eaten, and they found their way to the garden possibly because children played with them. The property was owned after 1718 by Hendrick Lindeman and his prosperous family. He was a noteworthy entrepreneur in and around Deventer in the period 1745 to 1750. A house list in 1748 shows that his household included his wife, his sister-in-law, two children older than ten years of age, and a servant. Elsewhere *patacons* have been found in Alphen on the Rhine, Amsterdam, Bergen op Zoom, Breda, Den Bosch, The Hague, Eindhoven, and Helmond. Two

patacons from Alphen on the Rhine were among the wasters of the pipe maker Philip Hoogenboom, who was established around 1750. This indicates that *patacons* as well as marbles were made as byproducts of the pipe industry. *Patacons* conveyed an ideological and religious connotation. The decoration of bread not only enhanced festive occasions but also brought moral messages. Written in Dutch.

Bartels, Michiel, Jeroen Benders, Jaap Kottman, Johan Ekkel, and Piet Bolwerk

1993 *Van huisvuil en huizen in Hasselt: Opgravingen aan het Burg Royerplein*, ed. by Michiel Bartels, Hemmy Clevis, and Frits David Zeiler. Stichting Archeologie IJssel/Vechtstreek, Kampen.

Excavation of a block in the center of the old city of Hasselt began in March 1991. The block had contained houses until 1913, when a tram station was built there. In 1935 the tram station was replaced by a garden and fountain. The excavation lasted four weeks. List, description, and plan of 129 features (walls, floors, cisterns, cellar stairs, wooden privies, wells, post holes, etc.) dating from the first half of the 13th through the 19th centuries. Describes ceramics from five privies and wells dating from the 16th through the early 19th centuries, including an early 19th-century apothecary's privy containing English pearlware and other ceramics. Illustrates with black-and-white photographs and drawings examples of Rhenish stoneware, English white salt-glazed stoneware, red earthenware, white earthenware, Dutch majolica, Dutch faience, porcelain, creamware, glassware, clay pipes, coins, a miniature fireback, combs, knife handles, a domino, a tooth brush, and decorated wall tiles. Most of the clay pipes date from the 18th century. Written in Dutch.

Bax, Alan, and Colin J.M. Martin

1974 *De Liefde*, a Dutch East Indiaman Lost on the Out Skerries, Shetland. *The International Journal of Nautical Archaeology and Underwater Exploration* 3 (1): 81–90.

De Liefde was built in 1698 and was wrecked in 1711. An iron gun and two silver ducatoons were found at the site in 1964. Excavation has produced many artifacts, including a clay pipe, a thimble, buckles, a bronze breech block from a cannon, bronze bell fragments, a silver sword hilt, pewter spoons, a lead weight, and knife handles of horn, ivory, and ebony, all illustrated.

Beahan, Jenny

1998 A Cultural Tourism Perspective. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 144–148. Special Publication No. 3,

Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Freemantle.

The cultural landscape of western Australia is largely unknown to the tourism industry. Since 1986, plans have been made for a land-access four-wheel-drive tour to the *Zuytdorp* site. The *Vergulde Draeck* is an additional maritime heritage experience which could be developed. A successful trip has also been organized around the *Batavia*.

Beshears, Jemison R.

- 1993 Description and Wood Analysis of the Hull Timbers of a 17th-Century Merchant Shipwreck off Monte Cristi, Dominican Republic. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference, Kansas City, Missouri, 1993*, ed. by Sheli O. Smith, 123-129. Published by the Society for Historical Archaeology.

The wreck was discovered in the 1960s by a local fisherman, and it is known as the "pipe wreck" because of the hundreds of clay pipes found there. A large number of the pipes bear the mark of Edward Bird of Amsterdam. Other artifacts recovered during the past summer include an iron cannon, navigational dividers, wampum beads, thimbles, brass tacks, two candle sticks, faunal remains, pieces of cordage, and thousands of ceramic sherds and clay pipes. Coins were found that were first minted in 1651. Coral concretions have sheltered much of the hull from environmental damage. Between the outer hull planking and the sheathing was a black resinous mixture of animal hair and tar. There was evidence of repairs to the keel and to the outer planking. Wood samples were determined to be oak that did not grow in continental Europe and came probably from England.

- 1996 Dendrochronology and the Monte Cristi Pipe Wreck. *The Broadside* 3 (1): 3-4. Published by the Pan-American Institute of Maritime Archaeology.

It was found that the timbers of the wreck were not from continental Europe but were most likely from England. The construction of the ship also appears to have been English. It had been thought the ship was Dutch because of its cargo of Dutch ceramics and clay pipes. The ship may have been a merchant ship under the Dutch flag when it sank, or it may have been a ship captured by the Dutch or a Dutch ship built under foreign contract.

Bitter, Peter

- 1993 Handling Pots and Pans: Reflections on Applied Features on Late-medieval Earthenware from the Western Netherlands. In *Assembled Articles 1: Symposium on Medieval*

and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993, 97-118. Stichting Promotie Archeologie, Zwolle.

Applied features are those functional parts that were added to the body of a pot. The differences between these features and how they were applied could be useful in the study of regional traditions as well as changes in pottery production. Data from excavations in Leiden and from Alkmaar are useful. In Alkmaar the site of a pottery workshop dating from ca. 1550 to 1620 was excavated. The ceramic typology used in Leiden accounts for about 80% of all the red earthenware types produced there from ca. 1350 to 1600. However, at Leiden there is remarkably little variety compared to the wide range of products from the Utrecht kilns where there were perhaps as many as two to four times as many types. Possibly Leiden pottery was a small-town local market production whereas Utrecht and Bergen op Zoom were oriented toward large-scale export. Regional differences faded in the late 16th and first half of the 17th centuries, with greater standardization. Evidence from the work of several potters in Alkmaar shows that the hollow handles of early medieval skillets were replaced by the typically flat, massive straight handles beginning about 1350. Later, the swallow-tailed handle appeared in the 16th century, having been invented by Bergen op Zoom potters in the late 15th century. Includes a typology of applied features including handles, lugs, feet, and footings on earthenware, with illustrations and drawings.

Bitter, Peter, W.J. van den Berg, R. Roedema, E. Esser, E.F. Gehasse, and G.M. van der Pal

- 1992(?) *Geworteld in de bodem: Archeologisch en historisch onderzoek van een pottenbakkerij bij de Wortelsteeg in Alkmaar*. Stichting Promotie Archeologie, Zwolle.

In September 1991 excavations were conducted at a building site on the Wortelsteeg, an alley in the northeastern part of Alkmaar. Many pottery wasters had already been collected from a site at the corner of Wortelsteeg and Wageweg. Remains of a circular pottery kiln were unfortunately destroyed at the site in 1987. Foundations of several buildings were uncovered in 1991. Potters were active on this site from about 1550 to 1620. Many more wasters were found. There was a soap factory on the site from 1626 until 1937. There are archaeological remains from seven periods beginning ca. 1475. The foundations of one house can be attributed to the period between 1493 and 1519. In former back yards of houses were found garden walls, water cisterns, privies, and trash pits. The contents of one privy can be dated to the period 1573 to 1677. Leather objects include not only shoes but also a complete workman's shirt found in a deposit of kiln waste. Pits filled with dung from sheep reveal information

about plants in the vicinity. Samples of pollen, seeds, shells, and bone were recovered from privies; fruit and vegetable remains included rice. Faunal remains included lamb, calf, birds, fish, lobster, crab, and shellfish. A privy representing especially prosperous occupants contained porcelain and *façon de Venise* glass. The final phases of the pottery making at the site included production of both red and white lead-glazed earthenwares. The white-firing clay had to be imported. The handles on the white earthenware suggest the presence of a workman from Cologne or Frechen. Glazed pantile fragments were used as kiln props, and the pots were stacked in the kilns on their sides. The pottery was mainly utilitarian, consisting of skillets, cooking pots, dishes, and small bowls. Green-glazed white earthenware skillets were produced. Illustrates with black-and-white photographs and drawings examples of glass *roemers* and tumblers as well as beakers, wine glasses, porcelain, Dutch faience and majolica, stoneware, red and white earthenwares, pewter, shoes, clay pipes, a gable stone dated 1684, a child's toy wooden wagon, and a leather and wood book cover with brass clasps. Written in Dutch with an English summary.

Bitter, Peter, Juke Dijkstra, Rob Roedema, and Rob van Wilgen

1997 *Wonen op niveau: Archeologie, bouwhistorie en historie van twee percelen aan de Langestraat*. Rapport 5 and 5A. Rapporten over de Alkmaarse Monumentenzorg en Archeologie, Gemeente Alkmaar.

Two lots on the Langestraat in Alkmaar were excavated where a fire destroyed two historic buildings in 1992. The owners and occupants of each of the house lots have been thoroughly documented from 1552 to the early 20th century. The archaeological features were dated in relation to 15 time periods, from the Late Bronze Age (period 1) to the 19th century (period 15). The three earlier periods before the 19th century were period 12 (ca. 1425 to 1550), period 13 (ca. 1550 to 1700), and period 14 (ca. 1700 to 1800). Each feature was catalogued as to period number and an alphabetical code. Artifacts from eight privies were recovered and analyzed. The absence of any evidence of the heavy floods that struck Alkmaar in the 12th and 13th centuries was surprising. Remains of houses from the 14th century were found. Brick houses were built on both lots about 1400 to 1425, and they underwent many subsequent alterations. One house was an inn until around 1600. The artifacts associated with occupation of the other house lot suggest rather poor inhabitants until about 1400, when the house was enlarged, and new occupants used glassware, Rhenish stoneware, Dutch majolica, and Spanish lustre ware. The privy of a wealthy occupant from the first half of the 17th century contained *façon de*

Venise glassware, a giant glass beaker decorated with gold foil, and many other glass vessels. The houses typified the separation of work spaces from living spaces from the 16th to the 18th centuries. Typically, houses of the less wealthy were together with the larger houses of the very wealthy on the same street. In addition, some of the wealthier occupants apparently used less expensive ceramics and clay pipes in the 18th century. The archaeological data document through the 17th and 18th centuries the increasing variation and increasingly specific functions of ceramics as well as their new shapes and forms. The artifact catalogue is illustrated with black-and-white photographs and many drawings. Written in Dutch with an English summary.

Bitter, Peter, Nancy de Jong-Lambrechts, Rob Roedema, Don H. Duco, Akemi Kaneda, Sjek Venhuis, and Sebastiaan Ostkamp

2004 *De verborgen stad: Archeologisch onderzoek naar 750 jaar wonen in Alkmaar. Vormen uit Vuur, het Mededelingenblad van de Nederlandse vereniging van vrienden van ceramiek en glas 186/187*.

A collection of papers on archaeological excavations in Alkmaar with special articles on cooking, eating, and drinking utensils, clay pipes, Chinese and Japanese porcelain, slip-decorated earthenware, and marriage symbols on silver and ceramics, with hundreds of illustrations in full color. Rubbish pits behind houses generally were used until the first half of the 16th century, while most brick houses had privies beginning in the 16th century. The contrast between rich and poor became even greater with the economic decline of the 18th century. Inside the houses, earthenware firecovers were used for safety at night to maintain the glowing coals of a fire. Fireplaces in living rooms were decorated with wall tiles after about 1625. In 1686 the first fashionable coffee house was opened in Alkmaar, and excavations at the site of an early 18th-century coffee house produced a set of plates with sayings such as "de koffij is goet." English white salt-glazed stoneware is regularly found between 1740 and 1760, and Worcester porcelain was popular from about 1765 to 1780. Glazed red earthenware frying pans began to appear in the 14th century, and from the late 16th century white earthenware ones with green or yellow glaze also appear. Strainers and colanders are found from the early 15th century. In the 16th century glass was used only in the better households. The *roemer*, the most common type of glass in Alkmaar, developed from the *berkemeier*. In the second half of the 17th century, *façon de Venise* beakers decorated with white glass threads are found. "Waffle pattern" beakers date from about 1575 to 1700 and are found even in less well-to-do house sites. At first the clay pipes in Alkmaar came mostly from Amsterdam. These included "Jonah and the whale" pipes. After about 1650 imported clay

pipes from Gouda predominated over locally-made pipes. Marks on the Gouda pipes include the crowned *ws*, the spectacles, and the crowned *A*, while higher quality pipes included the posthorn and the prince marks. Gouda pipes continued to predominate in the 18th century. In Alkmaar at least fifty pieces of pre-1650 Chinese porcelain have been excavated. Japanese porcelain could be imported after 1657, and in Alkmaar a blue-decorated Japanese "crow cup" from the 1660s has been found. In Leiden kiln wasters from a slipware pottery which existed there from 1617 to 1671 have been found, and near Leiden a similar piece of North Holland slipware dated 1617 from the same pottery has been found. Several kiln wasters found in Alkmaar, plus an enormous amount of North Holland slipware excavated on Schermereiland, indicate that North Holland slipware was produced in Alkmaar from about 1585 to about 1670. Majolica as well as faience vessels, and silver knife handles, beakers, thimbles, and other other objects were often decorated with marriage symbols. One symbol is the clasped hands below a flaming heart. Written in Dutch with an English summary.

Blot, Jean-Yves

1996 *Underwater Archaeology: Exploring the World Beneath the Sea*. Translated by Alexandra Campbell. Harry N. Abrams, Inc., New York.

In 1985, the wreck of the *Mauritius*, a Dutch ship built in 1601 and 1602 and sunk on its return from Asia in 1609, was discovered by chance. The remains of the hull displayed characteristic features of Dutch ship construction. It was of "shell first" construction, and the hull was built without first fitting an inner cross-frame. The information from the hull was as important as the richness and variety of the ship's cargo.

Boltze, Trees, Ruud Borman, Wim van Maanen, Elly du Maine, Jan Verhagen, and Ronald Wientjes

1982 *Scherven en potten uit zand en klei: vondsten uit Achterhoek, Liemers en Veluwe*. Nijmeegs Museum Commanderie van Sint Jan, Nijmegen.

Description of archaeological excavations in Gelderland at Arnhem and in the Zuid-Veluwe. Excavations in the Hemelrijk in Arnhem produced glassware, namely *roemers* from the first half of the 17th century. Red earthenware was the best-represented ceramic ware. The next were late medieval stoneware, white-bodied earthenware with yellow slip and lead glaze, red earthenware with green lead glaze, white earthenware with iron or manganese oxide lead glaze, and plain white tin-glazed earthenware. There were much smaller amounts of majolica, Chinese porcelain, and blue-decorated tin-glazed earthenware. Illustrates photographs of white-bodied pipkins, Rhenish stoneware, and slip-deco-

rated red earthenware from the 16th and 17th centuries. Written in Dutch.

Bradley, James W., and Monte Bennett

1984 Two Occurrences of Weser Slipware from Early 17th-Century Iroquois Sites in New York State. *Post-Medieval Archaeology* 18: 301-304.

An Iroquois Indian site dating ca. 1600 contained fragments of a Weser ware vessel similar to examples recovered from contexts of ca. 1590 to 1600 in Amsterdam. The vessel had a pale salmon-colored body covered with a fine white slip on the interior surface under a lead glaze. Medium orange/brown slip trailed in a pattern of concentric circles with green mottling decorated the piece.

Brongers, J.A., and H.F. Wijnman

1968 Chronological Classification of Roemers With the Help of 17th Century Paintings in the Low Countries. In *Rotterdam Papers, I, A Contribution to Medieval Archeology. Teksten van lezingen gehouden tijdens het Symposium voor 'Middellevuise Archeologie in de oude bin-nensteden' te Rotterdam, Schiedam en Delft van 21 t/m 24 maart 1966*, ed. by J.G.N. Renaud, 15-21. Coordinatie Commissie van Advies inzake Archeologisch Onderzoek binnen het ressort Rotterdam, Rotterdam.

Excavations in rubbish pits, wells, and privies in urban areas produce fragments of glass from the 16th and 17th centuries, sometimes from closely dateable contexts. Sometimes dated glassware is found. Paintings can also be used to date glassware, by way of comparison. The first catalogue of 17th-century paintings showing glassware was completed in 1964. A chronology of *roemer* types based on more than 200 Dutch and Flemish paintings from the period 1600 to 1680, representing 63 different artists, has now been developed. The important dates are the dates of paintings on which there is the first appearance of a given type of *roemer*. Also, 18 engraved *roemers* were included. The 17th-century paintings in the sample did not illustrate any *berke-meier* glasses. The *berkemeier* is a *roemer*-like type of glass from the 16th century of which the cup is cone-shaped and the stem is decorated with thorn-shaped drops [prunts]. *Berkemeier* glasses are excavated in 16th-century contexts, and one that is engraved with the date 1642 was probably an antique. *Berkemeier*-like glasses were observed in the 17th-century paintings, however, with smooth prunts or raspberry-shaped prunts. Raspberry prunts first appear on a type of *roemer* that remained in use for the longest period, beginning in the 1630s. A type of *roemer* that first appears in the mid-1640s has raspberry prunts that are much finer, flatter, and smoother. Analysis of paintings based on the birth dates of the artists shows that generally earlier painters used earlier

roemer types and later painters illustrated later types, thus validating the utility of using paintings for the dating of glass types.

Brown, Ruth R.

1997 Arms and Armour from Wrecks: An Introduction. In *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution*, ed. by Mark Redknap, 101–109. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology Society and Society for Post-Medieval Archaeology, Oxford.

In the arms and armor category are gorgets which have been recovered from the *Batavia* wreck (1629). All that remained of a batch of pikes on this ship were the ferrules. A patch box from a rifle was also found. The *Mauritius* (1609) carried a mixture of brass, wrought-iron, and cast-iron cannons, and a brass petard has also been found on this wreck. A petard was a brass pot filled with gunpowder and used to make a breach in fortifications.

Bruijn, Anton, Hans L. Janssen, and Everdina Hoffman-Klerkx

1992 *Spiegelbeelden: Werra-keramiek uit Enkhuizen, 1605*. Stichting Promotie Archeologie, Zwolle.

Since the discovery in 1896 in Germany of the site of a kiln that produced red-bodied earthenware distinctively decorated with yellow slip and lead glazed near the small town of Wanfried on the river Werra, the name Wanfried ware has been applied to this pottery. In the late 1970s more of this ware was found in other towns on the Werra, and Wanfried ware was renamed Werra ware. This ware is now found regularly in the western Netherlands and around the Zuiderzee. They were regarded as imports from Germany, but new discoveries at Enkhuizen have overturned this view. Dirk Claeszen Spiegel, a Dutch cloth merchant, owned a pottery at Enkhuizen from 1602 to 1608, and excavations at this site beginning in 1979 produced extensive evidence of the production of this ware. A few complete dishes bearing dates 1603 and 1604 were found among wasters in a stratified pit, and a brick well nearby contained evidently all the wasters from the year 1605. The material above them evidently represents the eventual clearing of the site and includes fragments with dates as late as 1609. Werra ware decoration was divided into three zones: in the center of the dish was an image; then, on the flange were about five spiral coils; and then on the rim were oblique dashes. Enkhuizen decoration included Adam and Eve, flowers, fruits and trees, and animals such as deer, hares, fish, and birds. All the decorations are very similar to German examples from the Werra region. The German decorators at Enkhuizen initially used German dishes as examples, yet there are distinct deviations from the

German examples in the style of dress and costumes; for example. Three styles of women's dress can be distinguished. Only two styles of men's dress appear on the Enkhuizen plates. Illustrates with drawings and both black-and-white and color many examples. Written in Dutch, in German, and in English.

Bruyns, W.F.J. Mörzer

1998 A View of the Nederlands Scheepvaartmuseum. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 134–137. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Fremantle.

As early as 1927 the Museum was involved in maritime archaeology and wrecks. Finds from the man-of-war *Brederode* which sank in 1658 in the Battle of the Sound were given to the Museum. Unfortunately, because there were inadequate techniques for the treatment of such artifacts available at that time, little is left of this collection today. On the other hand, artifacts preserved from the wrecks of the *Amsterdam* (1749), *Hollandia* (1743), *Witte Leeuw*, *'t Vliegand Hart*, and *Bredenhof* are in much better condition.

Bult, Epko J.

1995 Delftse theepotten, de tweede generatie. In *Assembled Articles 2: Symposium on Medieval and Post-Medieval Ceramics, Antwerpen, 25 and 26 January 1995*, 33–42. Stichting Promotie Archeologie, Zwolle.

During a comprehensive soil cleaning project in 1993 at the site of the former gas works on the Asvest in Delft, archaeological observation was performed. The project area extended beyond the former city rampart, over the moat filled in 1900, and over an area within which the earlier city wall had been located. Because of the heavy pollution of the soil, the fill within the canal had to be entirely removed. While it was not possible to salvage artifacts from the fill systematically, precise recording would have been of little meaning because no direct connection can be established with specific households from which the trash originated. Between the moat and the occupation area always stood the city wall. One exception was the small deposit of pottery wasters and rubbish. Unfortunately, much of this was lost during the soil cleaning or through the work of clandestine diggers, but a small group of objects from the kiln waste has been retrieved. The potter had specialized in the manufacture of tea pots, including lids, spouts, and handles. They are of a type regularly found in 18th-century sites in Delft and the

immediate area. The ceramic body is of hard-fired, iron-rich clay, of an orange to dark red color. Associated artifacts in the fill do not offer precise dating of the teapots. The clay pipe bowls date mostly from the 1720s, while the earliest datable ceramic is a teapot of red stoneware from about 1700. Essentially, most of the material dates from the second and third quarters of the 18th century. Illustrates examples of the teapots with drawings. Written in Dutch.

Bult, Epko J., David R. Fontijn, Carola Nooijen, H.E. Henkes, G.H. Stam, Jean Kaiser, Zita van der Beek, and Henk Robbers

1992 *IHE Delft Prospers on a Cesspit: Archaeological Research Between Oude Delft and Westvest*. IHE, Westvest 7, Delft.

The archaeological evidence shows that the occupants of the site in the 14th and 15th centuries were fairly prosperous, with a high percentage of stoneware, although luxury meats such as game and poultry were not consumed. In the late 15th and early 16th centuries, however, the consumption of beef decreased and was replaced with more expensive mutton and pork. The more expensive chicken became the most popular type of poultry. Nevertheless until the mid 16th century the occupants were not among the Delft élite; fragments of beautifully decorated stoneware jugs were absent, and not until the early 17th century did glassware include elegant wine glasses covered with a thin layer of gold, in association with bones of a dwarf dog and of wild game such as those of hare. Some of the occupants in the 17th and 18th centuries were among the wealthiest citizens of Delft. Clearly, the prosperity level increased during the second half of the 16th century, but an absence of archaeological data from just that period makes it difficult to trace this change. Economic change included the establishment of breweries between 1544 and 1600. Remains of a structure on the Smitsteeg was probably a malthouse belonging to the Rosbel brewery. The breweries declined during th 18th century. Trash pits from the 15th and 16th centuries produced mainly red earthenware, while the relative abundance of Siegburg stoneware declined from the amounts in the preceding period. In trash pits from the 17th and 18th centuries Siegburg stoneware was absent. Stoneware in general decreased and was completely absent in the 18th-century fill deposits except for an occasional fragment of a Raeren jug, coarse kitchen utensils, or Westerwald vessels. White-bodied earthenware became more expensive than red earthenware. The shapes of pipkins changed at the end of the 16th century, making it easy to distinguish them from earlier examples. The most common Delftware vessels were plates and dishes, decorated in Chinese designs. Faience galipots, or albarelli, were also found. Porcelain was

well represented. Illustrates in color and black-and-white photographs as well as drawings examples of all types of ceramics, glassware, tubular glass beads strung to form a hairnet, clay pipe marks, pewter spoons, knives, furnace slag, leather shoes, wooden objects, toys, faunal remains, and excavated features.

Burningham, Nick

1998 *Discovering Our Heritage With Ships of Exploration*. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 124-129. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Freemantle.

In reconstructing a replica of the *Duyfken*, research drew on different sources of data, including archaeological remains of approximately contemporary Dutch ships. Information about an underwater wreck of ca. 1590 in the Netherlands showed very strongly the long and relatively sharp bow and stern that had been hypothesized. The wreck also revealed a surprisingly sharp cross section shape, unexpected for a Dutch vessel.

Carmiggelt, Arnold

1991 *Een beeld van een vondst: Haagse archeologische vondsten in particulier bezit*. VOM, reeks 1991, nummer 4. Gemeente Den Haag, Dienst Stadsbeheer, Hoofdaling Archeologie.

Fully illustrated catalogue of artifacts excavated in The Hague, with chapters on dated artifacts, tinglazed ceramics decorated with landscapes, artifacts depicting animals, artifacts depicting humans, artifacts depicting love and marriage, ceramics and other artifacts bearing coats of arms, ceramics and a pipe bowl celebrating the House of Orange, and objects with other inscriptions. Written in Dutch.

1993 MAE: Wat doen we ermee?: Voorlopig verslag van de analyse van aardewerk uit laat en postmiddeleeuwse vondstcomplexen in Nederland en België (1350-1800). In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 55-86. Stichting Promotie Archeologie, Zwolle.

Interim report on the quantitative analysis of pottery based on minimum number of specimens (MNS) from late- and post-medieval assemblages in the Netherlands and in Belgium. These data may contain evidence that enable comparisons relating to wealth and status, while deviant assemblages can be studied in relation to documentary sources. It appears that in this period in the Netherlands are two distinct pottery regions. In the western

Netherlands the proportion of gray-bodied ware and stoneware falls from the mid-14th century on, and assemblages are predominantly red earthenware. In the eastern Netherlands gray-bodied ware and stoneware remain relatively prominent in the 15th century while red earthenware spread inland from the coastal provinces. After about 1600 the Netherlands form a fairly uniform pottery region with minor differences still detectable between the east and west. The data also make possible the classification of pottery assemblages into categories of wealth. A "pottery wealth quotient" figure is obtained by dividing the sum of the percentages of "luxury" ceramics by the sum of the percentages of the more "common" ceramics. The figures can be plotted in a diagram, but the dating of each assemblage must be taken into consideration. During the period of study, the percentage of ceramics classified as tableware increased while the percentage of ceramics classified as "food preparation" ware decreases. This is perhaps because food increasingly was prepared in metal utensils while ceramics replaced wooden tableware. During the 18th century in the western Netherlands ceramic assemblages indicate that porcelain was over-represented and lead-glazed earthenware was under-represented in probate inventories. Written in Dutch with English summary.

Carson, Cary

1994 *The Consumer Revolution in Colonial British America: Why Demand? In Of Consuming Interests: The Style of Life in the Eighteenth Century*, ed. by Cary Carson, Ronald Hoffman, and Peter J. Albert, 483-697. University Press of Virginia, Charlottesville and London.

Illustrates a Chinese porcelain cup excavated at Kingsmill, Virginia. Others exactly like it have been found in Virginia at the Maine on Governor's Land, at Wolstenholme Town, and at Causey's Care. Identical Wan Li porcelain was retrieved from the Dutch East India Company wrecks of the *Witte Leeuw* (1613) and the *Banda* (1614).

Cederlund, Carl Olof

1983 *The Old Wrecks of the Baltic Sea: Archaeological Recording of Wrecks of Carvel-Built Ships*. BAR International Series 186. B.A.R., Oxford.

Illustrates the wrecks of the *Amsterdam* and the *Batavia* in black-and-white photographs and drawings; illustrates a black-and-white photograph and drawing of the sternpost of the *Batavia*. In 1909 the wreck of the Dutch warship *Brederode*, sunk in 1658 near Helsingör, Denmark, was subject to salvage operations. The bottom of the ship has survived. The Scheepvaart Museum has ceramics, an iron cannon, parts of a gun carriage, and other objects that were raised.

Clevis, Hemmy

1993a Form, Function, and Name. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 125-130. Stichting Promotie Archeologie, Zwolle.

A new, additional category is proposed for the chronological typology of ceramics applied to the ceramics from Deventer, Campen, Zwolle, Kessel, Nijmegen, and Hasselt. In addition to the categories for type number (including the fabric) and for name/function, there should be a category for "main-form" to indicate a more general vessel form. The name/function category is used for specific Dutch names used historically to distinguish between saucers, lobed dishes, fish drainers, salt cellars, and other types of plates. There are still problems with the main-forms of cups and bowls. The cup is a form that was introduced with the Chinese porcelain teacup and was copied in tin-glazed faience. It is only rarely found in red or white earthenware, and the earlier red and white earthenware cups therefore should be classified as bowls. There are problems with some of the red earthenware bowls from Nijmegen, since they are not open forms. But if they are called pots, they will form a separate subgroup within the main-form of pots. Illustrates with drawings and graphs types from Deventer, Campen, and Nijmegen.

1993b Naam, functie en vorm. Een discussie aan de hand van enkele borden van Werra-keramiek. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 133-138. Stichting Promotie Archeologie, Zwolle.

As far as is known, in Zwolle at four different locations sherds of six objects made of so-called Werra ware have been found. These are in a building site on the Ossenmarkt, in a cellar of the so-called Celehuisje, among the trash and debris of a house on the Walstraat, and during the restoration of the city wall between Diezerpoort and Wijndragerstoren in 1977 and 1978. The plate fragment from the Walstraat is dated 1611 (illustrated). A plate fragment from the Ossenmarkt is dated 1617 (illustrated). A third plate is complete and is dated 1618 (illustrated). From the trash left by a group of women maintained by charity comes an ornament: a two-handled decorated Werra bowl bearing the date 1593 (illustrated). The fragment found between Diezerpoort and Wijndragerstoren is from a looking-glass and is dated 1613. Written in Dutch.

2003a Zwolle, Golfban; 6-20 februari 2002: Jaaroverzicht 2002. In *Overtijdsels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*, 49-50. Stichting Promotie Archeologie, Zwolle.

In one of the woods belonging to the 18th- and 19th-century Selhorst country houses, a small test trench was excavated at the location of a possible burial mound. The feature was indeed man-made. The copse is shown on a map from 1780. It was concluded that hills were raised for cultivation of a grove. In one of the trenches was unexpectedly uncovered the complete, very clear post hole plan of a farm building. Small fragments of industrial period ceramics were found, indicating a recent date, but investigation of all maps shows that no such building ever stood there after 1830. Written in Dutch.

2003b Zwolle, havezathe Werkeren, de voorburcht, 1 april–1 juli 2002: Jaaroverzicht 2002. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek* 2002, 50–55. Stichting Promotie Archeologie, Zwolle.

Excavations were conducted to uncover part of the site of Werkeren, a country house complex or *havezate*, buried under the former Reuvekamp family farm that had burned. It was expected that traces of one or two farm buildings and the barbican would be found. It was discovered that one of the farm buildings had been demolished before 1780 to be replaced by a "hall house," the cellar of which had served as the cellar for the earlier structure. The hall house subsequently underwent development in three phases. Written in Dutch.

Clevis, Hemmy, and Jan Thijssen

1989 *Kessel, huisvuil uit een kasteel. Mededelingenblad Nederlandse vereniging van vrienden van de ceramiek*, 136, number 4.

A well sealed in the early 17th century in Kessel Castle was excavated in 1958. Ten boxes of sherds from that excavation have now been analyzed. The material represents two periods: the first half of the 16th century and ca. 1600. Some of the stoneware is from Siegburg, but most of it is from Raeren. White earthenware was imported from the Maas valley (Andenne ware) or the lower Rhineland. The Andenne ware is mostly represented by plates with red slip decoration. Red earthenware sherds are greatly in the minority at Kessel Castle. Since the production of Dutch faience began only after about 1620, the faience in this well is most likely of Italian origin. Two examples of Dutch majolica were found. Other ceramics include Hispanic lustre ware and Beauvais earthenware. Illustrates the ceramics with drawings and black-and-white photographs. Written in Dutch with an English summary.

Clevis, Hemmy, Frits David Zeiler, Jaap Kottman, Frits Laarman, Janneke Burman, and Olav Goubitz

1989 *Weggegooid en teruggevonden: Aardewerk en glas uit Deventer vondstcomplexen, 1375–1750*. Stichting Archeologie IJssel/Vechtstreek, Kampen.

This study presents only a small part of the data from the research project on the Burseplein in Deventer. Red earthenware was typical of local wares after the 14th century. White earthenware was imported; only on a limited scale was inferior ware made from iron-poor clay that otherwise came from southern and middle Limburg near the entrance of the Maas valley. In the beginning of the 16th century a majolica kiln was in production in Utrecht. Porcelain arrived first in Middelburg in 1602 in a captured Portuguese ship. Faience was produced with tin glaze on both sides of plates by means of a different stacking technique used in the kilns by the middle of the 17th century. In Deventer the earliest glass is found in an early 15th-century context. Describes privies, trash pits, and cellars with illustrations and inventories of associated ceramics and glassware. Also includes descriptions, analysis, and illustrations of pewter, a silk ribbon, heather brushes, an ivory comb, faunal remains, plant remains, leather shoes, and other material. Written in Dutch.

Clevis, Hemmy, Mieke Smit, Jaap Kottman, Monique Barwasser, Olav Goubitz, Johan Ekkel, Henk Hasselt, Frits Laarman, and Caroline Vermeeren

1990 *Verscholen in vuil: archeologische vondsten uit Kampen, 1375–1925*. Stichting Archeologie IJssel/Vechtstreek, Kampen.

With excavations in urban contexts privy vaults (mostly within or directly against the rear or side gable of a house) and privy pits (in the yard to the rear of a house) were regularly encountered. The earliest brick privy vaults in Nijmegen date from the second half of the 14th century. In the earliest deposits both red and gray-bodied earthenware was found. Both were made from the same clay. Some vessels have a white clay slip on the outside and were probably produced in Kampen. One privy vault filled from about 1675 to 1750 contained mostly red earthenware vessels, with faience and majolica vessels second in number, porcelain third most common, and white earthenware fourth. A well filled from the last quarter of the 17th century to the second half of the 18th century contained remains mostly of red earthenware vessels, with faience second most common and English creamware third. Illustrates many examples of the ceramics with drawings and photographs, also drawings to illustrate a typology of bases for glass beakers. Illustrates with black-and-white photographs and drawings examples of *roemers*, beakers, and wine glasses. Leather objects include shoes and shoe parts, a child's mask, a bag or purse, and scabbards. Wood objects include plates and bowls, spoons, combs, and knife handles. Hair, rope, and textiles include men's hair braids. Most of the clay pipes are from Gouda. Other artifacts and materials

fully illustrated, described, and analyzed include medals, coins, pins, thimbles, buckles, a brass button, knives, pewter spoons, a pewter porringer, a pewter chamber pot, iron tools, nails, horseshoes, hardware, faunal remains, a carding comb, combs made of ivory and of multiple materials, bone bars from a xylophone, parasites, cereal remains, nuts, fruits, seeds, and all types of ceramics and glass. Written in Dutch.

Clevis, Hemmy, and Herbert Sarfatij

1982 Borden uit een Dordtse beerput (ca. 1600). In *Rotterdam Papers, IV, A Contribution to Medieval Archeology*, 23-34. Museum Boymans-van Beuningen, Rotterdam.

The privy was found in 1978 in the northeast part of the town center of Dordrecht, South Holland, close to the Nieuwkerk. Through the finding of a quantity of dated pieces it was possible to date the contents of the privy closely. These dated pieces were a 1597 Raeren stoneware jug, a 1601 Raeren stoneware jug, a 1602 Wanfried plate, and a 1611 Wanfried plate. Other ceramics included two Weser ware jugs, a complete polychrome-decorated Dutch majolica plate, large fragments of other majolica plates, fragments of Dutch majolica albarelli and a porringer, fragments of white or buff earthenware green or yellow glazed, and an enormous amount of red earthenware (115 vessels). There were also coins, pewter spoons, wine glasses, and clay pipes. One pipe has a crowned IP heel mark, while another has a WH heel mark with 1617 date. Written in Dutch with an English summary.

Cordfunke, E.H.P.

1973 *Alkmaar van boerderij tot middeleeuwse stad*. Uitgeverij ter Burg, Alkmaar.

Discussion of urban excavations in Alkmaar and of artifacts through the medieval period, including shoes, faunal remains, ceramics, and other evidence. The wall of a cloister built in 1415 was found, built of yellow bricks, in addition to a brick-built drain adjacent to the wall. The drain contained faunal remains and a significant collection of 15th- and 16th-century ceramics and 16th-century glassware. Illustrates a yellow-glazed piggy bank from the ceramic assemblage. Elsewhere, the foundation of the Gevangenpoort built in 1532 was found, built of red bricks 27 cm in length. The yellow bricks of the drain of the cloister wall were only 19 or 20 cm in length. Medieval wells were constructed of wooden barrels that had been used as wine casks. The use of typical red earthenware three-legged pipkins (*grapen*) spread rapidly with the increased use of lead glaze after about 1325. Written in Dutch.

Cowan, Rex, Zélide Cowan, and Peter Marsden

1975 The Dutch East Indiaman *Hollandia* Wrecked on the Isles of Scilly in 1743. *The International*

Journal of Nautical Archaeology and Underwater Exploration 4 (2): 267-300.

The wreck was located in 1971. It is in very decayed condition. Cannon include 6-pounder bronze guns and a bronze mortar dated 1743. Illustrates a bronze musket ball mold, a sounding lead, a spigot, a buckle, a musket side plate, a bronze mortar and stone pestle, pewter, a tobacco box, sleeve links, a two-tined silver fork, and cloak clasps. There is evidence of mercury on the ship.

Cowan, Rex, S.B. Engelsman, and W.F.J. Mörzer-Bruyns

1982 Finds from the *Hollandia*. *The International Journal of Nautical Archaeology and Underwater Exploration* 11 (4): 287-296.

In 1973 large areas of wreckage from the *Hollandia*, sunk in 1743, were sighted south of the main site. During 11 years of work, a large collection of navigational instruments has been found, including rulers, a graphite pencil, slates, sounding leads, a telescope eye piece, twelve pairs of brass dividers, a brass drawing compass, and other objects. A navigational ruler made by J. van Keulen was found.

Craddock, Paul T., and Duncan R. Hook

1997 The British Museum Collection of Metal Ingots from Dated Wrecks. In *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution*, ed. by Mark Redknap, 143-154. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology Society and Society for Post-Medieval Archaeology, Oxford.

Lead ingots recovered from ships, whether English or Dutch, are without exception from Britain. Derbyshire mines produced the lead ingots from the East India Company ships *Campan* wrecked in 1627 off the Isle of Wight and *Hollandia* wrecked in 1743 off the Scilly Islands. Chinese zinc ingots were found on the *Witte Leeuw* and the *Mauritius* wrecks, ships that were returning to Amsterdam. Dutch East India Company silver ingots have been found on ships en route to the East Indies: the *Bredenhof* sunk in 1753 off Madagascar and the *Slot ter Hooge* sunk in 1724 off Maderia. Small cast bars of Japanese copper were found on the East India Company ship *Waddingsveen* which foundered in 1697 in Table Bay, Cape Town.

Davey, P.J.

2003 A 17th-century Clay Pipe from the Salcombe Wreck Site. *Post-Medieval Archaeology* 37 (Part 1): 159-163.

The Salcombe find is a Dutch "baroque" style pipe of about 1635 to 1645. The main center associated with Dutch "baroque" pipes is Amsterdam, although a possibly local example dated 1633 has been recovered in Maastricht.

Dawson, Graham

- 1989 *Tinglaze Waster Material in The Netherlands*. Report from the Membership Secretary, Society for Post-Medieval Archaeology, July, 1-3.

An examination of the tin-glazed waster material excavated at Leiderdorp, near Leiden, shows that there are important types beyond those described by Korf. One type is a group of "cylinders" which are hollow circles of 3-inches diameter. They are also found at a kiln site at Deventer. They may have been used to support piles of dishes separated by trivets in a kiln during firing. They apparently do not occur among wasters at English kiln sites. On the other hand, saggars are found relatively often in English waster deposits, while very few were found at Leiderdorp or Deventer. Evidently the stacks of tin-glazed dishes were placed in the kiln without any protection. Another type of vessel at Leiderdorp is a red earthenware jug, externally brown or green glazed but with a white slip-like encrustation on the interior. This type of vessel may have been used for preparing the glaze, and other examples are from Deventer. Both the Deventer and the Leiderdorp deposits are from the second quarter or the middle of the 17th century. There are significant differences in the technology represented by the evidence in these waster deposits with that indicated by waster deposits of the same period in London. Contrary to assumptions that the Dutch strongly influenced English pottery production in this period, there appear to be significant differences in the technology used in the two countries. There are also some close similarities, however.

de Bodt, Saskia

- 1991 *Gedateerde keramiek: Gebruiksvoorwerpen met jaartal uit de collectie Vn Beuningen-de Vriese/Dated Ceramic Wares: Household Pottery Marked With a Year from the Van Beuningen-de Vriese Collection*. Museum Boymans-van Beuningen, Rotterdam.

Illustrates 160 examples of dated ceramic items in chronological sequence, beginning with a hearth brick dated in the 1530s of unknown provenance and a beaker fragment dated 1568 excavated in Raeren-Pfad (Belgium), and ending with a red earthenware plate dated 1914. A red-bodied tin-glazed majolica mustard pot dated 1629 was excavated in the Pieterstraat in Delft, and it is the only majolica item illustrated. Except for the hearth brick, all the dated items from before 1592 are stoneware. A Siegburg tankard fragment dated 1576 was excavated in Utrecht. The earliest dated red earthenware is a German Werra ware plate dated 1592 excavated in Delft. Most pieces continued to be of stoneware until 1600, after which red earthenware vessels predominated. Also illustrates items not part of the Van Beuningen-de Vriese collection, including a frag-

ment of a majolica plate dated 1627 found in Rotterdam and a majolica drinking cup dated 1581. Many of the items in the Van Beuningen-de Vriese collection were excavated in North Holland in Noordeinde, near Graft, and consist of Werra and other red-bodied slipware. Also, much dated red earthenware was also found near a kiln excavated in 1979 at Spaans Leger in Enkhuizen, where local potters are thought to have produced copies of Werra ware. Probably beginning with the Renaissance and the emergence of the self-confident individual, the dates on ceramics fall into two categories: those dates which are on ceramics that were mass-produced and those which commemorate special personal or political occasions. Written in Dutch and in English.

de Clercq, Wim, Danielle Caluwé, and Steven Mortier

- 2004 *Excavations at Middelburg in Flanders: First Results and the Study of the Glass Assemblage from the Castle Excavations*. *SHA Newsletter* 37 (3): 22-23.

Most of the finds in the castle moat and in the privies date from the 16th century, a period of military occupations and battles. There are lead bullets, bullet wasters, bullet molds, and cannon shot. Two privies and the castle moat contained a remarkable quantity of glassware from the second half of the 16th century representative of high status. Almost all the glassware represents drinking vessels, and 38% is *façon de Venise* glass. On 80% of the drinking vessels there was a high level of decoration, and 20% of the vessels were gilded, engraved, or otherwise decorated.

de Groot, M.

- 1995 *Een 18e eeuwse vuilnisbelt in het Nierspark te Gennep*. In *AWN-afdeling XVI, jaaverslag 1995*. Nijmegen, Archeologische Werkgemeenschap voor Nederland. <<http://httpd.chello.nl/~a.hendriks01/>>.

In 1995 following a flood, large-scale dyke construction resulted in the discovery of a dump on the Niers River east of Gennep, Limburg. The dump contained fragments of lead-glazed red earthenware, kiln wasters, roof tiles, clay pipe bowls and stems, and butchering waste. The red earthenware included fragments of a sgraffito-decorated dish and a slip decorated plate. There was also a fragment of a tile [malt-tile] with conical perforations from a kiln used to dry grains for the brewing of beer. Written in Dutch.

de Raedt, I., B. Vekemans, K. Janssens, F. Adams

- 2000 *Synchrotron Light Through Ancient Glass*. *Europhysics News* 31 (6): 15.

Excavations in Antwerp produced a large number of 16th- and 17th-century glass made à la *façon de*

Venise. It has been assumed that most of these objects were locally manufactured, although some may have been imported from Venice. In order to distinguish between local and Venetian products, the major and trace composition of about 130 soda-lime glass vessels was determined. This revealed the existence of four distinct compositional groups. Two groups, the "Antwerp *crystallo*" and "Antwerp *vitrum blanchum*," have compositions nearly identical with those of two genuine Venetian glass types, *crystallo* and *vitrum blanchum*, suggesting these objects might have been imported. The two other categories, "Antwerp *façon de Venise*" and "Antwerp mixed alkali," appear to be specific for Antwerp production. There is a surprising proportion of *crystallo* and *vitrum blanchum* glass among the Antwerp finds. In previous studies of glass from London and Amsterdam of the same period, it seemed that only a few *vitrum blanchum* glasses are represented, and glass with the *crystallo* composition occurred even more rarely. To investigate whether indeed the *crystallo* glass and *vitrum blanchum* glass was imported and made with the same raw materials as genuine Venetian glass vessels (very pure quartz pebbles and purified Levantine soda ashes), the trace element composition was determined. A number of glass vessels from Venice were also analyzed for reference. This revealed that the amount of Zr was especially distinctive in differentiating local production from Venetian import. A binary plot shows the amount of Zr versus the amount of Sr. Whereas most of the Antwerp finds feature a Zr content between 40 and 100 ppm, the truly Venetian fragments and a limited number of Antwerp vessels show a significantly lower Zr concentration of 10 to 20 ppm.

de Ridder, Tim, and Annemarijke Willemsen

2004. *Gat in de stad: Ontdek de stadsarcheologie van Nederland*. Rijksmuseum van Oudheden, Leiden, and Convent van Gemeentelijke Archeologen, Amsterdam.

Rotterdam around 1960 was the first city to appoint a city archaeologist. Many cities followed. Now, in 2004, the Netherlands has 36 city archaeologists, each with his or her own organization. Together they manage the archaeological resources of more than fifty municipalities. In the 16th and 17th centuries new foods came on the market such as potatoes and spices. With export products such as glassware, beads, earthenware, and pewter made in large quantities in "factories," one can speak of early industry. Typically for industrial processes, in which speed was economical, there was consistently waste. Pits with waste from bone beads of the 14th century or glass beads from the 17th century are frequently spectacularly large. In almost all Dutch cities traces are found from the Eighty Years' War with Spain (1568 to 1648). Many cities were conquered after a

long siege or relieved. In the downtown areas many shot are still found. They were frequently thrown away because the cannon were antiquated. In Hoorn in 2001 was excavated a 17th-century shipyard at the Karperkuil, constructed in 1576. It was a large site and there was only limited funding. Work was concentrated on the shipyard, which was unique. The rest of the site, a bordering habitation from the 17th and 18th centuries, was only hastily examined. Then came the treasure hunters. They came and went on the weekend, in spite of signs with "polluted soil" and "no entry." According to unsubstantiated reports they made singular discoveries. Until the houses were built, about 1600, that area had for a time lain fallow and then became a sort of garbage dump. Around it was the waste of a hat maker. Illustrates in color many artifacts, including a sherd of polychrome majolica with the head of Erasmus and date 161—found in Utrecht, a woollen cap from between 1592 and 1596 from Amsterdam, a jacket and warm waistcoat from Alkmaar dated 1777, two felt hats from the end of the 16th century found in Hoorn, a stack of misfired blue and white plates found in Delft from the 17th century, and many other objects. Written in Dutch.

de Roever, Margriet

1995. Merchandises for New Netherland. In *One Man's Trash is Another Man's Treasure*, 70–93. Museum Boymans–van Beuningen, Rotterdam, and Jamestown Settlement Museum, Williamsburg.

Illustrates excavated buttons, a knife, fork, and spoon, thimbles, and lead bale seals from Campen, Leiden, and Amsterdam.

De Witte, Hubert

1983. De dienst archeologie te Brugge en het onderzoek, 1977–1981. In *Jaarboek 1982: Stad Brugge Stedelijk Musea*, 141–168. Walleyndruk pvba, Brugge.

For the restoration of the Hof van Gistel in the Naaldenstraat in Bruges, in the spring of 1978 a small test excavation was conducted. This investigation revealed foundations of a former 15th-century building of the Hof van Gistel, likewise a 16th-century cellar that in the 18th century fell into disuse and was filled. Within the fill were pieces of Chinese porcelain and faience plates from Tournai. In the Onze-Lieve-Vrouwekerk in 1979 an archaeological rescue investigation conducted for more than 10 months revealed the tomb of Maria of Burgundy, in which not only the skeleton of the Duchess was found but also the heart urn of her son Filipe. Around this tomb were examined 16 other brick graves, dating between the second half of the 13th century and the 17th century. [Princess Maria of Burgundy was born February 13, 1457, in Brussels, Brabant, and died March 27, 1482, in Bruges,

Flanders. Her son, King Felipe I of Castile-Leon, was born June 22, 1478.] Written in Dutch.

1987 Archeologisch jaarrapport, 1985–1986. In *Jaarboek 1985–86: Stad Brugge Stedelijk Musea*, 95–111. Vrienden van de Stedelijke Musea Brugge.

An open area that was the former Rijkpeijndersstraat and that was almost completely covered by brewery buildings again will be developed. In April and May 1984 on this site single random probes were made which intersected a single trash pit and wells. Two pits contained 19th- and early 20th-century material. The last two contained 17th-century artifacts in one and 15th-century artifacts in the other, under which was a wooden clog. At the end of March and in the first weeks of April 1985 the upper layers were mechanically removed from the entire site, first to about 1.50 m under the surface, and in a second phase to the deeper Pleistocene sand. Illustrates a drawing or a *roemer* [goblet] of white glass decorated with gold glass paste dating from the 15th to the 16th centuries, which was found at the Rijkpeijnder site. Written in Dutch.

De Witte, Hubert, and Alexandra Mars

1987 Geïmporteerd Spaans aardewerk in Brugge. In *Jaarboek 1985–86: Stad Brugge Stedelijk Musea*, 113–135. Vrienden van de Stedelijke Musea Brugge.

Illustrates from the Rijkpeijnder site a fragment or a tile from trash pit found with other late 16th- and 17th-century material. Dating possibly from the 16th century, the tile has a medium pink body with orange core; its width is about 10.5 cm. It is tin glazed only on the upper side. The cobalt blue decoration is in the form of a tower, chapel, or gate building. Illustrates from the Karthuizerwijk site a Sevilla(?) rim fragment from a *cuerda seca* plate of about 1475 to 1550. The body is a soft yellow-beige, and the tin glaze is on both sides. By the *cuerda seca* technique the contours of the different parts of the design were put on before being covered with polychrome glaze, in this case yellow-brown and green. During the firing this was burned, by which an unglazed outline remains. Besides green and yellow-brown, blue and manganese purple glazes were also used. From Katelijnestraat is an Isabella Polychrome plate rim fragment, of about 1500 to 1550, with a light yellow-beige body, badly applied tin glaze on both sides, and contemporary restoration with brass wire. The dish was decorated on the inside with cobalt blue and manganese purple bands (concentric circles) of different widths. Along the rim runs a broad frieze filled with geometric and stylized botanical motifs each in the form of three short parallel bent lines (blue) and a purple winged circular motif with two brush strokes below it. Also, there

are Late Valencian rim fragments of a bowl, with a pink body, yellow-beige edges, and blue-tinted tin glaze on both sides, dating about 1475 to 1550. The inside was decorated with a copper-brown luster frieze, filled with stylized leaves, flowers, and buds against a decor of dots and circles. A comparable Late Valencian fragment is known from Hoorn. Written in Dutch.

Delgado, James P.

2004 *Adventures of a Sea Hunter*. Douglas & McIntyre, Vancouver, Toronto, Berkeley.

The cargo list for the *Vrouw Maria* on September 23, 1771, listed Brazil wood, cotton, cambric, calico, linen, zinc, cheese, paper, indigo, mercury, butter, and other items, but not the special shipment of works of art for the Russian Imperial Court. The special shipment may have been a secret, or royal shipments may have been exempt from customs duties. This shipment included rare paintings of the 16th and 17th centuries acquired for Catherine the Great from the collection of Dutch merchant Gerrit Braamcamps. The ship sank off the southern coast of Finland in a storm. The wreck was discovered in June 1999. The first artifacts recovered from the wreck included a Dutch clay pipe made by Jan Souffreau of Gouda, a zinc ingot, a lead cloth seal marked "Leyden," and a ceramic bottle for mineral water from Germany. The wreck rests on the bottom nearly level and is surprisingly intact. The hold of the ship is tightly packed, and there is very little space between the deck and the top of the cargo. Damaged crates reveal hundreds of clay pipes and piles of eyeglass lenses. The wreck will be thoroughly documented before anything is disturbed or removed.

Delgado, James P., ed.

1997 *Encyclopedia of Underwater and Maritime Archaeology*. Yale University Press, New Haven and London.

Articles on the *Mauritius*; the *Nieuwe Rhoon*, a homeward-bound Dutch East India ship wrecked in Table Bay, Cape Town, in 1776; the *Nassau*, one of four wrecks from the Battle of Cape Rachado (1606), Bambek Shoal, Straits of Malacca, rediscovered in 1993; the *Geldermalsen*; the *Meresteyn*, sunk near Cape Town in 1702, carrying a cargo from Texel; the *Mauritius*, sunk in 1609 near present Gabon, West Africa; the *Hollandia* sunk in 1743; the *Batavia*; the *Amsterdam*; the *Zuytdorp*, lost in 1712 en route to Batavia, now Jakarta; the *Zeewijk*, wrecked in 1726 also en route to Batavia, Java; and others.

Duco, Don H.

1980a Eighteenth Century Clay Pipes from Schoonhoven. In *The Archaeology of the Clay Tobacco Pipe*, ed. by Peter Davey, IV. *Europe*, 1, 109–113. BAR International Series 92. B.A.R., Oxford.

The small pipe making industry of Schoonhoven began in the 17th century and, like those of Amsterdam, Gouda, and Rotterdam, was started by English soldiers. The pipe makers' guild was formed in 1767, and guild regulations were published in 1774. In Schoonhoven mostly poor-quality pipes were produced, in competition with the poorest of three quality grades of pipes produced in Gouda. The guild ceased in 1793, and after that date nothing is known of the industry in Schoonhoven. Illustrates examples of 18th-century Schoonhoven pipe bowls.

1980b Clay Pipe Manufacturing Processes in Gouda, Holland. In *The Archaeology of the Clay Tobacco Pipe*, ed. by Peter Davey, IV. *Europe, I*, 179-217. BAR International Series 92. B.A.R., Oxford.

White-firing clay needed for tobacco pipes is not found in Holland, so it had to be imported. In the beginning of the 17th century this clay was imported from England, and it is called ball-clay. The first active pipe makers to land in the Netherlands brought this clay from England, from the same places that usually were used by these English in their own country. This changed in the course of the 17th century. About the year 1630 the Gouda and Rotterdam pipe makers brought pipe clay from Cologne. Also Doorni clay, that came into the Netherlands through Bergen op Zoom, was used at Gouda in the pipe industry. Gradually the English clay was eclipsed and was used only as a ball-clay admixture. In the 18th and 19th centuries, Maastricht clay was also used next to the German clay. Until the 19th century potters fired pipes for the pipe makers, although by 1747 Gouda pipe makers were granted permission to build their own kilns. Unfortunately, no old kiln has been preserved in Gouda. Three qualities of pipes were produced. Illustrates pipe molds, tools, and old photographs of the Goudewaagen factory and workers. Written in Dutch with an English translation.

1981 The Clay Tobacco Pipe in Seventeenth-Century Netherlands. *The Archaeology of the Clay Tobacco Pipe*, ed. by Peter Davey, V. *Europe, 2*. BAR International Series 106 (ii). B.A.R., Oxford.

The history of pipe makers and pipe making in Dutch cities and towns from Alkmaar to Zwolle has been reviewed. Tobacco was introduced to the Netherlands at the end of the 16th century by the English, as early as 1580. The English played a dominant role in pipe making in the Netherlands before ca. 1640. Illustrates many pipes and makers' marks and identifies makers.

1982 *Merken van Goudse pijpenmakers: 1660-1940*. Uitgeversmaatschappij De Tijdstroom Lochem, Poperinge.

In the development of Gouda pipes, the bowl opening initially was sloping but soon changed in angle. When the final egg-shaped bowl design was developed around 1740, the quality of the pipes continued to deteriorate. Illustrates with drawings examples of "fine" or "porcelain" quality pipe bowls and coarse quality pipe bowls. Also illustrates Gouda bowl marks, with approximate date ranges. Written in Dutch.

2003 *Merken en merkenrecht van de pijpenmakers in Gouda*. Stichting Pijpenkabinet, Amsterdam.

Since 1663 the registration of pipe marks in Gouda has been required, but this occurred less conscientiously than the guild regulations prescribed. Many contracts were later or not at all registered in the incomplete guild records, and the records are missing. Although in 1982 the author found a guild membership record in the library of the British Museum, there is still no trace of the four authoritative mark books. Archaeological material has provided the illustrations of the mark list, for which the National Reference Collection of the Pijpenkabinet in Amsterdam formed the basis. Inevitably, this part is also not complete, and coincidental encounters must fill the gaps in the future.

Dumbrell, Roger

1992 *Understanding Antique Wine Bottles*. Antique Collectors' Club in association with Christie's Wine Publications, Woodbridge, Suffolk.

Dutch onion-shaped bottles continued to be produced long after the English had ceased to produce them, as shown by bottles from the wrecks of the *Hollandia* (1743) and the *Amsterdam* (1747). They are distinctive, with no exact English counterpart. However, some very typically English-looking bottles were among the bottles from the *Hollandia* auctioned in 1977, and they appeared to date earlier than 1740. Such bottles may have been used over a long period of time. Many 18th-century Dutch bottles have also been recovered from canals in the Netherlands.

Edgren, Torsten

1978 *Keramiken från vraken vid Esselholm i Snappertuna och Metskär i Hitis, södra Finlands skärgård*. In *Esselholmvraket: Särtryck ur Finkst Museum, 1978*, 71-91.

Illustrates examples of 13 earthenware pipkins, 12 earthenware skillets, and three salt-glazed stoneware jugs from a 16th-century wreck found at Esselholm. Two of the jugs are Bellarmines. The earthenware is either Dutch or Flemish from the second half of the 16th century, while the stoneware is Rhenish. Written in Finnish.

Edwards, Hugh

1970 *The Wreck on the Half-Moon Reef*. Charles Scribner's Sons, New York.

Popular history and description of the wreck of the 38-gun East India Company ship *Zeewijk* in 1727 on a reef of the Abrolhos Islands off the western Australia coast. In 1966 an ivory elephant tusk from the wreck was recovered, similar to those recovered in 1963 from the wreck of the *Vergulde Draeck*, 150 miles to the south. Illustrates a breech-loading cannon, a skull, and a brass whistle found on the reef and on land.

1998 Where is *Batavia's* Graveyard? In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gastra, 85-94. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Fremantle.

In 1840 men of the HMS *Beagle*, during their survey of the Abrolhos, found beams of a very old wreck. Assuming it was the *Batavia*, they named the island "Pelsart Island" and their anchorage Batavia Road. This hasty judgment caused confusion for the next century; the actual wreck was not in the Pelsaert Group islands at all, but instead far to the north. In 1964 remains of stone shelters were discovered on West Wallabi Island, and excavations were conducted there in 1964 and 1974. The sites contained fragments of stoneware Bellarmine jugs, nails, crude ladles made of lead, barrel hoops, a sword, and large numbers of burned bones of wild game. Skeletons found buried on Beacon Island, which would have been the historic "*Batavia's* Graveyard," have evidence of violent injuries. Dutch coins and bullets were found with the skeletons, and there was also a brass trumpet garland with the maker's name, Conraet Droschel, and the date 1628. Illustrates sherds of salt-glazed stoneware jugs.

Elzinga, G., and D. Korf

1978 *Vondsten uit eigen bodem*. Fries Museum Facetten 9. Fries Museum, Leeuwarden.

Excavations in 1974 at the construction site for the new Fries Museum revealed many artifacts from the early 17th century in wells and privies. Also, artifacts from the area included 16th-century sherds and a 15th-century Siegburg stoneware vessel. Some wells were constructed of stacked wooden barrels with tops and bottoms removed. Other wells were round and built of loosely-laid tapered red brick. Illustrates with photographs 17th- and 18th-century tin-glazed tiles as well as Dutch majolica bowls, plates, a salve pot, and a small pot with a handle from the first half of the 17th century. Also illustrates red earthenware and buff earthenware (including Weser ware) vessels, Rhenish stoneware, a brass skimmer, a copper bedpan, a wrought-iron hammer-head, an ivory comb, and table knives. Written in Dutch.

Engle, Anita

1990 *The Ubiquitous Trade Bead*. Readings in Glass History, No. 22. Phoenix Publications, Jerusalem.

Archaeological evidence of beadmaking in Amsterdam is appreciably earlier than documents would suggest. Fill deposits in the Waterlooplein dating about 1580 to 1596 contained beads and beadmaking waste.

Erftemeyer, J., and A.P.E. Ruempol

1986 *Gebruiksvoorwerpen en citaten*. In *Huisraad van een molenaarsweduwe: Gebruiksvoorwerpen uit ween 16de-eeuwse boedelinventaris*. Museum Boymans-van Beuningen, Rotterdam/De Bataafsche Leeuw, Amsterdam, 33-51.

Illustrates a small German stoneware jug found in Delft, a three-legged earthenware pan with a single handle found in Zwijndrecht, a flat-bottomed earthenware skillet found in Oud Krabbendijke, and a pewter spoon found in Rotterdam, all of ca. 1600. Also illustrates a Raeren stoneware wine jug dated 1592 found in Noord Brabant, a Dutch majolica plate dated 1580 found in Delft, a red earthenware pipkin dating between 1575 and 1600 found in Reimerswaal, a wooden candle stick of ca. 1600 found in Delft, a two-tined table fork with bone handles of ca. 1600 found in Amsterdam, a pewter salt cellar dated 1575 found in Dordrecht, and a knife dating about 1550 found in Rotterdam. Also illustrates an earthenware dish and a pewter plate both found in Leiden, two brass spigots found in Amsterdam, an earthenware jug found in Reimerswaal, a glass beaker or beer glass found in Utrecht, an earthenware plate and a wooden bowl both found in Delft, a slip-decorated red earthenware firecover found at Nordeind, and a pewter salt cellar with hinged cover found in Hazerswoude, all dating from the 16th century. Written in Dutch with English summary.

Fayden, Meta [Janowitz, Meta]

1993 *Indian Corn and Dutch Pots: Seventeenth-Century Foodways in New Amsterdam/New York City*. Ph.D. dissertation, City University of New York.

Discussion includes summaries of ceramics by type excavated from the Taanstraat and Waterlooplein in Amsterdam.

Fenwick, Valerie, and Alison Gale

1988 *Historic Shipwrecks Discovered, Protected & Investigated*. Tempus Publishing, Inc., Charleston, S.C.

The Dutch East India Company ship *Kennemerland*, built in 1661, was wrecked in December 1664 on its voyage from Amsterdam to Batavia. The first discoveries at the wreck site were cannon. The distribu-

tion of artifacts at the site was carefully mapped, and the data were analyzed statistically to interpret the breakup of the ship and dispersal of its contents. The 119 lead ingots that were raised and studied provide information about the supplying of lead to the Dutch by the English. Mercury was found inside a stoneware jug in which it was being shipped to Batavia, probably for refining gold. Fruit pits from the *Kennemerland* indicate that peaches and plums were also being shipped, and concretions from the site contained barley husks and peppercorns. Several objects have been identified as the heads of golf clubs, each formed from wood with a lead casing. The hull of the *Amsterdam*, wrecked in 1749, is largely intact on a beach in East Sussex. In 1969 workers building a sewer nearby dug into the middle of the ship and retrieved five bronze cannon and other artifacts. The Dutch government claimed ownership of the wreck in 1975 and initiated research. Excavations at the stern revealed its carved decoration, the gun room on a lower deck, and the surgeon's medicine chest. In 1996 a three-year study began to record the hull. Stoneware jugs that are found at wreck sites could have survived many voyages, and Bellarmine jugs from a Dutch East India Company wreck on the Australian coast were as much as 30 years old at the time of the wreck. Raeren jugs found on a 16th-century English ship had been in use even longer.

Fernando, Vimukthi

2004 Maritime Archaeology in Sri Lanka: Salvage of 'De Avondster.' WWW Virtual Library—Sri Lanka: 'De Avondster.' <<http://www.lankalibrary.com/geo/avondster.htm>>.

In a simple shed at the water's edge of the Bay of Galle, Sri Lanka, specialists from the Netherlands and Sri Lanka are busy studying artifacts from the *Avondster*, a Dutch ship sunk in 1659. This project marks the dawn of maritime archaeology in Sri Lanka. This is the Conservation Laboratory of the Maritime Archaeology Unit formed under the Mutual Heritage Programme, a collaboration between the governments of the Netherlands and Sri Lanka. Conservation work is continuing with various cannon balls of three sizes, yellow bricks, pieces of wood and rope, barrels, storage jars, jugs, bottles, spoons, and a plate. A human skull was found in the lower layers.

Fisher, Neil

1996 *The Pipe Wreck 1996: An Invitation to All. The Broadside* 3 (1): 3–4. Published by the Pan-American Institute of Maritime Archaeology.

The ship sank in Spanish waters between 1651 and 1655, but how it got there remains a mystery. It is concluded the ship was of English construction, but its cargo consisted mostly of ceramics, Dutch clay pipes, and other trade goods. A cannon, a brass

chandelier, silver coins, musket balls, a brass cross, ship fittings, and other objects have also been retrieved.

Forster, William A., and Kenneth B. Higgs

1973 *The Kennemerland, 1971: An Interim Report. The International Journal of Nautical Archaeology and Underwater Exploration* 2 (2): 291–300.

The *Kennemerland* was wrecked in 1664 in the Shetland Islands. Iron cannons have been found, in addition to Bellarmine jugs, yellow bricks, and the ship's bell.

Gaimster, David R.M.

1993 *A Survey of the Production, Distribution and Use of Ceramics in the Lower Rhineland, c. 1400–1800: Some Methodological Notes. In Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993, 177–194. Stichting Promotie Archeologie, Zwolle.*

Since 1980 the city of Duisburg, with its program of rescue archaeology, has produced the core sequence of ceramics for inter-site comparative analysis in this region. For comparative studies, the ceramics have been classified by ware type (fabric), form, and function. For closed contexts such as rubbish pits, privies, and wells, quantification by minimum vessel count was adopted. Neutron activation analysis revealed the relative variations in trace elements. In the case of 15th-century lead-glazed white-ware, the Langerwehe ware was represented by a well-clustered set of samples when plotted. However, the diffuse nature of the readings of Cologne ware suggest that the local potters exploited a number of separate clay sources. Includes a map of the principal ceramic production and consumer sites in the Lower Rhineland, charts and graphs of ceramic data, and an illustrated catalogue of drawings of the principal ceramic forms in the Lower Rhineland.

1997a *Rhenish Stonewares from Shipwrecks: The Study of Ceramic Function and Lifespan. In Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution*, ed. by Mark Redknapp, 121–128. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology Society and Society for Post-Medieval Archaeology, Oxford.

There is evidence from kiln sites in Germany that molds for stoneware vessels with dates in relief were used by potters for a decade or more after the applied date. Corked Raeren stoneware medicine bottles of a form dating from ca. 1475 to 1525 were found on the wreck of the English *Mary Rose* (1545) and in a stoneware shop of ca. 1525 to 1550 exca-

vated in Bergen op Zoom. Extensive collections of Rhenish stoneware have been retrieved from Dutch East India Company wrecks, beginning with the *Witte Leeuw*. This wreck contained a Siegburg stoneware pitcher with a molded date of 1585. The *Batavia* wreck of 1629 had a debased portrait medallion from a Bellarmine jug dated 1619. Another jug, of Raeren stoneware, had a molded frieze of the *Peasants' Wedding*, which appears on intact vessels with a date of 1596. Of equal interest on the *Batavia* is a Raeren or Westerwald-type blue and gray pitcher molded with the trademark of a Nijmegen stoneware shipper and a coat of arms dated 1595. A number of blue and gray Westerwald jugs from the wreck have intact pewter lids, one with an Amsterdam pewterer's mark. On the wreck of the *Lastdragger* sunk in 1653 it was found that Rhenish stoneware was used to ship volatile goods, in this case mercury. Evidence of the transport of mercury in Bellarmine jugs was also found on the *Kennemerland* (1664) and the *Vergulde Draeck* (1656). The *Batavia* jugs were all of globular form, whereas the *Vergulde Draeck* Bellarmine jugs were of globular as well as ovoid forms. By the time of the *Amsterdam* (1749), the use of Rhenish stoneware was declining.

1997b *German Stoneware: 1200–1900, Archaeology and Cultural History*. Published for The Trustees of the British Museum by British Museum Press, London.

Scholarly study of stoneware traces back to 1853 with the publication in Germany of an article on a Frechen-type Bellarmine jug with an inscribed waistband found at Deutecom, Gelderland. Written by the director of the National Museum of Antiquities in Leiden, the article refers to a number of Frechen and Raeren vessels with molded inscriptions from excavated sites as well as private collections. A catalogue published in 1861 in Amsterdam includes a selection of ornate late 16th-century tankards and jugs found in Amsterdam. In 1879 studies of Raeren stoneware excavated in Limburg were published. Excavations in Amsterdam and in other Dutch towns indicate broad trends in the urban consumption of German stoneware from the 15th to the 17th centuries. By the end of the 15th century, Raeren and Aachen wares had gradually superseded Siegburg and Langerwehe stonewares. Excavations in Bergen op Zoom revealed the damaged stock of ca. 1518 to 1550 of two stoneware dealers. There was a wide range of Cologne mugs and jugs and of Raeren mugs, jugs, and chamber pots. In and near Maastricht, many Siegburg and Raeren vessels from ca. 1550 and 1575 have been excavated. By 1575, the Amsterdam consumption of stoneware was divided between wares from Cologne, Frechen, Raeren/Aachen, Siegburg, and Langerwehe. Raeren continued to be a major source for the Netherlands and Flanders until the end of the 16th century.

About 1600 Coppengrave became a significant source for Amsterdam. A sharp decline in stoneware consumption after 1600 relates to the introduction of drinking glass production, while after 1675 the Westerwald virtually monopolized the local stoneware market in Amsterdam. Although the Westerwald became the exclusive supplier in Amsterdam and elsewhere, overall stoneware importation markedly declined in the 17th and 18th centuries. Excavations in Ghent reveal by the end of the 16th century the consumption of stoneware from Bouffloux and Châtelet. The lower fill of a privy in Bruges dating between 1550 and 1625 produced ceramics of which about 20% were Rhenish stoneware. As late as the early 16th century in the Netherlands, a green copper-based lead glaze was sometimes added to the surface of Siegburg jugs. The medallions of Bellarmine jugs found at Fort Orange in New Netherland parallel those recovered from East India Company ships such as the *Batavia* and the *Vergulde Draeck*. At Fort Pentagouet in Maine, six Bellarmine jugs were found having applied medallions corresponding to fragments from the wrecks of the *Witte Leeuw* and the *Batavia*. Illustrates a Siegburg jug from the *Witte Leeuw*, also a fragment of the frieze from a Raeren jug from the *Batavia* with the "Peasants Wedding." A Raeren or Westerwald jug from the *Batavia* bears the medallion of the Nijmegen stoneware shipper Jan Allers, along with a medallion bearing a coat of arms dated 1595.

Gartley, Richard, and Jeff Carskadden

1998 *Colonial Period and Early 19th-Century Children's Toy Marbles: History and Identifications for the Archaeologist and Collector*. The Muskingum Valley Archaeological Survey, Zanesville, Ohio.

Marbles have been excavated at a number of 17th- and 18th-century sites in the Netherlands, including mid 17th-century features in Leeuwarden and Deventer. Hundreds of marbles have been excavated from sites in Amsterdam, including a site dated 1738 to 1805. These marbles include brown salt-glazed stoneware marbles, which have also been found on the lower gun deck of the ship *Amsterdam* lost in 1749. Raeren brown stoneware marbles have been found in the Netherlands in sites of about 1600 to 1640. Common brown-bodied earthenware marbles in large numbers began to appear at sites in the Netherlands in the late 18th century. White-bodied earthenware marbles have been found in 17th-century sites in Deventer and Amsterdam. A blue-painted example was found in Amsterdam from a site of about 1700. Marbles made of limestone were found in Amsterdam in a site dating about 1575 and also in 17th-century sites.

Gawronski, Jerzy H.G.

1990 *The Amsterdam Project. The International*

Journal of Nautical Archaeology and Underwater Exploration 19 (1): 53-61.

The *Amsterdam* is the most complete East India Company wreck known. Excavations occurred from 1984 through 1986. A cannon recovered in 1969 is dated 1748. A group of artifacts originated from the surgeon's medicine chest.

- 1991 The Archaeological and Historical Research of the Dutch East Indiaman *Amsterdam*, (1749). In *Carvel Construction Technique: Skeleton-first, Shell-first. Fifth International Symposium on Boat and Ship Archaeology, Amsterdam, 1988*, ed. by Reinder Reinders and Kees Paul, 81-84. Oxford Monograph 12. Oxford Books, Park End Place, Oxford.

Archaeological data from the wreck are extremely detailed because of the good preservation. The current program consists of controlled excavation, survey/registration, and maintenance of the wreck. The excavation so far has concentrated on the stern area and a limited part of the port side.

- 1992 Functional Classifications of Artifacts of VOC-Ships: The Archaeological and Historical Practice. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference, Kingston, Jamaica, 1992*, ed. by Donald H. Keith and Toni L. Carrell, 58-61. Published by the Society for Historical Archaeology.

There is a need for standardization in reporting data from wrecks, using functional typologies and archaeological classification. Illustrates a site plan of the wreck of the *Hollandia*, sunk in 1743 off the Scilly Isles, and the systematic index used to classify the artifacts.

- 1996 *De Equipage van de Hollandia en de Amsterdam: VOC-bedrijvigheid in 18de-eeuws Amsterdam*. De Bataafsche Leeuw, Amsterdam.

Lists 38 known locations of East India Company wrecks dating from 1606 to 1795. The two ships were built in 1742 and 1748; the *Hollandia* sank in 1743 with all hands, and the *Amsterdam* was wrecked off Hastings in 1749. The *Hollandia* site covers a large area with a wide and random distribution of artifacts. Rex Cowan has made an extensive collection of the material, and the Rijksmuseum has acquired an important part of the collection. The *Amsterdam* represents a much more compact site, most of which has not been excavated. There is a sample of artifacts from the site. The economic history of the East India Company has been well documented, but archaeology can provide information about little-known aspects of daily life such as the structure of the work force and logistical and technological resources and facilities. Illustrates a small wooden cask full of

tallow covered by a soldered thick lead covering, the underwater remains of a barrel of herring, seeds, glass bottles, salve pots, Cologne stoneware, red and black coral, pewter, a leather boot, a lead bale seal, ribbons, buttons, candle sticks, wine glasses, a glass tumbler, a leather book cover, clay pipe makers' marks, and a wooden shovel from the *Amsterdam*. Illustrates lead weights, dividers, coins, apothecaries' weights, a silver table knife, fork and spoon, a candle stick, bullet molds, firearms, cannon, clay pipe makers' marks, writing instruments, seals with the marks JGK and a beehive, pieces of type, and brass scissors from the *Hollandia*. Written in Dutch with an English summary.

- 2001a Oprograving Karthuizersstraat. March. Bureau Monumenten en Archeologie, Amsterdam. <<http://www.bmz.amsterdam.nl/adam/nl/archeologie/karthuizersstraat.html>>

The Karthuizersstraat in the Jordaan is named for the monastery that stood here in the 15th and 16th centuries. Nothing is to be seen of this building. In March 2001, archaeologists found a remnant of a large wall. The masonry dates from the beginning of the 16th century and probably formed a part of the rectangular *kloosterhof* that was rebuilt around 1392. Under this wall remnant and the foundations of 17th- and 18th-century houses all sorts of surprising traces of medieval occupation were found. Although no remains of houses were uncovered, the discoveries indicate that farms stood here on *terpen* at least from 1200. There was also found a feature from the period during which the monastery was in decline. After 1600, parts of the complex were rented, and an inn existed here until about 1750. This inn, named "The Little Karthuizer," was probably in the southwest corner of the *kloosterhof*. Here the old monastery wall came to a large and very rich privy about 3 m deep with many objects used for drinking and smoking. Also the pit contained much botanical material that points to a rich and varied menu with fruits and vegetables. Illustrates various glass vessels from the first half of the 17th century and other objects excavated from the privy. These include an Amsterdam syrup pitcher, a brazier with clay pipes, a Rhenish stoneware pitcher, and an Italian faience pitcher. Written in Dutch.

- 2001b Oprogravingen van de VOC-scheepswerven op Oostenburg. May. Bureau Monumenten en Archeologie, Amsterdam. <<http://www.bmz.amsterdam.nl/adam/nl/archeologie/oostenburg.html>>

In 2001 a second excavation project in the Oostenburg was begun. Near the Czaar Peterstraat were found the shipyards of the East India Company from 1660 to 1800. At these wharves, during this period 500 East India Company ships were built. Although the site was already disturbed,

many remains from the 17th and 18th centuries were found. For a distance of approximately 75 m, the 17th-century bank of the IJ was exposed. There was wooden shoring visible with the remains of two ships' ways of 50 m length and 12 m width, consisting of a slope of dredged clay resting on horizontal beech-wood planking. The construction of the ways in 1660 utilized a large-scale, modern approach considering the heavy foundation with sleepers and pilings. Behind the site the remains of a timber shed were found. In the former harbor bottom interesting objects were found that had fallen in the water during the activity and were never dredged up. These included an intact 18th-century jack-screw. During cleaning, on the wooden box appeared the logo of the East India Company inscribed with the letter A (the mark of the Amsterdam Chamber). The Oostenburg island was artificially created in 1660 with trash from the city and dredging. Written in Dutch.

2003a Hortus-opgraving: de broeikas uit 1715. January 10. Bureau Monumenten en Archeologie, Amsterdam. <<http://www.bmz.amsterdam.nl/adam/nl/archeologie/hortus.html>>.

In November 2002 archaeological rescue excavations occurred during the restoration of the Oranjerie built in 1875. Under the floor, structural remains of the earlier series of hothouses built in 1715 were discovered. Here, tropical plants from the West Indies and the East Indies were cultivated and displayed. With a floor surface of 25 by 2.5 m, the hothouse foundation included a series of nine connected cisterns which held water used to spray the plants. The floor of the hothouse consisted of rough gray tiles laid on top of the cisterns. In addition, there was a basin in the middle presumably where water plants were set. There was also a hearth with a brick channel for conducting heated air through the building. Written in Dutch.

2003b De 18e-eeuwse veestallen van Amsterdam in Zeeburg. January 10. Bureau Monumenten en Archeologie, Amsterdam. <<http://www.bmz.amsterdam.nl/adam/nl/archeologie/zeeburg.html>>.

In 2002 an archaeological investigation occurred along the Zeeburgerdijk Oost at the foot of the Amsterdam bridge for construction of a water filter system. North of the bridge, substantial foundations came to light, but nothing was known initially of the historical existence of a building at this location. It proved to be a large rectangular structure of about 40 by 23 m. The southern half of the foundation consisted of elongated, north-south oriented vaults that were filled up with sand, clay, and rubble. In the northern half were two rows of rectangular compartments. The walls were heavily built. All diagonal

walls rested on thick beams. The artifacts found in the fill in the vault and in the fill around the building are from the second half of the 18th century. The presence of manure in one of the vaults and single compartments led to the conclusion that this was once a large stable complex. Historical sources confirmed this. Large stables were set up here in 1769 by the Oude Zijds Huiszittenhof and were demolished in 1938. This location at the Zeeburgerdijk was the place for the relief of cattle that had arrived at Amsterdam from over the Zuiderzee. The excise tax on the "unloading of the animals" from the 16th century was leased to the regents of the court to finance care of the poor. Next to the harbor below stables were also established for temporarily housing cattle, pigs and cows. Under the northern part of the foundations were found remains of an older complex: a floor of yellow brick (*ijsselsteentjes*) that probably was part of one of the stables built in 1675. Written in Dutch.

2003c Krotwoningen en pottenbakkerij in de Westerstraat. April 2. Bureau Monumenten en Archeologie, Amsterdam. <<http://www.bmz.amsterdam.nl/adam/nl/archeologie/westerstr.html>>.

In the fall of 2002 warehouses on the Westerstraat together with houses behind them were demolished for new construction, and excavations were conducted in February 2003. The Karthuizerklooster was built here about 1400, and after about 1580 various tradesmen established workplaces in the monastery ruins. Christiaan van Abelen established his pottery kiln in 1598 in the monastery court, where he made majolica and faience. Another potter had a tile kiln there in 1606. New houses were built here in the new Jordaan district around 1650. Under these houses were found the floors of a workplace that was used from about 1600 to 1650. An open work floor built of yellow IJssel bricks was uncovered, associated with a large wooden structure. This replaced an earlier, simple wooden structure with wood plank floors that stood from about 1600 to 1625. There was a thick sand deposit with pottery wasters probably predating 1625. The wasters consisted of Dutch pantiles, unfinished tiles and plates, and kiln furniture. Written in Dutch.

Gawronski, Jerzy H.G., ed.

1987 *Amsterdam Project: Annual Report of the VOC-Ship "Amsterdam" Foundation, 1986*. Juni. VOC-Ship "Amsterdam" Foundation, Amsterdam.

Collection of articles by various authors on results of excavations and hull reinforcement of the *Amsterdam*, lost on the south coast of England in 1749, with analysis of wood, leather, ceramic, and glass artifacts as well as of find processing, conservation, and historical research. Illustrates with draw-

ings a bone comb, wood knife handles, a button, a buckle, a pewter spoon marked "LONDON," barrels and barrel staves, a bottle neck with cork and copper wire, and a cannon. There is also analysis of dendrochronology, a medical ointment, tobacco, insect remains, and many other types of evidence from the wreck. Written in Dutch and in English.

Gawronski, Jerzy, and Jørgen Veerkamp

2004 *Bakstenen: Bouwen van Amsterdam*. In *Amsterdam Monumenten & Archeologie 3*, 11-23. Bureau Monumenten & Archeologie, Uitgeverij Bas Lubberhuizen, Amsterdam.

One might think that bricks would be among the least interesting discoveries from an archaeological excavation. It has been generally believed that large bricks are older than small bricks because of an advancing decline that began in the 14th century. There are nevertheless questions in accepting a direct correlation between brick size and age. Using a selection of bricks from dated contexts and buildings, a chronology of brick sizes has been established. Brick initially was considered a replacement of natural stone, used originally as a filler within natural stone walls and then gradually applied more widely. Finally walls were built completely of brick, with natural stone serving more as a decorative element. This combination remained fixed in Northern Dutch architecture to the 17th century. The advantages of bricks were clear. In May 1452 it was proclaimed in a statute that all new houses had to have brick walls and hard pantile roofs. While the need for bricks increased, a decrease in brick sizes also began. Large bricks were more awkward for masonry work, and with smaller bricks it was possible to produce a larger number. They could be formed more quickly, dried faster, and were fired faster in the kiln. Moreover it appeared that a smaller size brick produced fewer wasters. The placard of the States General of April 15, 1645, on "orders for the Firing of Brick and Tiles" mentioned the use of three kinds of brick with clearly prescribed sizes. Largest were *moppen* with a length of "10 inches wood measure, two breadths one length, and the two thicknesses one breadth," representing a robust brick of 25.7 by 12.8 by 6.4 cm. Second were the Leiden or Rhenish brick mentioned with a length of 7 inches "firm," a thickness of 1 1/2 inches "firm," and a width of half the length. This was the middle brick with a format of 18 by 9 by 3.9 cm. The smallest brick was the Gouda or IJsselsteen with a length of 6 1/2 inches, in which a small variation was allowed ("a small straw's breadth allowed"), and with the same width and thickness proportions as the *moppen*, which would be a brick of about 16.7 by 8.4 by 4.2 cm. In the 18th century in Amsterdam other sizes appeared. Wagenaar in 1765 reported *moppen* that were 9 inches long, 4 1/2 inches broad, and 1 5/6 inches thick (23 by 11.5 by 3 cm). The

Leiden or Vlechtse brick according to him had to be 7 1/4 inches long, 3 5/8 inches broad, and 1 4/7 inches thick (18.6 by 9.3 by 4 cm). The Amsterdam archaeological collection contains brick samples from 642 separate buildings or structures from the 13th to the 19th centuries. In the period 1500 to 1600, the larger size bricks remained reserved for relatively larger buildings such as hospitals and monasteries. In a mid-16th-century building phase of the Onze Lieve Vrouwen Hospital, the largest size that was used was now shortened in length to 25 cm, while the Minderbroeder Monastery was built around 1500 with middle size bricks of 22 cm. The smallest size of 17.5 cm appears to have been intended for more modest masonry, such as privies and wells or a garden wall, as in that of the Clarisses Monastery from the second quarter of the 16th century. Also in the period 1600 to 1700, there was discussion of decreasing each of the three brick sizes. The largest size was reduced in length to an average 24 cm. Archaeological examples of this are from the Zeeburg bulwark of 1660, but also from single houses, as in the Taanstraat. These reveal brick smaller than the *moppen* of 25.7 by 12.8 by 6.4 cm that according to the statute of 1645 counted as large format bricks. The Amsterdam middle size with 23 to 23.5 cm lengths appears on the other hand again a bit larger than the prescribed middle size Leiden or Rhenish brick of 18 by 9 by 3.9 cm. This middle size brick was then widely applied. They had been meant for large buildings, as in the VOC-East-India Magazine on Oostenburg in 1660 or the Large Warehouse of the Admiralty on Kattenburg in 1690, as well as for houses, as in those houses excavated in a block with more than a hundred houses on the Waterloo plein from the first half of the 17th century. The smallest size brick in this period had an average length of 17.5 cm. This type is essentially the same as the compact bricks that were indicated in the statute of 1645 as the IJsselsteen or third size. This brick was originally produced by brick kilns along the Dutch IJssel River, but because of the great issue brick makers along the Vecht and Old Rhine (the manufacturers of the Vechtse and Leiden brick) also adopted these sizes in their assortment. They became used in house walls, wells, and paving. Illustrated in color. Written in Dutch.

Gawronski, Jerzy H.G., Bas Kist, and Odilia Stokvis-van Boetzelael

1992 *Hollandia Compendium: A Contribution to the History, Archaeology, Classification and Lexicography of a 150 ft. Dutch East Indiaman (1740-1750)*. Rijksmuseum Amsterdam, Amsterdam; Elsevier Science Publishers B.V., Amsterdam, Oxford, New York, Tokyo.

Currently 33 Dutch East Indiaman shipwrecks have been identified dating from 1609 to 1795, compared with 19 in 1979. A variety of research methods and

techniques have been used at these sites. These ships were clearly multifunctional in character. Archival lists of equipment, stores, furniture, and armament of Dutch East Indiamen form the basis for a lexicon of objects, most of which can be defined as to meaning and type. The finds from the *Hollandia*, sunk in 1743 in the Isles of Scilly, were retrieved beginning in 1971, with a bronze gun with the AVOC monogram. The spatial distribution pattern of the artifacts makes possible a reconstruction of the wreck and the way in which the ship settled. Illustrates plan views of the site and hundreds of drawings as well as black-and-white photographs of individual artifacts in a comprehensive catalogue. Artifacts include blocks, pins, parrelbeads, sheaves, etc., from rigging. Other objects include cartridge canisters and cases, powder horns, wire-linked lead shot (springshot), grape shot, shot molds, sword hilts, scabbard clips, firearm parts, gun flints, cannons, buckles, buttons, shoes, combs, table forks (3- and 4-tined), razors, spoons, spigot taps, clay pipes and pipe marks, tobacco boxes, metal containers and utensils, pewter screw tops, glass bottles and tableware, porcelain, English white salt-glazed and Rhenish stoneware, Langerwehe ware, wooden barrel fragments, wall hooks, candle sticks, a snuffer, gaming pieces, coins, instruments, tools, nested apothecaries' weights, fittings, nails and other fasteners, and unidentified objects.

Gibb, James G., and Wesley J. Balla

1993 Dutch Pots in Maryland Middens: or, What Light from Yonder Pot Breaks? *Journal of Middle Atlantic Archaeology* 9: 67-85.

Report examining characteristics of 17th-century Dutch utility earthenwares excavated in the Netherlands and in the collection of the Albany Institute of History and Art, in comparison with Dutch ceramics from the Compton site in Maryland. Illustrates a frying pan, a colander, porringers, pipkins, a skillet, three-legged pots, and a chamber pot with drawings.

Gevaert, Glenn, Marnix Pieters, and Danielle Caluwé, eds.

2003 *Glas van vissers, kooplui, monniken en heren: Middeleeuws en later glas uit het bodemarchief van Kust-Vlaanderen en Zeeland*. Museum Walraversijde/Provinciedomein Raversijde, Oostende.

From a single privy excavated in the city of Sluis (Zeeland), next to more than ten colorless wine cups was found a luxurious, colorless glass goblet with possibly matching lid. A well with material from the end of the 16th century has more than ten wine *roemers*, glass cups, and colorless wine glasses below which was a "flute glass." Another pit contained square bottles, finely decorated glass goblets, and single cups. In the remains of Aldegonde Castle

(West-Souburg, Zeeland) in the winter of 1971/1972 excavations occurred in the fill of various privies and the moat. From moat fill are broken earthenware, objects of bone, ivory, tin, wood, leather, and also glass. The discoveries testify mainly to the period 1425 to 1525 during occupation by a Burgundian ducal family. The excavation of one privy in the castle yielded at least 77 complete glass objects. There are also two blue sprinklers for perfume with characteristically long necks. Of the remaining glassware, most is of European origin: bottles, beakers, and goblets from the 15th or the 16th centuries. The luxury and refinement that the European products display is striking. The conical pruned cup with thorn prunts and regularly notched foot ring belongs to the inception of the evolution of the *berkemeier*, a very widespread type of cup. The conical pruned cup from Aldegonde is a transitional model, relatively few discoveries of which are published, almost all from Antwerp and before the 16th century in date. From excavations in the Walraversijde Vissersmilieu (Oostende, West-Flanders), only ten glass discoveries can be assigned types: two colorless knobbed beakers, the two filigreed beakers, and six complex goblets. The colorless beakers have the typical 16th- and 17th-century cylindrical form with outward flaring lip and a notched foot ring. The mixed alkali glass composition is believed most likely of Antwerp. The more complex glass beakers are too fragmented to define typologically. All these fragments have been found in early modern contexts, sometimes even in association with dated objects (a stoneware fragment with the year 1601). Thus they are not part of the material culture of the fishermen of Walraversijde, except possibly they were introduced by the military nobility during the siege of Oostende (1601 to 1604). Only four bottles were found: three green and a very small colorless blown bottle. The two larger, green wine bottles are from the middle of the 18th century. The third green bottle, found in a 16th-century context, was used perhaps as an ornament or tableware. The Vrouwenpolder Monastery (Vrouwenpolder, Zeeland) was in use between 1452 and 1552. The artifacts provide evidence of luxury. The presence in a relatively early context of an exported colorful, refined bottle is significant. Not only the complex execution but also the date indicates an expensive, presumably imported, product. This means that personal toileware and expensive, imported, and clearly luxurious materials were in use by richer monastery residents from the first half of the 16th century. The filigree techniques could have been used from the introduction of Venetian traditions: about 1537 at Antwerp, about 1581 at Middelburg, and about 1593 at Amsterdam. The archaeological material has mostly only the combination of colorless and white, or of colorless, white, and blue threads; only a single example has a combination of

colorless, white, blue, and also red threads. The color combination of colorless, white, blue, red, and also still further green rather suggests a Venetian origin, as much as the application of the more complex combined *vetro a fili é retorti* technique. In an assemblage from the city of Middelburg (Zeeland), two of the 16 mini *roemers* have an oval bowl, pointed prunts, and a smooth thread. Late 16th-century mini *roemers* and *berkemeiers* are regularly dug up in the Netherlands. The German production centers in the Spessart and the Hils exported such beakers till about 1630 to the Netherlands. The format, the oval bowl, the smooth foot ring, and the pointed or thorn prunts are characteristics that indicate a date in the early 17th century. Written in Dutch, with color illustrations.

Gould, Donald

1974 Draining the Zuider Zee Uncovers a Boneyard of Ancient Ships. *Smithsonian* 4 (12): 66-73.

More than 320 wrecks have appeared as the Zuiderzee is drained. A large merchant vessel sunk about 1654 is preserved in the museum at Ketelhaven. Illustrates in color remains of a flat-bottomed 18th-century barge and a barge or ferry from about 1650.

Green, Jeremy N.

1973 The Wreck of the Dutch East Indiaman the *Vergulde Draeck*, 1656. *The International Journal of Nautical Archaeology and Underwater Exploration* 2 (2): 267-290.

The *Vergulde Draeck* was wrecked on a reef north of Perth, Australia, in 1656. A total of 7,881 coins was recovered during excavation. Illustrates Bellarmine jugs, clay pipes, an earthenware pipkin, a bronze mortar, a brass rosary with beads, a spigot, a pewter spoon, and other objects.

1975 The VOC Ship *Batavia* wrecked in 1629 on the Houtman Abrolhos, Western Australia. *The International Journal of Nautical Archaeology and Underwater Exploration* 4 (1): 43-63.

The isolation of the wreck site and the adverse sea conditions are two serious problems in excavation of the site. Timbers have been recorded with maps, and a wooden gun port has been raised. Small, controlled explosive charges have been used in the excavation.

1977 *The Loss of the Verenigde Oostindische Compagnie Jacht Vergulde Draeck, Western Australia, 1656*. BAR Supplementary Series, 36. BAR, Oxford.

The second and last journey of the *Vergulde Draeck* to the Indies ended in 1656 on the west coast of Australia. The ship had stopped at the Cape and unloaded goods there. Material including ivory

tusks was recovered from the wreck site in 1963. Illustrates Bellarmine jugs, Westerwald stoneware, lead-glazed earthenware, majolica, clay pipes, bricks, coins, pewter, powder flasks, tools, shoes, bale seals, and a variety of other small objects. Brass, copper, and bronze objects include a mortar and pestle, a cauldron, a colander, buckles, spigots, fish hooks, a button, a frying pan, a bucket, and kettle fragments. The flute *Lastdragger* was lost off Yell, Shetland Islands, in 1653. The remains were located in 1971. Illustrates from this wreck spigots, copper and pewter spoons, wire-linked lead musket balls, remains of a pocket sun watch, dividers, a clay pipe, coins, Bellarmine jugs, a signet ring, brass buttons, buckles, knife handles, and a brass candle stick.

1984 Maritime Archaeology in Australasia: Recent Discoveries. In *Nautical Archaeology: Progress and Public Responsibility*, ed. by Susan B.M. Langley and Richard M. Unger, 155-175. BAR International Series 220. B.A.R., Oxford.

Illustrates in black-and-white photographs the *Batavia* hull structure underwater and reconstructed in the Western Australian Maritime Museum, also the stone building façade and five Bellarmine jugs from the *Batavia*, sunk in 1629. Coins from the wrecks of the *Zuytdorp*, sunk in 1711, and the *Vergulde Draeck*, sunk in 1656, were found in the 1920s. Excavation of the *Vergulde Draeck* began in 1972 by the Western Australian Museum. The new Maritime Museum, established in 1977, included a gallery for artifacts from the *Batavia*.

1986 The Survey of the VOC Fluit *Risdam* (1727), Malaysia. *The International Journal of Nautical Archaeology and Underwater Exploration* 15 (2, May): 93-104.

The site was discovered and partially looted in 1984. The *Risdam* was built in 1713 and was 130 feet in length. The wreck is on the east coast of Malaysia. The vessel hull was strongly constructed with regular sets of ridgers and chocks set on top of the ceiling. Two high-fired stoneware storage jars were recovered, in addition to a number of tin ingots, elephant tusks, conical-shaped lead ingots, yellow bricks, short pieces of sappanwood, a pulley block, a glass wine bottle, and porcelain fragments. This is one of the best preserved Dutch East India Company wrecks.

1988 Note on Guns from the VOC Ship *Batavia*, Wrecked off the Western Australian Coast in 1629. *The International Journal of Nautical Archaeology and Underwater Exploration* 17 (1): 103.

The *Batavia* excavation reveals the ship carried 30 guns (6 bronze, 2 composite, and 22 iron). The higher quality bronze guns were concentrated in the bow. The composite guns were made of copper

sheeting, wrought-iron hoops, and staves with a solder filler.

- 1991 The Planking-first Construction of the VOC Ship *Batavia*. In *Carvel Construction Technique: Skeleton-first, Shell-first. Fifth International Symposium on Boat and Ship Archaeology, Amsterdam, 1988*, ed. by Reinder Reinders and Kees Paul, 70-71. Oxford Monograph 12. Oxford Books, Park End Place, Oxford.

There is evidence the *Batavia* was constructed first by laying up most of the hull planking. Then the frames were put up.

- 1996 East Indiamen. In *The Sea Remembers: Shipwrecks and Archaeology*, ed. by Peter Throckmorton, 168-170. Barnes & Noble Books, New York. [Originally published in 1987 by Mitchell Beazley Publishers.]

The Western Australian Maritime Museum has studied a number of Dutch East India Company wrecks, notably the *Batavia*, which sank in June 1629. The wreck was found in 1963 in the Houtman Abrolhos. Illustrates plan of the site. Illustrates in color sandstone blocks cut to form an elegant doorway intended for the Company building in *Batavia* that were part of the cargo. Silver utensils in the cargo were intended for the Mughal emperor Jehangir. Illustrates the excavated burial of a victim of the mutiny that followed the shipwreck. Other East India Company shipwrecks such as those of the *Kennemerland* (1664) and the *Hollandia* (1742) have provided important information about navigational instruments. On the *Lastdrager* sunk in 1653 were found pocket sundials designed to operate only in European latitudes, obviously intended only as gifts to people in the East. Ornate smoking pipes found on the wreck of the *Vergulde Draeck* (1656) are from northern Thailand. Includes a complete list of wrecks of Dutch East India Company ships from *De Witte Leeuw* (1613) to the *Middelburg* (1781). Also illustrates in color a Chinese porcelain plate from *De Witte Leeuw*, as well as silver coins.

- 1998a VOC Shipwrecks of the World. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 53-59. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Freemantle.

There has been growing interest in the study and excavation of East India Company shipwrecks since the 1960s. In the development of this, western Australia has played a small role with its four East India Company wrecks. It is useful to review and summarize what is known of the East India

Company wrecks that have been discovered. The earliest listed wreck is that of the *Nassau*, lost in 1606 and found at Malacca in Malaysia. Other recent discoveries include the *Hercules* (1661), the *Avondster* (1659), and the *Dolphijn* (1663), all found in 1992 and 1993 at Galle in Sri Lanka. One of the most recent wrecks is that of the *Zeelelie* of 1795, sunk in the Isles of Scilly. There is an extraordinary variation in the level and quality of the archaeological work that has been done. Many wrecks still are not legally protected from looting, and in many cases institutions and individuals have become involved with treasure hunters or salvors in attempts to document the work that has been undertaken.

- 1998b The *Batavia* Incident: The Sites. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 95-100. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Freemantle.

Artifacts that can be directly related to the wreck of the *Batavia* have been found on two islands, Beacon Island, and West Wallabi. On Beacon Island is evidence of at least seven graves. Rhenish stoneware Bellarmine jug fragments were excavated at a coastal shelter site built of stone on West Wallabi, but no datable evidence has been found at a similar inland stone shelter site. Also, stone "fireplaces" found on West Wallabi have not produced archaeological evidence for dating.

Green, Jeremy N., and Neil North

- 1984 Further Comment on the Hand-guns ex *Association. The International Journal of Nautical Archaeology and Underwater Exploration* 13 (4): 334-337.

Hand-guns thought to date from the 15th century are similar to a number of guns found on the *Batavia* wreck (1629). These had a parallel bore with tapered chamber ending in a screw thread; the gun was lightly constructed of a copper sheet brazed into a tube with a bronze breech. The guns were used to fire pyrotechnic fire balls or fire arrows. Illustrates in black-and-white photographs matchlock blunderbusses found on the *Batavia*.

Groeneweg, Gerrit

- 1995 Grenzen aan de groei van de Bergse potmakers-nijverheid: Poging tot het identificeren van de 17e-eeuwse concurrent. In *Assembled Articles 2: Symposium on Medieval and Post-Medieval Ceramics, Antwerpen, 25 and 26 January 1995*, 87-94. Stichting Promotie Archeologie, Zwolle.

Bergen op Zoom has been a center of earthenware

pottery production since the 13th century. From seven potteries in 1400 the number increased to 22 potteries in the 17th century. Illustrates with a drawing the distinctive globular body and rim profile shape characteristic of Bergen op Zoom earthenware cooking pots. The rim profile continued its distinctive shape well into the 19th century. Most of the 17th-century lead-glazed earthenware from Bergen op Zoom was sold around Amsterdam and then was reshipped to other Dutch ports, towns on the Baltic Sea, and Dutch colonies in the West Indies. It is now known that a less well-known but very important production center at Oosterhout supplied the southern Netherlands and the area directly surrounding Bergen op Zoom. Illustrates with maps transportation routes and the distribution of Bergen op Zoom and Oosterhout earthenware found in excavations in the Netherlands. Written in Dutch with English summary.

Groenman-van Waateringe, W.

1975 Society...Rests on Leather. In *Rotterdam Papers, II, A Contribution to Medieval Archeology*, 23-34. Museum Boymans-van Beuningen, Rotterdam.

Identifies five types of shoes used in Amsterdam in the 14th, 15th, and 16th centuries. Illustrates with black-and-white photographs and drawings shoe parts and the five types of shoes. Quantitative comparisons of the five types are made with shoes from Oudekerkplein, Krasnapolsky, Warmoesstraat, and de Nes.

Groft, Tamms K., and Mary Alice Mackay, eds.

1998 *Albany Institute of History & Art: 200 Years of Collecting*. Hudson Hills Press, New York, in Association with Albany Institute of History & Art, Albany.

The recognition and rediscovery of the significance of Dutch majolica in ceramic history occurred in 1902, during excavation to widen a canal in Delft. Also, in 1917 large numbers of majolica sherds were discovered in Rotterdam during construction of a new *stadhuis* there. The restored examples of Dutch majolica plates and dishes in the Albany Institute collection were excavated in the Netherlands and were acquired on the basis of sherds recovered at the site of Fort Orange in Albany. Illustrates five Dutch majolica plates in the collection. Also illustrates examples of Dutch lead-glazed red earthenware and white earthenware from the 17th century in the collection that are of the same simple vessel forms represented by sherds recovered from the site of Fort Orange. Three of the earthenware vessels were found in Amsterdam, while a fourth, a red earthenware skillet, was found in De Rijp.

Grönhagen, Juhani

1985 Marine Archaeology in Finnish Waters. In

Proceedings of the Sixteenth Conference on Underwater Archaeology, ed. by Paul Forsythe Johnston, 37-39. Published by the Society for Historical Archaeology.

A vessel found in the 1960s in Tullhomen harbor, Hanko, was called "The Cable Wreck" because of a power cable running above it. Excavations in 1967 revealed a large amount of grain and confirmed that it was a very old vessel. An oblong deadeye dated the vessel prior to the 1650s; also found were Delft tiles and a clay pipe made in Gouda in 1647 or 1648. Another shipwreck found in the outer islands off Tammissaari has been identified as a Dutch vessel which according to oral tradition sank in 1783. Madeira and Rhine wine bottles were found in the hold, together with English ceramics, French mustard bottles, Russian coins from 1737 to 1754, a wooden plate dated 1783, and other objects. An earlier vessel in this area is also probably Dutch from the 16th century and was found in 1977. The wreck contains Bellarmine jugs and ceramics of Dutch origin. Another 16th-century probable Dutch vessel was found in the late 1960s in the Turku archipelago. Glazed tiles and ceramics including a Schnelle jug dated 1574 with the name of its maker, Christian Knutzen, were found.

Grulich, Anne Dowling

2004 *Façon de Venise Drinking Vessels on the Chesapeake Frontier: Examples from St. Mary's City, Maryland*. Historic St. Mary's City Research Series No. 7. A Morrison Fund Publication, Historic St. Mary's City, St. Mary's City, Md.

Illustrates two identical tumblers each with three aqua-blue raspberry-shaped prunts applied on the base as feet, one excavated from an outbuilding of about 1670 to 1700 at Smith's Townland in St. Mary's City and one excavated in the Netherlands from the first half of the 17th century. Also illustrates from the Smith's Townland site a fragment of a beaker with an applied "comet" decoration, the same as on two illustrated beakers excavated in the Netherlands. Illustrates red, white, and blue; and blue and white striped *vetro a fili* beakers excavated in the Netherlands. Fragments of similar blue and white striped beakers were found in a pit at the Town Center and at the nearby Calvert House site in St. Mary's City. Illustrates a spined/notched goblet excavated in the Netherlands similar to fragments found at the Gerrit van Sweringen site in St. Mary's City. Illustrates a large assemblage of table glassware excavated in Alkmaar, of which eight vessels share decorative techniques on glass fragments found at St. Mary's City.

Guilmartin, John F., Jr.

1982 *The Cannon of the Batavia and the Sacramento: Early Modern Cannon Founding*

Reconsidered. *The International Journal of Nautical Archaeology and Underwater Exploration* 11 (2, May): 133-144.

It has been assumed that generally wrought-iron breech-loading cannon were the most common form of ordnance through the middle of the 16th century, by which time they had been gradually replaced by cast bronze ordnance, while cast-iron guns also made their appearance in the mid-16th century. However, while construction of guns from wrought-iron involved inexpensive materials, it was labor-intensive and costly. Cast bronze cannons were less expensive in terms of labor but more expensive in material. The Portuguese ship *Sacramento* sunk in 1668 had Dutch bronze cannons made by Henricus Meus (dated 1622) and Assuerus Koster (dated 1634). The composite cannon constructed of sheet copper, wrought-iron, and lead solder mounted on the stern of the *Batavia* may have been more expensive in labor cost but provided some significant tactical or operational advantage.

Hall, Jerome L.

1991 The 17th-Century Merchant Vessel at Monte Cristi Bay, Dominican Republic. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference, Richmond, Virginia, 1991*, ed. by John D. Broadwater, 84-87. Published by the Society for Historical Archaeology.

A local fisherman discovered the "Pipe Wreck" in 1966. In 1980 during a survey of four wrecks the site was named the "Dutch Wreck." Peter Throckmorton collected fragments of clay pipes, a gold-washed thimble, and a piece of a Bellarmine jug. In 1985 treasure hunters removed numerous additional artifacts. Throckmorton believed both the ship and the clay pipes were English, while others concluded the ship was Dutch. An examination of more than 6,000 pipe fragments reveals they were the work of Edward Bird of Amsterdam. Of 53 pipe bowls analyzed during the 1989 season, 47 are of the bulbous form while 11 are of the elbow type. The limited information available indicates the ship was a Dutch merchant ship.

1992 A Brief History of Underwater Salvage in the Dominican Republic. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference, Kingston, Jamaica, 1992*, ed. by Donald H. Keith and Toni L. Carrell, 35-40. Published by the Society for Historical Archaeology.

The first systematic investigation of the "Pipe Wreck" was during the summer of 1991. A large number of clay pipes formed a significant portion of the ship's cargo. The wreck is tentatively dated to the mid 17th century. The pipes are of bulbous form and are marked EB, the mark of Edward Bird of

Amsterdam. The vessel was perhaps Dutch.

1993 The 17th-Century Merchant Shipwreck in Monte Cristi Bay, Dominican Republic: The Second Excavation Season Report. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference, Kansas City, Missouri, 1993*, ed. by Sheli O. Smith, 95-101. Published by the Society for Historical Archaeology.

The "Pipe Wreck" lies in 15 feet of water. A primary goal initially was to document the remaining timbers. Hundreds of clay pipes were found there. Most of the identifiable pipes bear the heel mark of Edward Bird of Amsterdam. Two other marks, however, are D*C and P*C, and those pipes are also probably Dutch. One cache of the pipes had been packed in alternating stem-to-bowl fashion. Buckwheat husks were within some of the pipe bowls. Buckwheat was also reported packed with pipes on the *Vergulde Draeck*, sunk in 1656. Two pipe stems had been notched evidently to serve as small whistles, similar to those reported from the site of Fort Orange. Spanish silver coins were minted no earlier than 1651. A large cast brass spindle-shaped object with notched rings or collars is a mystery. It may have been from a navigational instrument or from a type of chandelier. Dendrochronology indicates a 65.1% agreement of wood samples with the reference chronology from England. The wood was cut between October 1642 and March 1643. Tiny shell beads, bits of textile, faunal remains, Rhenish stoneware, pewter spoons, a pewter bottle top, brass curtain rings, brass thimbles, glass beads, straight pins, a whetstone, and other objects have been recovered. Illustrates with drawings a plan of the wreck site, clay pipes, and the chandelier.

1994 The Monte Cristi Shipwreck Project 1993 Interim Report. *The Broadside* 1 (1): 2-4, 8. Published by the Pan-American Institute of Maritime Archaeology.

Initially it was believed the wreck was a Dutch merchant ship trading with the north coast of Hispaniola. The Dutch pipes and Spanish coins on the wreck narrow the date to between ca. 1652 and 1665. Currently more than 20,000 clay pipe fragments have been recovered. There are three varieties of Edward Bird's EB mark on the pipes. Illustrates with drawings bulbous and elbow-type Dutch clay pipes and a site plan of the wreck remains. *Façon de Venise* glass fragments have also been found. The cargo included, besides pipes, tin-glazed faience and Rhenish stoneware. The ship, probably of English origin, may have been a Dutch prize and may have been heading for New Netherland or Brazil with a Dutch cargo.

1996 A Seventeenth-Century Northern European Merchant Shipwreck in Monte Cristi Bay,

Dominican Republic. Ph.D. dissertation, Anthropology, Texas A&M University.

The unidentified ship, called "The Pipe Wreck," was wrecked between 1652 and 1656. More than 25,000 pipe stems and 2,500 more complete pipes, apparently almost all Dutch, were recovered and constituted the cargo. More than 400 pipes bear the EB heel mark. The pipes had bits of buckwheat leaves packed in the bowls, and it is known that pipes excavated from the wrecks of both the *Amsterdam* (1749) and the *Vergulde Draeck* (1656) also had evidently been packed in buckwheat. Lists other Dutch sites and shipwrecks where pipes marked EB have been found. Also compares lead shot from a variety of Dutch and other 17th- and 18th-century shipwrecks. Other artifacts include dividers, pewter bottle tops, Bellarmine jugs, Spanish coins, glass beads, bone comb fragments, a brass chandelier, brass tweezers, a set of nested apothecaries' weights, thimbles, brass tacks, curtain rings, pins, a brass hawk's bell, a book clasp, pieces of an ivory fan, and a small ivory disk. The ship was most likely of English construction, although a major portion of its cargo was of Dutch origin; the ship may have sailed in the service of the West India Company.

Halme, Risto

1978 Vrakfyndet vid Esselholm i Snappertuna. In *Esselholmuraket: Särtryck ur Finkst Museum, 1978*, 61-70.

In November 1977 members of a sportdiving club located a 16th-century wreck in water between 11 and 17 m deep. The keel was of a gallion-type construction. It is comparable to a water ship excavated in the Zuiderzee. Illustrates a stone hearth lined with red-bodied green- to yellow-glazed tiles. Written in Finnish.

Heidinga, H.A., and E.H. Smink

1982 Brick Spit-supports in the Netherlands (13th-16th Century). In *Rotterdam Papers, IV, A Contribution to Medieval Archeology*, 63-82. Museum Boymans-van Beuningen, Rotterdam.

Brick-like ceramic objects with holes were used to support iron or wood spits while roasting meat over a fire. Some are elaborately decorated. One of the latest examples was found in Amsterdam associated with 16th century artifacts.

Helbers, G.C., and D.A. Goedewaagen

1942 *Goudsche pijpen*. N.V. Uitgevers-Mij Atlantic. The first manufacturer of pipes at Gouda indicated in old documents was William Baerelts, called in the Netherlands Willem Barentz. He commenced to exercise his trade in this city in 1617. He died as early as 1625. During his lifetime other Englishmen were also there as pipe makers, and Barentz had to complete because they also wanted to use his mark,

de gekroonde roos ("the crowned rose"). The pipe maker William Hoppe was the first who had to defend himself because he had marked his pipes with the mark of Barentz. The police of Gouda then forbid Hoppe to use this mark by itself and informed him he could use the *gekroonde roos* if he added another mark, by which it could be distinguished from the crowned rose of Willem Barentz. A recently discovered pipe (currently at the Museum "de Moriaan") shows next to the secondary mark a B in an oval on the stem. Probably Barentz was obliged by the new municipal order himself to put this auxiliary mark on the pipes. Written in French and Dutch.

Henkes, Harold E.

1994 *Glass Without Gloss: Utility Glass From Five Centuries Excavated from the Low Countries, 1300-1800*. *Rotterdam Papers 9, A Contribution to Medieval and Post-Medieval Archeology*. Coördinatie Commissie van Advies inzake Archeologisch Onderzoek binnen het Ressorf Rotterdam, Rotterdam.

Since 1991 significant pieces of glass from the Van Beuningen-de Vriese Collection have been on exhibit in the Museum Boymans-van Beuningen. There are four main categories of glass: drinking vessels, bottles, table glass (dishes and bowls), and various glassware (beads, buttons, rings, ink pots, hour glasses, window glass, etc.). Glass made with wood ash is called *waldglas*. Colorless, crystalline glass was produced in Venice after about 1450. About 1675 English lead glass was first produced. Lead glass excavated from archaeological sites is frequently coated black, depending on the type of soil in which it was buried. Illustrates with black-and-white and color photographs as well as drawings hundreds of examples of excavated glass beakers, tumblers, bowls, *berkemeiers*, wine glasses, *roemers*, flute glasses, pitchers, jugs, bottles, goblets, etc., organized according to a detailed typology by the periods 1450 to 1550, 1550 to 1650, 1650 to 1750, and 1750 to ca. 1825. Also illustrates drawings of glass bottle seals and inscriptions and black-and-white and color photographs of beads and small glass buttons excavated in Amsterdam, Antwerp (Kasstraat), Edam, Broek in Waterland, Oud-Beijerland, Oudeschans, and Delft. A hairnet made of beads is from the castle of IJsselmonde at Rotterdam. Written in Dutch and in English.

Higgins, David A.

1997 The Identification, Analysis and Interpretation of Tobacco Pipes from Wrecks. In *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution*, ed. by Mark Redknapp, 129-136. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology

Society and Society for Post-Medieval Archaeology, Oxford.

Cases of complete pipes have been recovered from a number of wrecks, including that of the *Vergulde Draeck* (1656), in which the Dutch pipes had stems 13 inches in length. The 223 pipes had stem bores of at least two different sizes and were found packed in buckwheat. Four tobacco boxes, apparently part of the ship's cargo but all different, were found on the wreck of the *Kennemerland* (1664). From the *Vergulde Draeck* eight different types of pipes were found, seven of which were not in the crate and are represented by between one and eight examples. The bimodal stem bores give dates covering a range of 50 years between 1614 and 1662, but the average date is about 20 years too early for the date of the wreck. The Monti Cristi "Pipe Wreck" off the Dominican Republic contains thousands of pipes, primarily of two types. The pipes with heels have the EB heel mark of Edward Bird, while the elbow-type pipes made specifically for export have a stamped symbol below the bowl. These export pipes are very rarely found in Europe. One unmarked English pipe bowl was found on the Monti Cristi wreck; it appears to date from about 1680 to 1710 and was possibly lost by a later salvor. Illustrates with line drawings the pipes from the Monti Cristi wreck.

Hocker, Fred

1988 International Internship Established. *INA Newsletter* 15 (2): 14-15. Published by the Institute of Nautical Archaeology.

Since the draining of the Zuiderzee began in the 1940s more than 350 shipwrecks have been found in the polders. They date from the 12th through the early 20th centuries. Most of the wrecks are local craft of small to medium size. The Rijksdienst voor de IJsselmeerpolders was established to investigate such sites. Under H. Reinder Reinders in 1976 the Museum voor Scheepsarcheologie embarked on an expanded program of systematic research based on the wreck sites. Methods for preserving wrecks in place were also devised. A wreck is excavated only enough to determine its size, age, and basic type. Then it is covered with a specially constructed mound to preserve it for future research. If the vessel cannot remain in place it may be fully excavated. Since the fall of 1986 the author has been studying the remains of an early 17th-century ferry that sank in the 1620s. Illustrates the wreck of the ferry as excavated *in situ* in 1980 and 1981 and then in storage after the excavation.

Hompe, W.G.

1993 Symposium on Medieval and Post-Medieval Pottery, 2 and 3 September 1993: Welcoming Speech. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics,*

Nijmegen, 2 and 3 September 1993, 1-3. Stichting Promotie Archeologie, Zwolle.

Pottery specialists will be especially interested in the discoveries by the Foundation for Town Archaeology in excavations on the Piersonstraat in 1990 in Nijmegen, producing about a hundred undisturbed assemblages from the 18th and 19th centuries.

Hudig, Ferrand

1926 Wapengoet en Porceleyn. *Oud-Holland* 43 (4): 162-181.

The results of a recent important excavation in Amsterdam are used to examine the meaning of a number of documents relating to the transition from Italian-style Dutch majolica to delft ware (faience). The excavations in the summer of 1926 on the Waailand produced more than 1,000 fragments of earthenware dating from before 1646. Both majolica and finer "delft" or "porcelain" (faience) were found. Illustrates a number of sherds. Written in Dutch with short English summary.

Huey, Paul R.

1988 Aspects of Continuity and Change in Colonial Dutch Material Culture at Fort Orange, 1624-1664. Ph.D. dissertation, Department of American Civilization, University of Pennsylvania.

Comparison of ceramics, glassware, clay pipes, and other objects excavated at Fort Orange with material excavated in the Netherlands. Illustrates a Dutch majolica plate excavated in the Netherlands in the collection of the Albany Institute of History and Art.

1991a The Archeology of Fort Orange and Beverwijck. In *A Beautiful and Fruitful Place: Selected Rensselaerswijck Seminar Papers*, ed. by Nancy Anne McClure Zeller, 326-349. New Netherland Publishing, Albany, N.Y.

Illustrates and compares a lobed Dutch faience dish excavated from a 17th-century privy in Antwerp with a rim sherd excavated at a site in Albany. The pattern on an English delft plate sherd from the same site in Albany is derived from the pattern that was used on a complete Dutch majolica plate found on a shipwreck dating about 1665 in the Noordoostpolder of the IJsselmeer.

1991b The Dutch at Fort Orange. In *Historical Archaeology in Global Perspective*, ed. by Lisa Falk, 21-67. Smithsonian Institution Press, Washington and London.

Illustrates a Dutch majolica plate with Wan Li decoration similar to the design on a sherd found at Fort Orange. Also illustrates a Dutch majolica plate excavated in Leiden with a "Haarlem border" and with a polychrome-painted cherub similar to that on a sherd from Fort Orange.

- 1996a Archaeological Testing at Philipse Manor Hall, Yonkers, N.Y., 1994. Bureau of Historic Sites, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, N.Y. March.
- Comparison of 17th-century Dutch green-glazed red earthen floor tiles discovered in the cellar of Philipse Manor Hall with similar examples reported from excavations in the Netherlands.
- 1996b A Short History of Cuyper Island, Towns of East Greenbush and Schodack, New York, and its Relation to Dutch and Mahican Culture Contact. *Journal of Middle Atlantic Archaeology* 12: 131-147.
- Illustrates a Dutch majolica plate excavated at Wormer, North Holland, in comparison with a sherd of an identical plate excavated at Crailo State Historic Site in Rensselaer, New York.
- 2003 Thirty Years of Historical Archaeology in the City of Albany, New York. In *People, Places, and Material Things: Historical Archaeology of Albany, New York*, ed. by Charles L. Fisher, 11-21. New York State Museum Bulletin 499. The University of the State of New York, The State Education Department, Albany.
- The broad assemblages of delicate glassware, ceramics, clay pipes, beads, and architectural fragments excavated from the yards of prosperous 17th-century houses in Dutch cities and towns such as Amsterdam and De Rijp are virtually indistinguishable from the collection of material that was excavated at Fort Orange in Albany, New York, except for the presence of deer bones, wampum beads, and Indian pottery fragments at Fort Orange.
- Hurst, J.G., and D.S. Neal
- 1982 Late Medieval Iberian Pottery Imported into the Low Countries. In *Rotterdam Papers, IV, A Contribution to Medieval Archeology*, 83-110. Museum Boymans-van Beuningen, Rotterdam.
- Late Valencian lustre ware was made in the last quarter of the 15th century and in the 16th century. An almost complete bowl was found in 1976 in a trash pit in Delft at the Greyfriars Monastery. Another example was found in Delft at the Carthusian Monastery. A number of other examples of this ware have been found at Oud Krabbendijke and in Sluis on Kapellestraat. Isabella polychrome pottery has been found also at Oud Krabbendijke, at Reimerswaal, and in a pit on Lange Noordstraat in Middelburg. The pit in Middelburg also contained examples of late Valencian lustre ware and Italian majolica. Illustrates examples with drawings.
- Hurst, John G., David S. Neal, and H.J.E. van Beuningen
- 1975 North Holland Slipware. In *Rotterdam Papers, II, A Contribution to Medieval Archeology*, 47-65. Museum Boymans-van Beuningen, Rotterdam.
- More than 200 examples of trailed and sgraffito-decorated slipware have been found mainly in the province of North Holland, with dated examples between 1573 and 1711. They are similar to Wanfried and Italian wares of the period, but the possibility of their origin in the Netherlands must be considered. This slipware was used to make six forms of ceramic ware: bowls, dishes, cups, pipkins, jugs, and firecovers. Illustrates examples with drawings in addition to a photograph of a firecover.
- 1986 *Pottery Produced and Traded in North-west Europe, 1350-1650. Rotterdam Papers, VI.* Published by Foundation for "Dutch Domestic Utensils," Museum Boymans-van Beuningen, Rotterdam.
- Identifies the main pottery types from various areas at different periods. Illustrated ceramics excavated in the Netherlands come from 40 sites situated throughout the country. Most of the imported vessels were found at sites near the coast, principally Amsterdam, Rotterdam, Utrecht, Vlissingen, Delft, Middelburg, De Rijp, and drowned sites. A large collection from the Waterlooplein in Amsterdam from between 1575 and 1625 demonstrates the widest range of imported pottery on any site in the Netherlands at this peak period of trade and prosperity. Seventeen of the illustrated vessels come from sites in Delft, including the site of a monastery that was suppressed in 1570, where the pottery came from pits and other features post-dating the monastery within the 1575 to 1625 period. There were a large number of North Holland slipware bowls as well as items of Weerra ware and Weser ware. Ceramics from Middelburg include not only North Holland slipware but also Italian and Spanish wares. Considerable quantities of North Holland slipware found at Graft and De Rijp gave that ware its name, but actually it has now been found outside that area and was probably produced in a number of places. Twenty-four vessels were found at drowned town sites and include Montelupo majolica. Illustrates ceramics with drawings and with black-and-white and color photographs.
- Ingelman-Sundberg, Catherina
- 1977 The VOC Ship *Zeeuyk* Lost off the Western Australian Coast in 1727: An Interim Report on the First Survey. *The International Journal of Nautical Archaeology and Underwater Exploration* 6 (3): 225-232.
- Squares 25 m in size were laid out on the site, and mapping and excavation followed. Two iron cannon were found surrounded by broken wine bottles. Seven kegs of nails have been located.
- Janowitz, Meta F.
- 1993 Indian Corn and Dutch Pots: Seventeenth-

Century Foodways in New Amsterdam/New York. *Historical Archaeology* 27 (2): 6-24.

Spectroscopical analysis has isolated a cluster of red earthenware sherds excavated from Manhattan with characteristics similar to those of kiln wasters from Bergen op Zoom. The ceramics excavated from a privy in the Oostenburgermiddenstraat in Amsterdam is the only Amsterdam assemblage of which the ceramic vessel forms have been quantified and published.

Janowitz, Meta F., Kate T. Morgan, and Nan A. Rothschild

1985 Cultural Pluralism and Pots in New Amsterdam-New York City. In *Domestic Pottery of the United States, 1625-1850*, ed. by Sarah Peabody Turnbaugh, 29-48. Academic Press, Inc., Orlando, Fla.

Petrographic analysis may distinguish between sherds of coarse earthenware excavated in New York City from samples of sherds from Dutch sites. The three groups of sherds from Dutch sites are 39 sherds from Haarlem, 20 sherds from Bergen op Zoom, and 56 sherds from Utrecht. The Utrecht sherds represent earthenware made of river clays. The sherds made in New York seem to have a different grain size, of a wider range in size, than the sherds made in the Netherlands.

Jörg, C.J.A.

1986 *The Geldermalsen: History and Porcelain*. Kemper Publishers, Groningen.

Discussion of the East India Company trade with China and of the porcelain recovered from the wreck of the *Geldermalsen*, sunk in 1752 on her homeward voyage. The cargo included, uniquely, coarse porcelain not intended for Europe but only for the Cape. Illustrates in color a wine glass stem, pewter, cannon, glass bottles, salt-glazed stoneware storage jars, and many examples of porcelain.

Karklins, Karlis

1974 Seventeenth Century Dutch Beads. *Historical Archaeology* 8: 64-82.

The two sites ('s-Graveland and Boeren-Wetering) that produced most of the beads collected by Van der Sleen date from the first half of the 17th century, based on associated artifacts. The bead manufacturing debris found at the Boeren-Wetering and Keizersgracht sites indicates most of the beads are of Dutch manufacture. The Boeren-Wetering site was a vegetable garden; other artifacts found there include a piece of majolica dated 1644, German stoneware from as early as 1635, clay pipes, and much porcelain. The remains of the glasshouse on the Keizersgracht were discovered in 1935. Inventory of 550 classifiable beads in the Van der Sleen collection.

1983 Dutch Trade Beads in North America. In *Proceedings of the 1982 Glass Trade Bead*

Conference, ed. by Charles F. Hayes III, 111-126. Research Records No. 16, 1983. Rochester Museum & Science Center, Rochester, N.Y.

Report on attributes, both physical and chemical, of glass beads collected at various sites in the Netherlands. Since most of the late-style beads dating from ca. 1700 to 1750 have been collected in and around Amsterdam, it is probable that this was the main place of their production. W.G.N. van der Sleen and Herman van der Made collected beads in and around Middelburg, Amsterdam, Rijnsburg, and Haarlem. Van der Sleen hypothesized that beads of Dutch manufacture were composed of potash glass while those from Venice were made of soda glass. Analytical tests do not substantiate Van der Sleen's hypothesis.

1985 Early Amsterdam Trade Beads. *Ornament* 9 (2): 36-41.

Although a glass bead industry is documented in Amsterdam from 1619 to at least 1679, recent archaeological evidence suggests that the industry was operating near the edge of the old part of the city in the early 1590s. Manufacturing debris and more than 50,000 whole and fragmentary beads have been found. At the Waterlooplein in Amsterdam the fill of a ditch dating between ca. 1580 and 1593 included tubular bead fragments and fragments of glass tubing. A variety of artifacts producing evidence of the beadmaking industry was found in deposits dating from 1593 to 1596 and also included bone beads, jet beads, and an oblate black glass button. Two late 16th-century bead manufacturing sites were found at the west end of the Keizersgracht. Illustrates tubular and rounded beads in color photographs.

1988 Beads from the Wreck of the Dutch East Indiaman *De Liefde* (1711). *The Bead Forum: Newsletter of the Society of Bead Researchers*, Number 12, April, 11-17.

The wreck site was initially investigated in 1964 and was excavated between 1966 and 1968. There was an assortment of brass and glass beads recovered. A sample of the beads from the Shetland Museum in Lerwick was studied and described using the Kidd and Kidd system. There are six varieties of glass beads of which five were not recorded by the Kidds. One variety is tubular while the others are wire-wound. The bead sample also included 31 brass beads made from tubing using a lathe. Based on another inventory, wire-wound glass WIIc2 beads were the most common, followed in number by the brass beads. These beads expand the knowledge of what the Dutch were trading to the East Indies in the early 18th century.

1993 The A *Speo* Method of Heat Rounding Drawn Glass Beads and its Archaeological

Manifestations. *Beads: Journal of the Society of Bead Researchers* 5: 27-36.

The presence of a very large chevron bead on a thick iron wire in the bead manufacturing wasters dating ca. 1601 to 1610 found in Amsterdam confirms that the *a speo* process was used there. Illustrates in black-and-white photographs examples of partially fused *a speo* bead wasters found at sites in Amsterdam including the Boeren-Wetering site.

Karklins, Karlis, and Tony Oost

1992 The Beads of Roman and Post-Medieval Antwerpen, Belgium. *Beads: Journal of the Society of Bead Researchers* 4: 21-28.

Excavations in Antwerp have uncovered a small but significant collection of glass beads. The beads from the Stadsparking, Kasstraat, and Waterkerende Muur sites in Antwerp have been classified using the Kidd and Kidd system. At the Stadsparking site, the excavations were the most extensive to be undertaken in Antwerp, but only one glass bead, dating from the Roman period, was found. At the Kasstraat site 60 beads were recovered representing 14 Kidd and Kidd varieties. At the Waterkerende Muur site, a privy of the late 16th to early 17th centuries produced six oblate black Ila6 beads and two globular opaque black glass buttons.

Kennedy, G.A.

1998 Discovery, Litigation and Legislation. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 30-36. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Fremantle.

For a long time precise locations of East India Company wrecks on the western Australia coastline remained unknown. In 1957 a claim was made that the wreck of the *Vergulde Draeck* was found, but the wreck that was found almost certainly was not that ship. The *Vergulde Draeck* and *Batavia* were discovered in 1963. The discoveries of the *Vergulde Draeck* generously offered all their rights to the wreck to the Western Australian Museum, beginning that Museum's commitment to maritime archaeology. Wreckage of the *Zuytdorp* of 1712 was found in 1927 and was conclusively identified in 1958. The remains of the *Zeewijck*, wrecked in 1727, were identified in 1968. Because of pillaging of the *Batavia* and *Vergulde Draeck* sites, the Museum sought to have the government enact protective legislation. Such legislation was passed in 1964. A new act was passed in 1973, and under the act of 1976 the Netherlands transferred to Australia all its rights to East India Company ships wrecked in Australian waters. The diver who claimed to have found *Vergulde Draeck*

challenged the validity of the protective legislation, and the decision was a narrow win for him in 1977. Eventually, Australia enacted protective legislation for wreck sites which is no longer vulnerable to attack.

Kist, J. Bas

1988 The Dutch East India Company's Ships' Armament in the 17th and 18th Centuries: An Overview. *The International Journal of Nautical Archaeology and Underwater Exploration* 17 (1): 101-102.

The earliest period of the East India Company between 1602 and 1665 is characterized by a great variety of ships and armaments. Through the 17th century the main armament of large ships was 24-pounders. Experiments were made with large caliber-low weight composite cannon such as have been found on the wreck of the *Batavia* (1629).

1992 Integrating Archaeological and Historical Records in Dutch East India Company Research. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference, Kingston, Jamaica, 1992*, ed. by Donald H. Keith and Toni L. Carrell, 53-57. Published by the Society for Historical Archaeology. Reprinted in *Maritime Archaeology: A Reader of Substantive and Theoretical Contributions*, ed. by Lawrence E. Babits and Hans van Tilburg: Plenum Press, New York and London, 1998, 39-52.

Since 1965 about 50 wrecks of Dutch East India Company ships have been found and excavated in Europe, Africa, and Asia, producing large amounts of hitherto unknown material. About 3,000 artifacts from the *Hollandia*, sunk in 1743, were acquired by the Rijksmuseum together with the archeological records. Illustrates a site plan of the *Amsterdam* (1749).

Kist, J. Bas, and Jerzy H.G. Gawronski

1980 *Prijs der zee: vondsten uit wrakken van Nederlandse OostIndiëvaarders uit de zeventiende en achttiende eeuw in de verzameling van de afdeling Nederlandse Geschiedenis van het Rijksmuseum*. Rijksmuseum, Amsterdam.

Listing of 18 East India Company shipwreck sites from 1613 to 1781 in date that have been located, with discussion of research and underwater archaeology. Illustrates hardware, rigging, pewter utensils, a breech-loading cannon, vent picks, firearms, shot, a bullet mold, sword fragments, coins, knife handles, porcelain, and other objects from various wrecks, including parts of a fire engine found on the wreck of the *Hollandia* sunk in 1743.

Kleij, Piet

1995a Aardewerk en glas uit het scheepswrak

Texelstroom IV. In *Assembled Articles 2: Symposium on Medieval and Post-Medieval Ceramics, Antwerpen, 25 and 26 January 1995*, 43–55. Stichting Promotie Archeologie, Zwolle.

An inventory has been undertaken of all shipwrecks in a specific part of the Texelstroom, a deep channel near the island of Texel. One of the most interesting wrecks is that of a Dutch trading ship that sank between 1731 and 1740. Red earthenware pans provide evidence of trade between West Brabant and the Baltic, known only vaguely from written sources. An unglazed and unfinished Delft plate is evidence of a little-known trade with the Baltic. In the middle of the ship stands a great pile of yellow and red bricks. In front of these bricks, in the direction of the bow, in choice ranks stand thousands of gray and red Dutch pantiles. Illustrates with drawings a Hispanic olive jar, red earthenware vessels including a Bergen op Zoom handled pot, a Delftware plate, Delft salve pots, marked Gouda clay pipes, Bellarmine jugs, Langerwehe and other pickle jars, Chinese porcelain tea wares, and glass bottles. Written in Dutch with English summary.

1995b Oosterhouts aardewerk. In *Assembled Articles 2: Symposium on Medieval and Post-Medieval Ceramics, Antwerpen, 25 and 26 January 1995*, 101–128. Stichting Promotie Archeologie, Zwolle.

In specific periods the Oosterhout pottery industry was larger and more important than that of Bergen op Zoom. The discovery of 18th-century pottery kiln waste in the Rulstraat has therefore provided direct evidence for this research. The clay at Oosterhout is very suitable for pottery making. Pottery making occurred in the medieval period. In 1609 the principle trade of Oosterhout was "pottery, tile, and brick making." The second half of the 18th century brought sharp competition from foreign countries. It is known that a Bergen op Zoom potter imitated wares from Frankfurt to capture back the market. Marks on Oosterhout earthenware include the oldest, a simple spoked wheel, dating from the 18th century found in the kiln waste on the Rulstraat. Probably this mark functioned the same as the 18th-century rose mark used in Bergen op Zoom. The first mention of the Rulstraat site is the death in 1706 of the wife of the owner. This man, Cornelis Abraham Vermeulen, died in 1723. His successor, Dingeman Janssen Crul, paid in 1726 for a "house, pottery, and ... five appurtenances." He died in 1733. The ceramic body of the Rulstraat pottery is orange-red in color; in comparison to Bergen op Zoom earthenware the Oosterhout ware is lighter and more orange than red. The body is very hard; with a nail one can hardly scratch it. It is glazed with a dark brown lead glaze that probably contains manganese oxide. A few pieces are decorated with green lead glaze.

From the excavation 30 vessel forms can be reconstructed. Illustrates with drawings the contrast between Oosterhout and Bergen op Zoom rim and body profiles; also illustrates 36 excavated vessels. Written in Dutch.

1997 The Identification of a Ship's Place of Departure With the Help of Artefacts. In *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution*, ed. by Mark Redknap, 181–190. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology Society and Society for Post-Medieval Archaeology, Oxford.

A wreck was found in the Waddensee several miles east of the island of Texel in 1985. It was about 100 feet in length. In the midships area was found a large pile of yellow and red bricks, in front of which lay thousands of gray and red Dutch roof tiles. Excavation revealed rows of Spanish olive jars, stoneware jars (some of which had been packed in wicker baskets), and boxes and kegs with nails, hinges, axes, adzes, flensing knives for whaling, locks, and keys. In the forward section of the ship were barrels of coal, a stoneware vessel of fat, two boxes of candles, casks of Gouda clay pipes, several hundred glass bottles, and some porcelain. Close to the bow were parts of a clock, muskets and cartridges, mortars and pestles, and red earthenware pans and bowls from West Brabant. Other ceramics included a biscuit-fired Dutch or Frisian majolica plate. A pipe with the *Spaarpot* mark bears the name Jan van de Broek, who worked between 1731 and 1737. A clay pipe bowl has the Crowned 32 mark, first used in 1729. The molded bottles date from after 1730; it is probable the ship sank in the 1730s, bound possibly for the Baltic. Illustrates the artifacts with line drawings.

Klomp, Michael

2002 Zwolle, Blekerswegje, juli 2002: Jaaroverzicht 2002. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*, 55–56. Stichting Promotie Archeologie, Zwolle.

Excavations were conducted in Zwolle between the Blekerswegje and Koewegje to determine if evidence had remained of the various trades practiced there. The Blaeu map of 1664 shows bleaching fields there and the name "Schoenkuipenbrug," indicating leather tanning activity. A fine pilgrims badge (illustrated) with an image of the Virgin and Child was found, but its origin is unknown. In the 16th century the gound was filled and raised. A wooden trough was found, but it cannot be positively associated with leather tanning. Other leather tanning vats found in Brugge and in Bergen op Zoom were round. Artifacts including horn cores and chamber pots can be directly associated with the leather tan-

ners. An outstanding discovery (illustrated) is a large lead cloth seal with the coat of arms of Zwolle on one side and the Archangel Michael on the other; its diameter is 3.3 cm. Written in Dutch.

Korf, Dingeman

1963 *Nederlandse majolica*. C.A.J. van Dishoeck, Bussum.

Illustrates with more than 200 drawings and black-and-white photographs many examples of Dutch majolica excavated from various sites. There is also a kiln waster and a kiln prop excavated from a pottery site in Harlingen. A majolica sherd dated 1568 was found in Hoorn, and one dated 1629 was found in Amersfoort; both are illustrated. Following an historical overview, the various examples of Dutch majolica are classified generally by types of decoration. Written in Dutch.

1964 *Dutch Tiles*. Universe Books Inc., Publishers, New York.

That delft tiles were at first produced in the same potteries as Dutch majolica is indicated by the heaps of wasters in Haarlem, where majolica wasters on which pieces of tiles had stuck in firing were found. The Haarlem wasters enable the identification of tiles made in Haarlem. Similar waster heaps have been found in Gouda. Illustrates and identifies more than 350 tiles.

1979 *Tegels*. De Haan, Haarlem.

Illustrates delft tile wasters from the kiln of Augustijn Cornelissen at Leiden and from kiln sites in Haarlem. Identifies and illustrates more than 600 tiles and catalogues various corner designs found on delft tiles. Written in Dutch.

1981 *Nederlandse majolica*. De Haan, Haarlem.

Illustrates kiln wasters and kiln props found in Haarlem, Leiden, and Harlingen. Also illustrates many dated examples of Dutch majolica. There are typologies by date periods of plate profiles, rim decorations and patterns, and other forms of decoration. Examples of majolica are illustrated in color and black-and-white photos as well as in drawings. Written in Dutch.

Korpershoek, K., Jr.

1979 Archeologisch onderzoek. *Blad Oud Hoorn* 1(3). Vereniging Oud Hoorn, Oost-Indisch Pakhuis, Hoorn. <http://www.verenigingoudhoorn.nl/kerken/oosterkerk/ooster_arc_hoel.php>.

In June 1978 excavations at Hoorn were conducted at three locations outside the church to investigate the condition of the foundations. Outside the transept and choir, both from 1523, were found many fragments of tiles and other ceramics, including a complete lead-glazed red earthenware

concave dish with slip decoration. It was made between 1550 and 1650, and near it was found a copper coin dated 1577. Written in Dutch.

Kottman, Jaap

1995 *Glaswerk in het Deventer Systeem*. In *Assembled Articles 2: Symposium on Medieval and Post-Medieval Ceramics, Antwerpen, 25 and 26 January 1995*, 67-73. Stichting Promotie Archeologie, Zwolle.

The archaeological approach to the study of glass through the Deventer System provides an opportunity for art-oriented and socio-economic historical research. Much research is needed into the origins of glass found in archaeological sites, and the study of glass factory sites is of major importance. The goal is to be able to assign diagnostic rim or other fragments of glass to specific vessel types as closely as possible instead of using general categories such as "beaker." Ribbed beakers, for example, can be divided into five groups. Illustrates with drawings various forms of beakers and other glassware. Written in Dutch with English summary.

Krause, Günther

1993 *Some Pottery Groups of the 13th-16th Centuries from Duisburg, Lower Rhine*. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 153-169. Stichting Promotie Archeologie, Zwolle.

Excavations in Duisburg began in 1980 and include numerous rescue excavations around the market and in different quarters of the old town. Among the various finds, pottery is most abundant. Dendrochronology has been used to date 82 wood samples, and coins have also been useful for dating. From the last quarter of the 15th century to the beginning of the 16th century lead-glazed plates became common. In a filled cellar were found early 16th-century decorated stoneware jugs from Cologne, numerous plates, and other ceramics. Gray-bodied ware, common for many centuries, began to decrease at this time.

Krook, Wiard

2004 *Stalloden: Zestiende- en zeventiende-eeuwse Amsterdamse textielkeuren*. In *Amsterdam Monumenten & Archeologie* 3, 44-53. Bureau Monumenten & Archeologie, Uitgeverij Bas Lubberhuizen, Amsterdam.

The Amsterdam collection of artifacts contains a variety of textile lead seals. These objects date from the 14th to the 17th centuries and come from Amsterdam as well as from outside the city. Insofar as can be determined, there are examples from at least 15 Dutch and 13 foreign cities. These archaeological discoveries offer new insights into the trade and importation of textiles in Amsterdam. Also the

stamped marks are of interest because of the images that are included. In recent years an inventory of the different stamps has begun. The oldest Amsterdam specimens are 14th-century textile leads (also now called peg leads) with early examples of the Amsterdam city coat of arms, consisting of a gothic shield with a vertical space (pole) and three Saint Andrew's crosses. Specimens from the 15th and 16th centuries are also stamped on the front with the arms of Amsterdam in combination with an edge inscription AEMSTELREDAMME. On the other side, we find images of different types of ships within a cabled edge. A third category is offered in the following overview. This concerns the 16th- and 17th-century textile leads with stamps that have connections with the city marks issued through the cloth guild. Two large double *staal* leads with the year 1647 are known from archaeological collections from outside Amsterdam. An example was dug up in dredging the harbor of Copenhagen in Denmark in 1975, and in 1983 in the environs of Haarlem an identical textile lead was found. Although these leads have the same diameter as the type from 1633 and the images are also identical, they now have the year 1647 above the shield on the front. In the Amsterdam archaeological collection there is an example of a complete 1-*staal* lead of 1652. The diameter is ca. 5.9 cm, and the front has the crowned Amsterdam city arms with the two lions and a ribbon and with an illegible year below it. The other side is clearer: the crowned arms of Amsterdam with the year 1652 and the edge inscription AMSTERDAMS ANDERHALF STAEL. A lead of this same type 6 cm in diameter was found in 1974 by chance by an Amsterdam citizen in his garden. The front shows the crowned arms of Amsterdam with the two lions. On a ribbon under the shield, the date 1669 is represented. Usually on the other lead seals we see on the other side the crowned Amsterdam city arms without lions and the edge writing AMSTERDAMS ANDERHALF STAEL. The date 1674 next to the city arms is, however, unusual. That different dates appear on the front and back sides of the lead proves that two separate stamps were used. Moreover this is an indication that the 1669 stamp obviously was still in use in 1674. Illustrated; written in Dutch.

Kussendrager, Alex

2004 Armenloodjes of armenpenningen (mereaux). Baken-, armen-, en andere loodjes. <<http://home.hetnet.nl/~jekkij/lood/lood0.html>>.

Poor leads and poor medals had values in exchange for items such as bread, peat, or wine. They are not to be confused with bale seals. Various letters on the leads have different meanings. "LAR" stands for "Lood voor Armen" (Lead for the Poor). A stamped "A" stands for "Almoes" (Alms). An elegant "M" stands for "Mededogen" (Compassion). "R" is for "Roggebrood" (Rye Bread), and "PX ROG" stands for

10 pounds of Rye Bread; a stamped "T" or a stamped "G" are for "Turf" (Peat) or "Gerst" (Barley). The letter "w" was for "Wijn." Many individuals in Hoorn in the 17th century, because of their small incomes, depended upon the benevolence of the community. A poor widow with young children, for example, could be assisted on a limited scale by local authorities and ecclesiastical authority. Illustrates examples of poor leads found in Hoorn in the Julianapark, Veemarkt, and Achterom. Some have a stamped mark of a post horn, taken from the coat of arms of Hoorn. Also illustrates examples found in Enkhuizen (also in North Holland) and in Zeeland (from Middelburg, Vlissingen, Kloetinge, and 's Gravenpolder). In Middelburg medals were made for beggars, and a number of these were discussed by Marie de Man [1855-1944]. She mentions the oldest dated lead for peat from 1660. In addition to medals for beggars and lepers, there were medals for fat or grease and for hospitals. Recently another hospital lead was found, and leads found in excavations in the moat fill may also be poor medals. That copper as well as lead was used for the medals is indicated by a city record of 1531 mentioning 600 brass tokens "carried by the poor." In a site immediately adjacent to the parking garage toll booth in 1993 three of these were found. They are round as well as square and have an eye. One has four holes at the corners. Sometimes leads were counterfeited, and there is a counterfeit hospital lead from Leiden.

Langedijk, Catherine A., and Herman F. Boon

1999 *Vingerhoeden en naairingen uit de Amsterdamse bodem: Productietechnieken vanaf de Late Middeleeuwen*. AWN-Reeks No. 2. Archeologische Werkgemeenschap voor Nederland, Herengracht 474, 1017 CA Amsterdam.

Since 1973 the Department of Archaeology of the City of Amsterdam has excavated no fewer than 340 thimbles. With only a few exceptions they were made of brass or similar copper alloys. Most were found in contexts allowing accurate dating. There are two types of thimbles: ordinary thimbles, with closed tops, and sewing rings, which are open at both ends. Sewing rings were used primarily by tailors, harness makers, upholsterers, shoemakers, sail makers, and saddlers. Thimbles can be grouped chronologically in four slightly overlapping time periods. Metal thimbles were introduced in the 13th century in western Europe. The earliest ones were cast, but thimbles were also made of hammered brass. Indentations on the top were applied one by one usually in a left-turning spiral. The second period begins about 1530 with a new method of brass production in Nuremberg, which allowed mechanical pressing of thimbles. The pattern of indentations changed, and now the spiral of indentations nearly always turned right. Makers' marks

are found on 50 of the 102 thimbles from this second period. During the third period from the beginning of the 17th century to the end of the 18th century, the Dutch dominated thimble production. Marked Dutch thimbles date from the first half of the 17th century. Most of the thimbles in the third period have indentations on the tops arranged in lines. The indentations were beaten with a stamp in one stroke. Deep drawing for the production of thimbles began in England about 1780. Deep-drawn thimbles are recognizable by an outwardly curled edge. Fully illustrated with black-and-white photos of thimbles, pictures, maps, and documents, with line drawings of marks. Written in Dutch with English summary.

Lankamp, Jos

2003 Enschede, Erve Witbreuk, 17, 20, 22, 27 augustus en 3 en 5 september: Jaaroverzicht 2002. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*, p. 28. Stichting Promotie Archeologie, Zwolle.

The Witbreuk farm lies near Twente University. Formerly, on this farm was a ditch that enclosed an elongated lot. A map from 1784 shows only an oval lot with no building at this location. The owner wished to dig out the filled-in ditch; in excavating the ditch fill, the remains of many roof tiles but only a few bricks were found. It is unclear if this material came from a building located on the lot before 1784. The building may have been built of mud and wattle or other material, and it might have been located on a neighboring lot. The earthenware that was found dates from the 17th and 18th centuries. Heavy wooden piles found in the ditch were in alignment with a property line and may have been part of a bridge. Written in Dutch.

Larn, Richard

1985 The Wreck of the Dutch East Indiaman *Campen* on the Needles Rocks, Isle of Wight, 1627-Part 2, by the Needles Underwater Archaeology Group. *The International Journal of Nautical Archaeology and Underwater Exploration* 14 (2, May): 97-118.

From the site were recovered 103 lead ingots. They were open-cast, probably in clay or loam, with a boat-shaped symmetrical form rounded on the underside and flat on top. Many had inscribed markings. Their average weight is 62 kg. During the excavation, about 8,000 coins were recovered. Of a sample of 3,500 coins, 94% were of the United Provinces, and only 6% were Spanish/American reales. The Dutch coins were Leeuwendaalders and half Leeuwendaalders.

L'Hour, Michel, and Luc Long

1990 The Wreck of an 'Experimental' Ship of the 'Oost-Indische Compagnie': The *Mauritius* (1609). *The International Journal of Nautical*

Archaeology and Underwater Exploration 19 (1): 63-73.

In 1985 the wreck of the *Mauritius* was found in the Gulf of Guinea in Africa. Built in Amsterdam in 1601 and 1602, the ship was wrecked in 1609. Evidence of the keel, frames, planking, and oak ceiling remained. Between 18,000 and 22,000 zinc ingots, weighing 122 tons, covered the site. Most are circular or oval in shape. The cargo also included peppercorns, and sherds of porcelain provide evidence of some 215 porcelain vessels. Illustrates with drawings and black-and-white photographs examples of *kraakporselein*, Swatow porcelain, a Bellarmine jug, and cannons. Martavan jars were also found. Some of the cannons were in the hold, used for ballast.

L'Hour, Michel, Luc Long, and Eric Rieth

1989 *Le Mauritius: la mémoire engloutie*. Casterman, dossiers archives du temps. Réalisation: Libris, 25 bis cours Berriat, Grenoble.

In March 1609 in returning from China, the *Mauritius* was wrecked on a sand bank on the Gabonese coast. An East India Company vessel, it was carrying a valuable cargo of spices, porcelain, and metals back to Europe. In 1985 the wreck was discovered by chance during a search for oil. The following year, two underwater archaeological companies returned to resurrect the *Mauritius* and its history. Its construction, cargo, and armament have been thoroughly analyzed. Illustrates artifacts in color and in black and white, in addition to line drawings. Written in French.

Lightly, Robert Alan

1976 An 18th Century Dutch East Indiaman. Found at Cape Town, 1971. *The International Journal of Nautical Archaeology and Underwater Exploration* 5 (4): 305-316.

The wreck was found on the foreshore at Cape Town. The timbers have been carefully recorded and studied. Illustrates drawings of marked clay pipe bowls and photographs of Chinese porcelain and iron bar and round shot.

Lubberding, Herman

2003 Bathmen, Alferinkslaen en Berkenschakel, Najaar 2002: Jaaroverzicht 2002. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*, 9. Stichting Promotie Archeologie, Zwolle.

Monitoring of a construction project revealed evidence only of drainage ditches from the 18th or 19th centuries. At three other construction sites, channels mostly 1.5 m wide but also a pit of 5 by 3 m were found, filled up with a boggy mass of branches, reeds, and leaves. Several such pits were found and were possibly prospect holes in search of bog ore. Not a single ceramic sherd was found, and the features could not be dated. An 18th century date for

the operation is likely, because some of the drainage ditches were older. The pits were not from peat harvesting. Written in Dutch.

Maarleveld, Th. J., B. Goudswaard, and R. Oosting
1994 New Data on Early Modern Dutch-flush Shipbuilding: Scheurrak T24 and Inshot/Zuidoostrak. *The International Journal of Nautical Archaeology and Underwater Exploration* 23 (1): 13–25.

Two 17th-century wreck sites found in the Waddensee have provided data on the construction of medium-sized merchant ships. Scheurrak T24 was a shipwreck from the early to mid-17th century. Its cargo included a shipment of "Hessian" crucibles in sets of five sizes. The ship was built after 1635. The other ship was built of timber cut after 1586, and the wreck dates to the early to mid-17th century. Ceramics on the wreck include sherds of a Siegburg jug, a blue-decorated Bellarmine jug probably with the Amsterdam coat of arms, and fragments of red earthenware bowls and a pipkin. There are also earthenware sherds from Bergen op Zoom and from the Maas valley. The leather shoes, with incisions and decorations, may date to the 1590s. A 3-pounder(?) cannon ball, three pewter spoons (illustrated), a brass spigot, a lead weight, a bronze three-legged pot, and a wooden handle were also found. The pewter was marked by the makers WH, CA or GA, and HH. Both ships were built of oak, and the timbers were not inter-connected and were of various sizes. The first vessel was very flat-bottomed, but the other hull was smoothly rounded in cross section.

MacLeod, Ian Donald, and Eng Wah Beng
1998 Analysis and Interpretation of Glass Artefacts from 17th–19th Century Dutch and Colonial Australian Shipwrecks. In *Glass, Ceramics and Related Materials*, ed. by Alice B. Paterakis, 58–69. Interim Meeting of the ICOM-CC Working Group, September 13–16, 1998, Vantaa, Finland. EVTEK Institute of Arts and Design, Department of Conservation Studies, Vantaa, Finland.

The limited amount of data from some of the early Dutch shipwrecks indicates the use of two principal types of potash glass. Quantitative analysis of glass samples also indicates a consistent ratio of calcium and magnesium for glass from Dutch wrecks dating from 1629 to 1727 and for an American ship wrecked in 1811. This ratio indicates that dolomite was the source of alkaline earth elements, and the Dutch and Americans were using similar recipes for bottle manufacture from the 17th to the early 19th centuries.

Manders, M.R., W.M. Chandraratne, A.M.A. Dayananda, R. Muthucumarana, K.B.C. Weerasena, and K.D.P. Weerasingha

2004 The Physical Protection of a 17th Century VOC Shipwreck in Sri Lanka. *Current Science*, May 10, 86(9): 1251–1255.

The *in situ* preservation of shipwreck sites is becoming increasingly important because of the high cost of excavating them, because there are so many, and because some sites need to be preserved for research by future generations of archaeologists. The Netherlands has a relatively long tradition of *in situ* preservation of wrecks, beginning in the 1980s with the discovery of wrecks in the former Zuider Zee. Some thirty wrecks have been protected from the effects of draining away the water. There is concern about bacterial degradation of wood on land as well as underwater, and formerly it was thought that wrecks underwater were protected against decay because of low oxygen. The wreck of the *Avondster*, a Dutch ship sunk in 1659 in Sri Lanka, was discovered in 1993. The wreckage had been covered with silt soon after it sank and remained in an anaerobic environment for centuries, but by 1993 the site was rapidly eroding and being exposed because of current changes due to nearby construction. Excavation of the site was undertaken to rescue deteriorating objects. To promote the redeposition of protective sand over the wreck remains, meanwhile, nets have been laid over the wreck, and this has been successful. Eventually, it is hoped, the entire site will become buried and protected under an artificial reef of sand.

Mars, Alexandra
1993 Eighteenth-century Lower Rhine Earthenware from Gennep (Province of Limburg): The Final Stage of the Medieval Redware Tradition. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 45–53. Stichting Promotie Archeologie, Zwolle.

In 1988 an excavation in Gennep in northern Limburg revealed evidence of an 18th-century potter's workshop. At a junction between cobbled streets called the Doelen were uncovered the foundations of a three-room brick 17th-century dwelling that had a tile roof and a square workshop building with its built-in kiln. They were still standing in the first half of the 19th century. At least two or three generations of one family were active at this site during the last three quarters of the 18th century. Within the household the potter used his own seconds with dents and shrinkage cracks. The pottery was made of local clay with a high content of iron that burned rose-red to orange. The wares have sgraffito decoration, trailed slip decoration, brown and green glazes, and sometimes also appliqués. Decorative patterns were applied using techniques often combining an overall white slip, trailed slip, and marbling. Slip-decorated products were first biscuit-fired. Most of the ware was for cooking and storage and included colanders, porringers, bowls, mugs, chamber pots, braziers, chafing dishes, flow-

erpots, firecovers, and salve pots. Two dishes bear dates from the 1720s, while a third dish dated 1762 is a waster. English wares such as a cup and saucer were also imitated, but no English products were found. Illustrates with drawings the various ceramic vessel types.

Marsden, Peter

1970 The Dutch East Indiaman on Hastings Shore. *The Geographical Magazine* 42 (12): 894-899.

Explains the importance of the intact wreck of the *Amsterdam*, discovered in 1969 on the south coast of England, deeply embedded in the sand and exposed only at exceptionally low tides. The ship was lost in 1749 on its maiden voyage from the Netherlands to Java. Illustrates with photographs cannon, a wine glass, bottles, shoes, a leather sword belt, rolls of ribbon, heather hand brushes, and spare pulley blocks.

1972 The Wreck of the Dutch East Indiaman *Amsterdam* near Hastings, 1749: An Interim Report. *The International Journal of Nautical Archaeology and Underwater Exploration* 1: 73-96.

The *Amsterdam* was built in 1748 and was owned by the East India Company. The wreck was clearly exposed at low tide in August 1970. Illustrates drawings of a wooden deadeye and a small wooden pulley block, a vent pick, cannon ball gauges, a faience ointment jar, a wine glass, an inscribed pewter spoon, an engraved clear glass tumbler, a decorated ivory fan, a glass bottle, a comb, a buckle, and other objects.

1974 *The Wreck of the Amsterdam*. Stein and Day, Publishers, New York.

Story of the loss of the merchant ship *Amsterdam* near Hastings on the south coast of England in 1749 and of initial archaeological exploration of the intact, buried wreck. Illustrates with drawings bottles and other glassware, pulley blocks, barrel fragments, iron shot and armaments, cannons, ceramics, clay pipes, buckles, buttons, a bronze candle stick, a sword belt, shoes, spoons, knife handles, and many other objects.

1976 *The Meresteyn*, Wrecked in 1702, Near Cape Town, South Africa. *The International Journal of Nautical Archaeology and Underwater Exploration* 5 (3): 201-220.

The wreck was discovered in 1971 north of Cape Town. The artifacts include wire-linked lead shot, sword pommels and a handle, a shoe, a buckle fragment, spoons, a spigot, chest handles, dividers, a knife handle, coins, and other objects.

1978 A Reconstruction of the Treasure of the *Amsterdam* and the *Hollandia*, and Their

Significance. *The International Journal of Nautical Archaeology and Underwater Exploration* 7 (2): 133-148.

The ships, sunk in 1749 and 1743, are documented to have carried treasure. More than 35,000 silver coins have been found on the *Hollandia*. More than 15,000 have been catalogued. The frequency of coins by date has been analyzed, revealing insights into economic history.

Martin, Colin J.M.

1996 North Sea Traders. In *The Sea Remembers: Shipwrecks and Archaeology*, ed. by Peter Throckmorton, 134-139. Barnes & Noble Books, New York. [Originally published in 1987 by Mitchell Beazley Publishers.]

During the past 45 years, the draining of the Zuiderzee has revealed some 350 wrecks. Nine water ships, large fishing trawlers with an open seawater well in which to keep the caught fish, have been found, of which three are from the late medieval period. In 1980 a small Dutch freighter was discovered during the construction of a canal in Lelystad. It was 60 feet long and 17 feet wide. A small cooking hearth and kitchen utensils were in the forward part of the ship, and coins found there suggest the ship sank around 1620. In the hold was some of the cargo: wrapped scythe blades, a box of eggs, brass cooking pots, pewter utensils, and leather bags.

1997 Ships as Integrated Artefacts; The Archaeological Potential. In *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution*, ed. by Mark Redknap, 1-13. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology Society and Society for Post-Medieval Archaeology, Oxford.

Careful archaeological recording, interpretation, and analysis provide information about cargo stowage. For example, the unflattened rivet stubs of the panel handles recovered from the wreck of the Dutch East India ship *Adelaar* sunk in 1728 suggests that the lids and handles were shipped unassembled for ease in packaging. This ship also produced a large number of lead ingots. From the wreck of the *Kennemerland* (1664) a small group of attractive portable items is evidently part of an individual seaman's trade chest. Illustrates a brass tobacco box dated 1664 and a pocket combination compass and sundial. The wreck of the *Vergulde Draeck* of 1656 has produced almost all forms of Bellarmine jugs represented by a well-known chronological typology spanning most of the 17th century, now regarded as somewhat outdated. Illustrates Bellarmine jugs from the *Kennemerland*.

Martin, Colin J.M., and Anthony N. Long

1975 Use of Explosives on the *Adelaar* Wreck Site, 1974. *The International Journal of Nautical*

Archaeology and Underwater Exploration 4 (2): 345–352.

The *Adelaar* was wrecked on the Isle of Barra in 1728. A gully in the site is covered with a solid layer of concretion, requiring explosive charges to loosen it. A barrel of iron nails was discovered; other artifacts include bar shot, cannon balls, a hook, and lead ingots.

Marx, Robert F., and Jennifer Marx

1993 *The Search for Sunken Treasure: Exploring the World's Great Shipwrecks*. Key Porter Books Limited, Toronto, Ontario.

Aqua-Exploration, a commercial company formed in 1979, in 1983 found the wreck of the *Joanna*, a Dutch ship lost in 1682 off Cape Agulhus while en route to Batavia. The *Batavia* wreck was discovered in 1963, and scuba divers took an unknown number of silver coins. The wreck of the *Gilt Dragon* [*Vergulde Draeck*] of 1656 was found in 1957, and the Australian government took possession of it in 1964. Illustrates two Bellarmine jugs and an astrolabe from the *Vergulde Draeck*. The wreck of the *Zuytdorp*, known since 1927, is very dangerous and inaccessible. Off the coast of the Netherlands are the wrecks of the *Anna Catharina* and the *Vlieghenthart*, both from 1735. The *Vlieghenthart* was discovered in 1982, and bronze cannons, Chinese porcelain bowls, bottles of German and French wine, pewter tableware, Bavarian glassware, and coins were found, despite looting. In 1975 the Dutch government laid claim to the wreck of the *Amsterdam* in England. Robert Sténuit found the wrecks of the *Lastdragger* (1653) and the *Slot ter Hooge* (1724). Sténuit agreed to give the Dutch government 25 percent of the recovery from the *Slot ter Hooge*. Sténuit in 1976 also found the wreck of the *Witte Leeuw* (1613). The ship carried 1,311 diamonds that were not found. The wreck of the *Geldermalsen* (1752) was found in the South China Sea in 1985. The ship, when it sank, was so overloaded that heavy porcelain replaced the normal ballast of rocks. The *Hollandia*, Piet Heyn's flagship, was burned and sunk in the seaport of Bahia in Brazil in 1624. The author located the *Hollandia* wreck in 1981. The wreck lay under a 19th-century wreck. Bellarmine jugs, lead bullets, swords, muskets, glass hand grenades, knives, pewter, silverware, buttons, buckles, leather boots, brass dividers, coins, fragments of an hour glass, and a lead compass rose were recovered. Human bones, including a number of skulls and weighing 200 pounds, were collected and reburied in the Netherlands. The most important artifacts are on permanent display in the maritime museum in Rio de Janeiro. The remainder was sold at auction.

McBride, P., and D. Whiting

1985 *The Wreck of the Dutch East Indiaman Campen on the Needles Rocks, Isle of Wight,*

1627-Part 1, by the Needles Underwater Archaeology Group. *The International Journal of Nautical Archaeology and Underwater Exploration* 14 (1): 1–31.

Because of the hard concretion on the site, small explosive charges were used in excavation. The wreck lies in a broad, shallow gully. Illustrates with drawings iron bar shot, a copper cartridge case, brass upholstery tacks, a pewter jug and pewter spoons, a salt-glazed stoneware jar, sherds of tin-glazed ware and porcelain, horn and ivory knife handles, a brass candle stick, beads, a pin and needles, a lead ink pot, wood and iron spades, a clay pipe, a pewter bottle top, a brass buckle, iron nails, and a grindstone.

McCarthy, M.

1998 Investigation at the *Zuytdorp* Sites, 1971–1994. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 41–52. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Fremantle.

The *Zuytdorp*, lost in 1712 on a voyage from the Netherlands to Batavia, is one of seven ships known to have been lost off the coast of western Australia. The work of the Western Australian Maritime Museum at the site is now nearing completion. The first evidence of the site was found in 1927, consisting of the remains of the survivors' camp on land. Successful dives to the wreck itself occurred in 1964. The Western Australian Maritime Museum established a dive team to explore the site in 1969. Despite setbacks, Jeremy Green and a team of divers were eventually successful in retrieving a large number of artifacts. In 1985, the Museum, faced with pressure to continue salvage of the site, resolved to resume the work, beginning with a feasibility study. Excavations also occurred in a survivors' camp site on land near the wreck. Recently-discovered objects include navigation dividers, coins, munitions, and a tobacco box lid.

McDonald, Kendall

1974 *Treasure Beneath the Sea*. A.S. Barnes and Company, South Brunswick and New York.

Descriptions and history of four Dutch wrecks that have been discovered: *De Liefde* (1711), the *Kennemerlandt* (1664), the *Hollandia* (1743), and the *Amsterdam* (1749). On *De Liefde* most of the coins discovered have been silver ducatoons dated between 1632 and 1711; there were 4,000 newly minted coins in a chest all dated 1711.

McElvogue, D.M.

1997 A Breech-loading Swivel Gun from the

Curaçao, 1729, Wreck-site. *The International Journal of Nautical Archaeology* 28 (3): 289-291.

A single bronze breech-loading swivel gun was raised from the wreck site in August 1997. Five other breech-loading swivel guns were discovered and raised in 1972. Each gun has the mark of the Admiralty of Amsterdam, a capital A and a proof mark cast in relief. Five breech blocks were recovered separately. Four breech blocks of the same size were found on the wreck of *De Liefde*, and in 1973 two bronze breech-loaders were recovered two miles from the *De Liefde* site.

McLaughlin-Neyland, Kathleen, and Robert Neyland

1993 *Flevobericht Nr. 383: Two Prams Wrecked on the Zuider Zee in the Late Eighteenth Century*. Directoraat-Generaal Rijkswaterstaat, Ministerie van Verkeer en Waterstaat, Directie Ijsselmeergebied, Lelystad.

The wrecks of two prams share a similar hull construction and analogous artifact assemblages. They were inland freighters requiring a small draft of water and had completely flat bottoms. Although these vessels were used primarily in canals and on rivers, they also must have crossed the Zuiderzee with some frequency. Both wrecks date from the second half of the 18th century and sank within 50 years of one another. One pram was found in East Flevoland near Lelystad, and the other was in South Flevoland due east of Amsterdam. The East Flevoland wreck contained 18th-century ceramics, a saw handle, buttons, a needle case, spoons, bottles, and Gouda tobacco pipes. There was a French coin minted in Monaco in 1653, but there was also a Utrecht farthing dated 1766. Lead lighthouse tokens dated 1782 and 1783 suggest the actual year of the wreck was 1783. The second wreck contained a Zeeland farthing dating from the 1750s, a Rhenish lead-glazed platter, red earthenware bowls, a creamware cup, spoons, Gouda pipe bowls, a heather brush, and other objects.

McNulty, Robert H.

1971 *Common Beverage Bottles: Their Production, Use, and Forms in Seventeenth- and Eighteenth-Century Netherlands, Part I*. *Journal of Glass Studies* 13: 91-119.

From 1615 to 1623 or later, green glass *roemers* were made in Rotterdam. Glasshouses had been erected in Amsterdam to make bottles by 1641. A glasshouse was established in Amersfoort in 1692. In the 18th century 18 Dutch cities were producing glass bottles. Illustrates photographs of a square-sectioned light green glass bottle from the second half of the 17th century found in Amsterdam, a square glass bottle with constricted sides excavated from a privy behind the city hall at The Hague, a round spa-type water bottle found in the Binnenhof at The Hague, a

wide-shouldered and narrow-based round bottle of the 1660s found at Nijmegen, and a chronological series of later bottles from sites in Amsterdam, Utrecht, Rotterdam and other places.

1972 *Common Beverage Bottles: Their Production, Use, and Forms in Seventeenth- and Eighteenth-Century Netherlands, Part II*. *Journal of Glass Studies* 14: 141-148.

Dutch bottles were produced for the import of Bordeaux wine. Illustrates squat rounded Bordeaux wine bottles of the 1670 to 1700 period found in the Zuiderzee and in Rotterdam. Also illustrates a round bottle found in Rotterdam with a pewter band around its neck and glass bottle seals found in Rotterdam (examples with crossed anchors, with the Dutch lion, with 1724 dates, and with man on horseback, "Der Prins," 1696), in The Hague ("Laet dat Glaser ens Umgaen" or "Let the glass go round"), in Amsterdam (Arms of Amsterdam), and from the *Zeewijk* wreck of 1727.

Melrose, Bruce

1998 *The Wreck of the Batavia*. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 77-84. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Freemantle.

Two small islands, on which 80 people were murdered, lie to the northeast of the *Batavia* wreck site and have never been explored. On Beacon Island seven skeletons have been found; the remains have evidence of sword or knife wounds, and one was shot. The murders occurred on Beacon Island six weeks after the wreck; the murderers were imprisoned on the island and were executed there. The graves of murdered women and children will not be found on Beacon Island. Further exploration of the islands should occur, particularly by the Western Australian Maritime Museum.

Miller, George L.

1987 *The Second Destruction of the Geldermalsen*. *The American Neptune* 47 (4): 275-281. Reprinted in *Advances in Underwater Archaeology*, ed. by J. Barto Arnold III, *Historical Archaeology* 26 (4, 1992): 124-131.

The wreck of the *Geldermalsen* was mined for its valuables in the spring of 1985, and Christie's Amsterdam then auctioned them in April 1986 as "The Nanking Cargo." From December 1985 until the auction, Christiaan J.A. Jörg analyzed the collection of more than 150,000 Chinese porcelain vessels recovered from the wreck. His book is an amazing accomplishment; without his work an extremely

important wreck would have remained undocumented, and the information would have been completely lost to scholars. It should have been possible to find sufficient funding for the proper excavation of a wreck of such importance and value. The preservation of materials on the wreck was excellent, with porcelain vessels still packed in their original crates. No attempt was made to record information during the retrieval process. The wreck salvager claimed to have been searching specifically for the *Geldermalsen*, but it is not clear whether he knew the wreck he found was the *Geldermalsen*. Likewise, Christie's Amsterdam did not identify the wreck by name, perhaps because the Dutch government maintains a claim on all Dutch East India Company wrecks. Moreover, the wreck site may be in Indonesian waters. The acquisition of artifacts taken from such sites by museums raises ethical and legal questions.

Neyland, Robert S.

- 1991 The Preliminary Hull Analysis of Two 18th-Century Dutch Prams. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference, Richmond, Virginia, 1991*, ed. by John D. Broadwater, 111-114. Published by the Society for Historical Archaeology.

Both wrecks date from the second half of the 18th century and were sunk in the Zuiderzee off the coast of Harderwijk and east of the harbor of Amsterdam. For one wreck a lighthouse token gives a date of 1783 or later, while on the other wreck was a worn brass farthing from the 1750s. The construction of these vessels seems more appropriate for canal or river craft and not for the Zuiderzee trade. They were built with completely flat bottoms rising in neither the bow nor the stern. The deck was flat in the stern, with the tiller passing over it.

- 1995 Continuity and Change in Dutch Boat Building. In *Underwater Proceedings from the Society for Historical Archaeology Conference, Washington, D.C., 1995*, ed. by Paul Forsythe Johnston, 134-139. Published by the Society for Historical Archaeology.

Watercraft characterized as prams may represent the most continuously used class of boats within northwestern Europe. Illustrates a reconstruction drawing of a 16th-century pram excavated near Workum in Friesland.

Neyland, Robert, and Kathleen McLaughlin-Neyland

- 1994 Preliminary Report on a Late Sixteenth-Century Boat Excavated in Friesland, the Netherlands. In *Underwater Proceedings from the Society for Historical Archaeology Conference, Vancouver, British Columbia, 1994*, ed. by

Robyn P. Woodward and Charles D. Moore, 19-24. Published by the Society for Historical Archaeology.

In 1992, a 16th-century wreck was discovered near Workum, Friesland, during the digging of a drainage ditch. The wreck predates 1624, and the hull planks were cut between 1547 and 1553. The style of a child's shoe found on the wreck suggests a date of sinking in the second half of the 16th century. Evidence indicates that previous cargoes included hay and/or livestock, bricks, and peat. Artifacts include a mismatched pair of child's shoes, pieces of a ceramic skillet, two heather brushes, a twisted copper wire eyelet, and pieces of re-used leather.

Nijs, Godfried

- 1997 Harreveld doorgrond: Historisch-archeologisch onderzoek naar "eene oude haevesaete." Archeologische Werkgroep Lichtenvoorde, Lichtenvoorde. November. Modified from articles published in *De Lichte Voorde*, a periodical of the Vereniging voor Oudheidkunde te Lichtenvoorde, numbers 29 and 32. <<http://home.pi.net/~gnijs/har.html>>.

When plans were made to demolish a vacant and abandoned boarding school at Harreveld in Gelderland and to commence new development of the site, the archaeological study group of nearby Lichtenvoorde conducted excavations to rescue information about the site that would otherwise be lost forever. The results of these excavations have been published. Originally the site was the location of a country house surrounded by a ditch. It was a "havezate," of which there is a detailed drawing included on a survey map made about 1650 by Jan van Lindt. [A "havezate" or "havesate" was a home of a lord or knight, and possession of such an estate was necessary for participation in provincial government. It may have been similar to an English manor house.] One of the most important documentary records for the archaeologists was a ten-page inventory dated 1798 listing the personal property in the house that was sold at auction to satisfy debts. The excavations in the moat and elsewhere in six different areas produced a large number of artifacts, including ceramics, glass, clay pipes, and well-preserved leather and wood objects. The moat as it was filled served as a dump for garbage. A number of the artifacts can be related directly to the 1798 inventory. The foundations of the tower and entrance gate were also found. The artifacts included a number of stoneware mineral water bottles from Germany. One has the incised letters "CA" in cobalt blue, the initials of Clemens August, the sovereign bishop of Cologne and Munster between 1723 and 1761. Most of the mineral water bottles are of the cylindrical form. Many fragments from the moat bear the "MF" stamp, but this stamp remains unidentified. Another mineral water bottle has a rampant lion with the inscrip-

tion HERZOGTHUM ORANIEN NASSAU. Much of the stoneware that was found comes from the German production center of Stadtlohn-Vreden, located on the German-Dutch border. The stoneware varies from yellow to light brown to gray, and the gray stoneware decorated with blue can be confused with Westerwald stoneware. Much of the red earthenware that was found comes from the German city of Ochtrup, east of Enschede. Although most of the red earthenware found in Dutch sites comes from the Rhine, red-bodied earthenware from Ochtrup has also been found in Arnhem, Zutphen, and Zwolle. A surprisingly small percentage of porcelain was found in the moat, as in other sites in the Achterhoek area, considering the fact that it is assumed that porcelain was generally accepted and used by all classes in the 18th century. From the upper layers in the moat, many English creamware fragments were found from the filling of the ditch between 1775 and 1800. This type of ceramic was generally reserved for the wealthy in this period. Entire plates of the English Queen's shape were reconstructed. This creamware was undoubtedly once possessed by Judith van Dorth, who lived here and was shot in 1799 by the French because of her fierce Orangist loyalties. Fragments of a nearly complete glass *roemer* from between 1750 and 1800 were excavated and reconstructed. The *roemer* bowl has a closed bottom, whereas older types have an open connection with the stem. Because of the wet, sealed soil deposits in the ditch, there was good preservation of wood and leather. Shoes included an early 18th-century slipper. The blade of a wood shovel made of oak, with a handle made of willow, was also found. Deeper in the ditch, earlier artifacts indicate that the moat was already in existence in the first half of the 15th century. As a result of the excavations, combined with the 1650 map, it has been possible to create a three-dimensional computerized reconstruction of the entire havezate complex as it was about 1650. Written in Dutch.

Noël Hume, Ivor

2001a *If These Pots Could Talk: Collecting 2,000 Years of British Household Pottery*. Published by the Chipstone Foundation; distributed by University Press of New England, Hanover and London.

Fragments of tin-glazed earthenware excavated in Limburg show that not only the English but also the Dutch used clear lead glaze on the backs of chargers while saving the tin glaze for the decorated upper sides. Illustrates lead-glazed red earthenware three-legged cups and a small cauldron with handles dating about 1550 to 1650 also excavated in Limburg. Also illustrates a small, handled saucer, or patera, of lead-glazed red earthenware found in Limburg and dating probably from the 17th century. Illustrates a small blue-decorated Westerwald

stoneware chamber pot excavated in Amsterdam with its brass lid intact. Also illustrates a blue-decorated Westerwald chamber pot with side medallions dated 1632, also found in Amsterdam. A pair of small Rhenish brown stoneware jugs with an unusual shape recovered from an unidentified Bermuda shipwreck are of the same type as wares excavated in Bergen op Zoom from a context of about 1518 to 1550. The great variety and range in the quality of applied masks on the Bellarmine jugs recovered from the wreck of the *Batavia* of 1629 have demonstrated that there is no simple chronology of such masks from fine and realistic to coarse and crude mask styles. Approximately 150,000 porcelain items, from chamber pots to teapots, were recovered from the wreck of the *Geldermalsen* of 1752. These included tea bowls and matching saucers coated externally with a brown slip, known as *Batavia* ware. Several hundred porcelain pots resembling chamber pots from the wreck were described as "vomit pots" in the original shipping inventory. There were also at least 43 stoneware bottles, a few of which had applied masks.

2001b *Potsherds and Pragmatism: One Collector's Perspective*. In *Ceramics in America 2001*, ed. by Robert Hunter, 2-27. Published by the Chipstone Foundation; distributed by University Press of New England, Hanover and London.

Although professional archaeological excavations are undertaken at Dutch sites threatened with new construction, many of the 16th- and 17th-century earthenwares and stonewares on the market are from urban sites in Amsterdam and elsewhere. While the sale of antiquities from Dutch sites is not to be applauded, it is foolish righteously to avoid the acquisition of such an item, likely resulting in the loss of information that could otherwise have been analyzed and shared. George Miller in an important article in 1985 argued very strongly against the sale of the porcelain from the wreck of the *Geldermalsen*. Nevertheless, the results of this significant underwater discovery were quickly and thoroughly published. Miller argued that a wreck of such importance could have been funded for proper excavation.

2003 *Through the Looking Glasse: or, the Chamber Pot as a Mirror of Its Time*. In *Ceramics in America 2003*, ed. by Robert Hunter, 138-171. Published by the Chipstone Foundation; distributed by University Press of New England, Hanover and London.

The earliest ceramic examples of pots that may have been chamber pots in the Noël Hume Collection date perhaps from the late 15th to 16th centuries and were excavated in Bruges. These pots have ear-like handles projecting from their sides and not from their rims. The position of the handle causes the pot

to tip when held, so they may have been dippers or skimmers rather than chamber pots. The examples from the 16th and 17th centuries excavated in Amsterdam and Rotterdam all have crinkled foot rings but otherwise vary widely. Examples of chamber pots excavated in Leiden, Dordrecht, and Paardenveld in Utrecht are also all different. A Westerwald chamber pot found in Amsterdam (illustrated) dated 1632 has crowned lions flanking a double-eagle central medallion. A small Westerwald chamber pot of the mid 18th century was found in Amsterdam with its flat brass lid *in situ*, but it was probably actually used as a soap cup.

O'Bannon, Colin A.

1994 Pieces of Eight? The Story Told by the Monte Cristi Shipwreck Coins. *The Broadside* 1 (1): 6-7. Published by the Pan-American Institute of Maritime Archaeology.

The coins from the wreck site consist of eight-real coins from at least two Spanish mints and date from no earlier than 1651 to 1652. The ship sank probably between 1652 and 1654. The clay pipes on the wreck could have been made as late as 1665 by Edward Bird of Amsterdam. Illustrates silver coins with a drawing and a black-and-white photograph.

O'Keefe, Patrick J.

1978 Maritime Archaeology and Salvage Laws: Some Comments Following Robinson v. The Western Australian Museum. *The International Journal of Nautical Archaeology and Underwater Exploration* 7 (1): 3-7.

In 1977 the High Court of Australia declared invalid provisions in the Maritime Archaeology Act which would have prevented a salvage diver from removing artifacts from the wreck of the *Vergulde Draeck*, sunk in 1656. The diver claimed to have found the wreck in 1957, lost it, and rediscovered it in 1963. In 1964, however, the *Vergulde Draeck* was declared an historic wreck.

Oost, Tony

1988 Putten uit putten: er hangt een Geurtje aan! In *'N propere tijd? (on)leefbaar Antwerpen thuis en op straat (1500-1800)*, ed. by P. Maclot and W. Pottier. V.Z.W. Antwerpse Vereniging voor Bodem- en Grotonderzoek, Antwerp.

In the course of the 15th century specific structures were established in Antwerp to collect trash. Most of these trash pits do not have firm flooring. Many food remains are found in the trash pits. Illustrates excavated examples of trash pits.

Oost, Tony, and Johan Veeckman

1989 De wereld in een afvalput. In *Achter de gevels van het Ethnografisch Museum*, 40-67. Stad Antwerpen, Antwerp.

In Antwerp at Kasstraat 11a during restoration, exca-

vations were undertaken. The house, "t Steenken," was built in 1579. A trash pit contained a white-bodied earthenware pipkin and a Bellardmine jug of about 1550. Other excavations produce red earthenware, Dutch majolica, Westerwald stoneware, glassware, clay pipes, Venetian glass, pewter spoons, and medicine bottles.

1995 Majolica uit Antwerpen: Een status quaestio. In *Assembled Articles 2: Symposium on Medieval and Post-Medieval Ceramics, Antwerpen, 25 and 26 January 1995*, 7-13. Stichting Promotie Archeologie, Zwolle.

The archaeological contexts of majolica from sites in Antwerp provide a clue in the identification of Antwerp products. Several of the most important sites include trash pits at the site of the St. Elisabeth Hospital, on Het Steen, on the Kasstraat, and on the Grote Kauwenberg. A great quantity of majolica was found at the Stadspark site. Various sites have produced interesting tiles, such as a late 18th-century rubbish pit at a site originally the Abbey of Hemiksem where a great quantity of tiles was found. Sites with kiln wasters are of the greatest importance. In three cases was there clear evidence of kiln waste, whether or not in association with a kiln site or a pottery: the first site was Sint Jansvliet, where misfired red-bodied tiles, kiln props, and an unfinished tin-glazed tile were found; on the Schoytestraat were found misfired, unfinished kiln wasters; more recently on the Steenhouwersvest not only kiln waste but also remains of a majolica kiln were found. The material from Sint Jansvliet dates from the second half of the 16th and the beginning of the 17th centuries. The Schoytestraat material dates between ca. 1575 and 1625/1650. The Steenhouwersvest material dates from the second half of the 16th century; the site was once the property of the wife of Lucas Andries, a son of Guido Andries, active after 1556. While excavated examples of majolica from the first half of the 16th century are few, this is exactly the period when the production of majolica in Antwerp began.

Oost, Tony, Piet Lombaerde, Lieve de Pooter, Dirk de Mets, Katrien van Vlierberghe, Sabine Denissen, Michel de Smet, and Willem van Neer

1982 *Van nederzetting tot metropool: archeologisch-historisch onderzoek in de Antwerpse binnenstad*. Volkskundemuseum, Stad Antwerpen Oudheidkundige Musea, Antwerpen.

Description of many types of artifacts excavated in Antwerp beginning with the Gallo-Roman and medieval periods and continuing to the 20th century. Ceramics beginning in the 15th century include red earthenware, white earthenware, stoneware, Antwerp majolica, clay pipes, tin-glazed majolica wall tiles, and floor tiles. Glass *berkemeiers*, beakers, *roemers*, bottles, and other vessels are described.

Subsequent chapters discuss metal, bone, wood, and leather artifacts as well as faunal remains. Illustrates with drawings as well as black-and-white and color photographs all types of artifacts, including tobacco pipes and pipe makers' marks. Written in Dutch.

Oosting, Rob

- 1991 Preliminary Results of the Research on the 17th-Century Merchantman Found at Lot E 81 in the Noordoostpolder (Netherlands). In *Carvel Construction Technique: Skeleton-first, Shell-first. Fifth International Symposium on Boat and Ship Archaeology, Amsterdam, 1988*, ed. by Reinder Reinders and Kees Paul, 72-76. Oxford Monograph 12. Oxford Books, Park End Place, Oxford.

The ship was found in 1948 and excavated from 1957 to 1961. It dates from the early or middle 17th century. Sections of the ship were raised in 1969 for preservation and display at Ketelhaven. The ship was apparently not built using "skeleton-first" technique. The length of the ship was about 27 m, its width was 7 m, and its depth below the main deck was 3.6 m.

Ostkamp, Sebastiaan, Diederik Bente, Olaf Goubitz, and Jaap Kottman

- 2003 Een boedel op de schop: 16de-eeuws vondsten uit Oldenzaalse waterput. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*. Stichting Promotie Archeologie, Zwolle, 71-112.

Excavations conducted in 1997 and 1998 in the center of Oldenzaal preceding enlargement of the city hall revealed wells and/or privies. The linings of all these pits, also of the one dating after the Middle Ages, were made from wood timbers. One of the wells was, after abandonment, used as a privy. Dendrochronological analysis indicates a felling date between 1510 and 1520 for the tree from which the pit lining was made. A well found in 1998 contained a large quantity of ceramics, glass, leather, wood, and metals. The fill was not privy fill, and the artifacts were not a deposition from daily use. The artifacts were quite fragmentary. The deposit may have been the result of a cleanup, through a death or some other removal. The artifacts date from a relatively short period, at most from a period of 50 to 75 years. It is probable that the inhabitants of the lot were associated with the Latin school of Oldenzaal. The house on the property was likely occupied by the preceptor of this Latin school while on the neighboring lot was a garden. The dating of the artifacts is mainly based on the ceramics, glass, and footwear found in the fill. The most important object is a Siegburg tankard bearing the date 1575. The earliest objects, especially the glassware, date from the first decades of the 16th century. The assemblage dates roughly between 1525 and 1580. Despite the late

date of the feature, at least 12 pieces of gray-bodied earthenware were present. This means that not less than 22% of the total ceramics is gray-bodied earthenware. In a privy that dated from the first half from the 16th century, also excavated in Oldenzaal, gray-bodied earthenware represents a large 39% of the total ceramics. In the western and middle Netherlands gray earthenware in the 16th century was already long absent from the market. In Brabant, a small number of forms remained in production until the beginning of the 16th century. Of the six red earthenware pipkins from the feature, two types relating to each other can be distinguished. The style of these pipkins is related to a 17th-century misfired pot that was found in Ochtrup. The sparse glaze as well as the slip trailings on one of the pots however points more to a 16th-century date for the specimens found here. The interior of one white-bodied earthenware porringer is yellow glazed; the interior of another is green glazed. Two plates and a pot of an unknown function are considered to be examples of so-called Hafner earthenware. The color of these pieces inclines to orange, and contrasts with the somewhat yellower Cologne Hafner earthenware. Of a majolica plate no more than a single rim fragment remained. The plate was decorated with an Italian motif, a decor that experienced its greatest popularity in the Netherlands just in the third quarter of the 16th century. All pieces of broken glass found in the privy are green in color, in various shades. The fragments of the *berkemeiers* found in this privy have a characteristic blue green color. The feature contains also two bottles and a base fragment possibly from a bottle with a turned up base. One bottle is blue green and spherical with a belly flattened on two sides. The leather finds encompass about 30 parts and/or fragments of footwear from between about 1525 and 1575. Worked bone is found only in the form of a comb. This comb is of a type that appeared in the Carolingian period, and, as this complex demonstrates, remained in use until the 16th century. The only complete wooden object in the artifacts is a paddle, perhaps used for discipline in the school. A large number of metal book clasps in addition to the wooden paddle is suggestive of the scholastic history of the site. An iron lock and a strongly-made lock plate with a keyhole in it was probably from a chest. Of five keys two were nearly complete. The keys are smaller than the customary door key size. The mending or repair of clothing is indicated by scissors, a thimble, and a pair of silver needles. A latten metal musket measure and a pair of lead musket balls indicates that the original owner(s) of the artifacts also possessed weapons. Illustrates with drawings and black-and-white photographs many of the artifacts. Written in Dutch.

Pagano, Daniel N., Diane Dallal, Diana diZ. Wall, Halwany Michrob, Jan M. Baart, Meta Janowitz, Nan A. Rothschild, Nicole Rousmaniere, Peter Sinmans, Rosemary Wainstein, Sasha Smith, Thomas Bender, and Wiard Krook

1996 *Unearthed Cities: Edo, Nagasaki, Amsterdam, London, New York*. Tokyo Metropolitan Edo-Tokyo Museum, Tokyo.

Includes a map of Amsterdam in 1724 showing 59 locations of archaeological excavations and their dates, from as early as 1954. During construction of a new town hall and theater, it was possible to excavate two entire blocks of houses built at the beginning of the 17th century. Illustrates with color photographs excavated remains of a 17th-century brick privy and many artifacts from the 17th and 18th centuries. These include spigots and taps of both wood and brass, tools, bricks and a glazed pantile, keys, red and white earthenwares, Dutch majolica and faience, Italian and Portuguese faience, porcelain, *roemers*, glass beakers, buttons, toy pewter vessels, clay pipes, etc. These are compared with material excavated in Edo (now Tokyo), London, and New York. Written in Japanese and in English.

Paranavitana, K.D.

1998 The Use of Archive Material for Research in Maritime History and Archaeology in the South Adisian Region. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 130-133. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Fremantle.

Archaeological findings and contemporary archival material are clearly interdependent. The ship *Hercules*, wrecked in Galle Harbour in Sri Lanka by an offshore wind on May 22, 1661, was discovered on the sea bed as a result of archaeological work conducted in 1990. Subsequently, research by Robert Parthesius in the Archives at The Hague not only helped confirm the identity of the wreck but also revealed the type of ship it was and its dimensions.

Parthesius, Robert

1998 Archives and Wrecks: Australian-Dutch Cooperation. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 68-74. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Fremantle.

For the discovery of the four East India Company

wrecks in western Australia, the documents in the East India Company archives were of essential value. The value of the combination of archaeology and history became especially clear during the excavation of wrecks in the 1970s and 1980s. A central issue has been the technique of early ship construction. The experience of building a reconstruction of the *Batavia* at Lelystad in 1993, along the lines of the better understood frame-first methods, has helped in understanding the evidence of the shell-first building method found on the actual wreck remains. The three layers of planking in the original *Batavia* represented a method of hull construction that had never been found on any other 17th-century wreck or in documents. Since that discovery, further historical research in the East India Company archives has shown that it was common practice in the early years of the Company. Other examples have also been discovered. Reproductions of the *Batavia* cannons have also been cast, and their distribution at the wreck site has helped in determining their original positions on board the reconstructed ship. Since 1992 the University of Amsterdam, the Western Australian Maritime Museum, and the Department of Archaeology in Sri Lanka have been working together in the Galle Harbour Project. Dutch ships were among the many wrecks that were located; of six Dutch ships known from the archives to have been wrecked in the Bay, four have been found. One, the *Barbestein*, dates from 1735; the others date from 1659 to 1663. It is planned in 1998 to begin excavation of the 1659 wreck of the *Avondster*.

2005 Risk Management: Shipwrecked Again? The Effect of the Tsunami on maritime Heritage in Sri Lanka. In *ICOM NEWS: Newsletter of the International Council of Museums* 58 (2):3. National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Fremantle.

Since the early 1990s, a Sri Lankan team of maritime archaeologists, historians, and museum curators has been doing research in the Bay of Galle and in the extensive archives in Sri Lanka and in the Netherlands. Underwater surveys have revealed sites dating from the 13th century to modern times. The Maritime Archaeological Unit and a conservation laboratory were formed in 2000 under the auspices of the Mutual Heritage Centre of Sri Lanka. After the wreck of the *Avondster* was discovered in 1993, monitoring of the wreck revealed that it was increasingly being exposed, and rescue excavations occurred from 2001 until the end of 2004. On December 26, 2004, only days after the final excavation, the tsunami destroyed the Maritime Archaeological Unit premises and the maritime museum. A substantial part of the historical collections was lost. The remaining unexcavated artifacts on the wreck are possibly now better preserved due to a thick layer of tsunami sediment.

Parthesius, Robert, Karen Millar, Somasiri Devendra, and Jeremy Green, eds.

2003 *Sri Lanka Maritime Archaeological Unit Report on the Avondster Project 2001–2002*. Amsterdams Historisch Museum, Amsterdam, and The Mutual Heritage Centre, Sri Lanka. <http://cf.hum.uva.nl/galle/avondster/Avondster_2001-02.pdf>.

The *Avondster* was originally an English ship, the *Blessing*, which the Dutch captured in 1653 and modified. The ship was wrecked in 1659 by accident while at anchor in Galle harbor, Sri Lanka. The Avondster Project focuses not only on the excavation and conservation of the wreck itself, but also on the training of Sri Lankan underwater archaeologists and conservators, archival research, the Sri Lankan-Dutch cultural heritage in Galle, and building a museum to display the excavated artifacts. The *Avondster* wreck is threatened by coastal erosion, the building of a seawall, and the channeling of storm drains, resulting in increased exposure of the wreck. The ship heeled on its starboard side toward the shore. The uppermost part of the wreck is probably the remains of the main deck. The stern section may be separated from the main portion of the wreck. Remains of rope and blocks were among the artifacts. Coils of rope were found. In the midship area adjacent to the galley, two incomplete timber barrels, yellow bricks from the galley structure, three or four stoneware Bellarmine jugs, animal bones, blue-decorated Chinese porcelain fragments, earthenware fragments, pieces of bottle glass, a pewter plate, a pewter spoon, a copper alloy spoon, and pieces of coal were found. The anchor and a cannon were raised in 2002. In the stern of the ship, medicine jars, two lice combs, and a porcelain vase were found. Other artifacts include the common martavan storage jars. The recovery of a human skull from an undisturbed 17th-century layer is a mystery. Conservation of the artifacts has mostly consisted of decontamination, deconcretion, and desalination.

Pasveer, Juliette

1998 Proposal for the Study of Human Skeletal Remains from the Abrolhos. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 118–121. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Freemantle.

Several human burials have been recovered since 1960 on Beacon Island. Research on the remains may provide much information about the victims: aspects of their daily life and social status in the homeland, living conditions on the *Batavia* prior to the wreck,

and the conditions and events on the islands during the ensuing months. A focus should be on health and hygiene, diet and social position, different occupations, and details of life on board such ships. The study of evidence of trauma will also provide historical details.

Petersen, Britt-Marie

1987 The Dutch Fluitship *Anna Maria*, Foundered in Dalarö Harbour in 1709. *The International Journal of Nautical Archaeology and Underwater Exploration* 16 (4): 293–304.

The ship was loaded with pine planks, dated through dendrochronology at 1654, 1707 to 1708, and 1688, and sawn in a mill in Härjedalen in northern Sweden. The wreck is one of the best preserved of older carvel-built ships in the Baltic Sea. The windlass was salvaged in 1960. Besides the lumber, the cargo included a keg of corrugated blister steel. Rigging elements include single and double blocks. Ceramics include unglazed pots, a pipkin, and a Bellarmine jug. The ship was built in Amsterdam in 1693 for a Swedish owner and was to be 130 to 132 feet in length and 28 feet wide.

Pit, Adriaan

1909 Oude Noord-Nederlandsche Majolika. *Oud-Holland* 27: 133–141.

A number of fragments of plates are considered to be the earliest known products of Northern Netherlands tin-glazed majolica production, but, although they were dredged up in the neighborhood of Delft, it is not certain that is their place of origin. The reverse sides of the plates have a lead glaze. In the Rijksmuseum is a small pot decorated with the arms of Haarlem and of Amsterdam and the date 1610; it was probably manufactured in Haarlem and resembles the majolica plate fragments that have been found. Illustrates photographs of a number of excavated majolica plate fragments. Written in Dutch.

Price, Richard, and Keith Muckleroy

1974 The Second Season of Work on the Kennemerland Site, 1973: An Interim Report. *The International Journal of Nautical Archaeology and Underwater Exploration* 3 (2): 257–268.

The wreck site, dating from 1664, produced 326 finds or groups of finds. Three sizes of cannon balls were found. About 3,000 lead shot were recovered. Several examples of lead shot joined together with coiled brass wire were also noted. An iron shot mold was found, together with dividers, glass bottles, Bellarmine jugs, and a complete red earthenware three-legged pipkin. A number of clay pipes was found, including one that is marked EB, the heel mark that appears most frequently in 17th-century contexts in recent excavations at the site of Fort Orange in America.

- 1977 The Kennemerland Site: The Third and Fourth Seasons of 1974 and 1976, an Interim Report. *The International Journal of Nautical Archaeology and Underwater Exploration* 6 (3): 187-218.

One concretion yielded barley husks on wood barrel staves. More than 100 lead ingots were raised. Artifacts included brass tobacco boxes, pewter pendants, brass bodkins, thimbles, pewter spoons, a pewter bottle top, lead bale seals, a brass spike, two pocket sun dials, peppercorns, a coil of rope, a horn comb, a leather scabbard, and an ivory knife handle.

- 1979 The Kennemerland Site: The Fifth Season, 1978, an Interim Report. *The International Journal of Nautical Archaeology and Underwater Exploration* 8 (4): 311-320.

Four more lead ingots were raised, in addition to the 114 lifted in 1976. Coins were found (including a Zeeland rosshilling). More than 30 pewter bottle tops were recovered in 1978. Pewter spoons included a finely decorated example, and a complete Bellarmine jug was recovered. Other objects (illustrated) include a silver buckle, two tortoise shell combs, four leather shoes, and two knobbed pewter objects.

Rackham, Bernard

- 1926 *Early Netherlands Maiolica*. Geoffrey Bles, Suffolk St., Pall Mall, London.

Illustrates fragment of a majolica plate decorated in a floral motif found in excavations in Amsterdam. Leaf-like decoration was current in Italy and is on a sherd found at Leeuwarden; it has a blue ground with darker blue foliage design. The form of a polychrome-decorated porringer found in Antwerp is clearly of Spanish derivation.

Redknap, Mark, and Edward Besley

- 1997 *Wreck de mer and Dispersed Wreck Sites: The case of the Ann Francis* (1583). In *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution*, ed. by Mark Redknap, 191-207. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology Society and Society for Post-Medieval Archaeology, Oxford.

A wreck identified as the *Ann Francis* belonging to a King's Lynn merchant dates from 1583 and is located on the south coast of Wales. A religious medallion from the wreck is similar in size to a brass medallion found on the *Vergulde Draeck* of 1656. A spigot or tap handle of copper alloy has the shape of a cockerel or hen and is similar to a 16th-century example found in the Moddermolenstraat in Amsterdam. Examples of linked lead shot with square holes are similar in weight to the linked shot from the *Kennemerland*.

Reinders, H. Reinder

- 1979 Mediaeval Ships: Recent Finds in the Netherlands. In *The Archaeology of Medieval Ships and Harbours in Northern Europe*, ed. by Sean McGrail, 35-43. National Maritime Museum, Greenwich, Archaeological Series No. 5, BAR International Series 66. B.A.R., Oxford.

About six fishing vessels called water ships have been excavated in the IJsselmeerpolders from the 16th and 17th centuries. They were built on a keel and have an S-shaped profile.

- 1981 Mud-works: Dredging the Port of Amsterdam in the 17th Century. *The International Journal of Nautical Archaeology and Underwater Exploration* 10 (3): 229-238.

The wrecks recovered from the IJsselmeerpolders are modest in size and less spectacular in cargoes than the East India Company wrecks. In 1972 and 1977 two nearly identical ships were excavated in Flevoland. On one ship was painted the number 33, while the other was inscribed with the date 1664 and the Arms of Amsterdam. They were mud barges used in the on-going dredging of the harbor of Amsterdam. One of them was among the boats built for the city by Jan Lucasz Root in 1664. The only remarkable artifacts within the barges were a pair of mud boots, while pipe bowls and pottery sherds suggest the boats broke adrift and sank in the Zuiderzee at the end of the 17th century or beginning of the 18th century.

- 1983 The Excavation and Salvage of a 16th Century "Beurtschip." *The International Journal of Nautical Archaeology and Underwater Exploration* 12 (4): 336-337.

In 1980 the wreck of a cargo ship sunk about 1620 was found during construction of a canal in Lelystad. In the front deck were two hatch openings, and the front hatch opened to a living space for the crew. The cooking area consisted of a wooden case with tiles. Another hatch opened to the rear hold, above which was a cabin at about deck level. In the front living quarters were cooking pots, a flint and steel, and a Bellarmine jug. Coins date from 1614 to 1619. The entire vessel will be exhibited at Lelystad in the Ketelhaven Museum.

- 1984 Excavations on the Former Seabed. In *Nautical Archaeology: Progress and Public Responsibility*, ed. by Susan B.M. Langley and Richard M. Unger, 155-175. BAR International Series 220. B.A.R., Oxford.

Since 1942 some 350 ships have been found in the drained Noordoostpolder. Since 1979 about 20 important wrecks have been protected *in situ*. Inland cargo vessels of the 16th century each had a full bow

and a sharp stern, leeboards, and round hatches. Merchant vessels of the 17th and 18th centuries include one on display at Ketelhaven and a larger one preserved *in situ*.

1985 Recent Development in Ship and Boat Archaeology in the Netherlands. In *Postmedieval Boat and Ship Archaeology*, ed. by Carl Olof Cederlund, 399-412. BAR International Series 256. B.A.R., Oxford.

During the past four years there has been a greater interest in the protection of wreck sites in the IJsselmeerpolders. The investigation of water ships has been one of the leading projects, with at least 12 examples found, mostly from the period 1500 to 1650. These ships each had a full bow and a V-shaped stern. Cargo vessels, however, were flat-bottomed and blunt fore and aft, except for several ships from the 16th century that, like the water ship, had each a full bow and a V-shaped stern. One typical 16th-century cargo vessel was found during canal construction on Lelystad in 1980; it carried scythes and a case of several hundred chicken eggs, three new bronze pots, a barrel holding about 100 pewter objects, and three leather bags. Coins indicate that it sank around 1620. The museum at Ketelhaven has a merchant ship of about 1650 and a mud barge of about 1675 in its collection. Preserved ships in the IJsselmeerpolders include water ships of about 1550, 1575, 1600, and 1625 and cargo vessels of about 1550, 1625, and 1785, all in Zuidelijk Flevoland. Wrecks excavated between 1979 and 1982 include water ships of about 1500, 1525, and 1575 and cargo vessels of about 1625, 1700, and 1750.

Reinders, H. Reinder, H. van Veen, K. Vlierman, and P.B. Zwiers

1977(?) *Het wrak van een 16e eeuwse visserschip in Flevoland*. Opgravingsverslag 1. Rijksdienst voor de IJsselmeerpolders, Smedinghuis, Lelystad.

The remains of a fishing boat, a water ship, were found in 1971 in Oostelijk Flevoland. The remains were carefully measured and recorded. The vessel was built with remarkable strength at the level of the deck and gangway. The holds in the bow and the stern contained many boulders of various sizes and weights, presumably ballast. No leeboards or evidence of leeboards was found. The living quarters on the ship were behind the fish-well. Soil survey results and the date 1561 on some of the tiles in the open fire place indicate the vessel sank in the second half of the 16th century. More than 200 artifacts were recovered. Illustrates with drawings and black-and-white photographs two stoneware jugs, a red earthenware footed dish, a red earthenware skillet, a three-legged red earthenware cooking pot, a complete sword, a halberd, a hammer, a dagger scabbard, a spigot, and rigging blocks. Written in Dutch with English summary.

1984 *Flevobericht nr. 235: vier werkschuiten uit de zeventiende eeuw*. Rijksdienst voor de IJsselmeerpolders, Lelystad.

A mud barge was found that stratigraphy indicates was sunk at the end of the 17th century or early in the 18th century. A knife and scabbard, a green glass bottle, a tobacco box, a padlock, two wooden scoops, and a pair of mud boots were found. Another mud barge is dated 1664. A "punter" was discovered that, based on the associated pipe bowls, marbles, and ceramics, dates from around 1650. It also contained a 1620 coin and a toy gun. Written in Dutch with English summary.

Renaud, J.G.N.

1972(?) *Rhodesteyn, schatkamer der middeleeuwse ceramiek*. *Mededelingenblad van vrienden van de Nederlandse ceramiek*, 71.

The small museum at Rhodesteyn, Neerlangbroek, Utrecht, contains the extensive Van Beuningen collection of medieval ceramics. H.J.E. van Beuningen started the collection after World War II, when large areas of Rotterdam were being excavated prior to reconstruction. Illustrates with black-and-white photographs a one-handled yellow-bodied and green-glazed drinking mug and another red-bodied and lead-glazed example with rouletted decoration dating about 1500 found in Rotterdam. Also illustrates a small 16th-century polychrome decorated majolica two-handed jug, a 17th-century coin bank in the form of a chicken made of yellow clay with green-glazed wings and a red comb and eyes, and two Weser ware red-bodied pots covered with yellow slip and decorated with green and orange stipples from the first half of the 17th century, all found in Delft. The collection also reflects the import of ceramics from France by 1600. During the clearing work in Rotterdam was found a plate with the inscription "Sans Dieu Nul ne Veut." It is yellow-bodied covered with a red slip and then a yellow slip over the red slip; the decoration was incised to the red slip but not through it. Then it was lead glazed. A large fragment of a red earthenware fire-cover was found at Krabbendijke on land that was submerged in 1530. Written in Dutch with English summary.

Renaud, W.F., and H.J.E. van Beuningen

1973 *Verdraaid goed gedraaid: verzameling H.J.E. van Beuningen*. Museum Boymans-van Beuningen, Rotterdam.

The Van Beuningen collection includes more than 5,000 examples of medieval and later ceramics that were used in Dutch households, taverns, and monasteries. The beginning of the collection was the discovery of artifacts in Rotterdam after the bombing in May 1940 opened old privies, foundations, and cellars. Illustrates from the first half of the 16th century a stoneware jug from Aken found at

Zaltbommel and a red earthenware lead-glazed chamber pot found in Rotterdam, in addition to a stoneware conical beaker or mug from Raeren with a pewter lid marked with a Leiden mark (crossed keys) found in Rotterdam. Also illustrates a red earthenware Weser ware plate excavated at Delft, a white earthenware lead-glazed Weser ware three-legged pipkin excavated in Rotterdam, and a polychrome-decorated Dutch majolica porringer excavated at De Rijp, all from the first half of the 17th century, a red earthenware slip-decorated plate from Germany with the inscribed date 1621 found in North Holland, and a red earthenware slip-decorated pipkin bearing the date 1663 found in dredging at Schermerhorn. Also illustrates a white earthenware spouted jug with yellow and manganese lead glaze dating from the second half of the 16th century found at Edam. Also illustrates a slip-decorated red earthenware plate from the Lower Rhine with the date 1750 found at Oude Plantage, Rotterdam. Also illustrates a slip-decorated red earthenware plate dated 1623, a red earthenware slip-decorated firecover dated 1633, and a red earthenware slip-decorated porringer all found at De Rijp. From the first half of the 17th century also illustrates a slip-decorated red earthenware porringer found at Delft, a red earthenware coin bank in the form of a chicken with a yellow comb found in Delft, a tin-glazed salt cellar found in Delft, a green-glazed white earthenware basket-shaped pot with handle found in Delft, and a lead-glazed white earthenware candle stick found in Enkhuizen. From the second half of the 16th century also illustrates a small polychrome decorated majolica two-handled jug and a wood and brass candle stick both found in Delft and a polychrome decorated majolica plate found in Bergen op Zoom. From Rotterdam illustrates excavated silver and pewter spoons from the 16th and 17th centuries. Written in Dutch.

Rijksdienst voor de IJsselmeerpolders

1982 *Boeiend verleden: geschiedenis van het Zuiderzeegebied*. Broompers drukkerijen bv, Meppel.

Coins are occasionally found. During the demolition of an old house on the former island of Urk, five gold and thirteen silver coins were found which must have been hidden between 1573 and 1576. A half crown, or *daalder* (illustrated), from 1606 was found in the wreck of a ship wrecked about 1610. Illustrates in color photographs shoes, boots, green and brown-glazed floor tiles, red earthenware including a slip decorated plate dated 1630, green-glazed white earthenware, tin-glazed tiles, and metal cooking utensils including a pot and a kettle from wrecks. Also illustrates excavated wreck sites, including a wreck that contained a load of shells. Other cargoes that have been found in ships are building materials (pantiles, bricks, paving tiles,

blocks of sandstone), dike-building material (stone), foodstuffs (fish, grain, wheat, buckwheat), and ships' timbers. There are also cargoes of 150 unfinished brass buckets, of iron-bound chests containing about 120 unused pitsaws missing their handles together with about an equal number of adzes all previously used but without handles, of iron bars, of swords with bone handles and iron hand guards, and of rolls of leather. Mud barges including one dated 1664 were found. Many wooden wrecks are being preserved for display. In 1975 and 1976 in Lelystad were found two wrecks, of which one was from the first half of the 18th century (ca. 1735). With it was a quantity of *duit* coins and pennies and a handsome knife scabbard. In 1980 in Lelystad was found the wreck of a Dutch freighter sunk about 1620. Illustrates a reconstruction drawing of this vessel. The hull, 18 m long and 5 m broad, is of the type of ship that often appeared in old prints of Dutch river and harbor views. The excavation of the hull revealed the still-intact arrangement of the interior. In the bow was the living space with a hearth and bedstead, while in the stern portion of the hold was a second living area. A large cargo was not found, but there was a quantity of various goods. There was a number of packaged scythes, a small lot of brand new cooking pots, and even a wooden chest with hundreds of eggs still packed in straw. A wooden barrel was full of pewter objects such as wine jugs, plates, salt cellars, candle sticks, and beakers. In the summer of 1977 was found the wreck of a half-burned-out ship with several cannon on board, while a number of muskets were also found. The most recent coin in the wreck dates 1670; perhaps the ship sank in 1672. Written in Dutch.

Ringenier, Hans, and Michiel Bartels

2000 *Arme luizen achter de huizen: archeologisch onderzoek aan de Papenstraat*. Archeologie Deventer, Deventer. February. <<http://www.deventer.nl/Txt/Cultuur-Archeologie-Papenstraat.html>>.

A number of storehouses in the Papenstraat were ecclesiastical property in the 16th century. The name *papen*, used from the Roman Catholic through the Protestant Reformation periods, refers to the many ecclesiastical functionaries who lived here. After the Reformation to the end of the 16th century there were cloisters and the chapter house of Sint Lebuïnuskerk. A majolica maker from Delft established himself here in 1626 and, with a work room in the old cloister, began making pottery. This was a time of rapid development for small-scale industries in Deventer. Besides workplaces, houses for workers were also built, but they were badly built. Remains of wooden houses are not found in excavations, but there are many small brick walls exposed that belonged to structures from after 1500. The oldest walls, which can be dated in the late 15th or early

16th centuries, were well built of "new" or first-fired brick. From the period 1575 to 1675 many foundations are found. There are two small cellars each with laid floors remaining. One of the cellars contains a small oven or fireplace. Among the remains was found green metal slag that was the waste from a metal working trade possibly established here in the 17th century. Pig bones also were among the rubbish and were colored entirely green. In the waste of the majolica or "Delfts" pottery little was found, but there are sherds of polychrome decorated majolica plates of that period. Under the pavement of a street near the Muggesplein were found two trash pits containing a large amount of 18th- and 19th-century earthenware. First of all under the trash were found remains of a red earthenware cooking pot. This in itself is not special, but it provides evidence of the poor workers who once lived near here. In addition there are fragments of a pretty red earthenware plate from Münster dating from the beginning of the 18th century. Finally there is also a nice early 17th-century *kraakporselein* plate from a trash pit. It is finely painted Wan Li porcelain from China. The trash from the pits is presumably from the poor workers who lived here; it is the ultimate in simplicity with no evidence of luxury. An exception is the porcelain plate. Written in Dutch.

Roth, Rudi

1995 The Reporting of Ordnance: The Guns from the *Mauritius*, a Casebook Study. In *The Archaeology of Ships of War*, ed. by Mensun Bound, 120-129. The International Maritime Archaeology Series Volume 1, 1995. University of Oxford.

In 1986 underwater excavations revealed nine bronze and 19 iron guns from the East India ship *Mauritius*, which sank in 1609. Each of the Dutch cannons was the only known example from four Dutch brass founders. Five of the bronze guns (all culverins) and seven of the iron guns have been carefully measured. Seven iron guns are of English manufacture, by at least three different founders. Two culverins dated 1587 are the work of Richard and John Phillips. A demi-culverin is the work of Sir Thomas Waller. These guns were British surplus sold or transferred to the Dutch after 1604 when England made peace with Spain. Dutch ships were extensively armed with English iron guns, thus explaining the predominance of apparently English iron guns on the *Batavia*, which sank in 1629. Illustrates the cannons with detailed measured drawings.

Ruempol, Alma, and Alexandra G.A. van Dongen
1991 *Pre-industrial Utensils: 1150-1800*. De Bataafsche Leeuw, Amsterdam/Museum Boymans-van Beuningen, Rotterdam.
Comprehensive guide to the Museum collection of

urban household items (mostly for the kitchen and table), with attention to their form, use, and manufacture. The objects are classified according to their presumed functions and are arranged by period. The categories for the separate 16th-, 17th-, and 18th-century periods include storage, food preparation, cooking, eating, glass, cutlery, pouring, drinking, lighting, heating, and toilet. Thousands of artifacts, many of them archaeological, are illustrated in black-and-white photographs.

Schaefer, Richard G.

1994 A Typology of Seventeenth-Century Dutch Ceramics and its Implications for American Historical Archaeology. Ph.D. dissertation, Department of American Civilization, University of Pennsylvania. Published in 1998 as BAR International Series 702. B.A.R., Oxford.

Complete typology, discussion, and interpretation of Dutch lead-glazed earthenware utility wares, also including stoneware and faience salve pots and albarelli. The typology is based on 17th-century ceramic assemblages from Prins Hendrikkade 36 and the Taanstraat in Amsterdam and from deposits excavated in Bergen op Zoom, North Brabant. Illustrates with accurate drawings examples of each ceramic vessel form and type.

Scholten, Frits T.

1993 *The Edwin van Drecht Collection: Dutch Majolica & Delftware, 1550-1700*. CIP-Gegevens Koninklijke Bibliotheek, Den Haag.
Recent studies based on archaeological discoveries have increased the awareness of the vast range of Netherlandish ceramics in the 16th and 17th centuries. Such objects have rarely found their way into private collections, and in this respect the Van Drecht Collection is unique. Illustrates in black-and-white and color examples of Dutch majolica and notes similar examples reported elsewhere and excavated in Leiden, Bergen op Zoom, Rotterdam, Leeuwarden, Haarlem, De Rijp, Deventer, Nijmegen, and Amsterdam. Also illustrates examples of faience similar to other examples reported from Amsterdam, Delft, Haarlem, Deventer, The Hague, Leiderdorp (kiln waste), Rotterdam, and the Waarder Polder (near Haarlem). A faience plate with Chinese decoration matches examples excavated on the Hooigracht in Haarlem, consisting of kiln waste attributed to Gerrit Willemsen Verstraeten. Illustrates a majolica porringer found in Delft and a white tin-glazed candle stick found in Delft on the site of De Porceleynse Fles. Also illustrates a faience plate decorated in blue and purple with a landscape found in Haarlem, a faience plate waster found in Delft, and a faience plate painted with a fruit still life also found in Delft.

Schrire, Carmel

1995 *Digging Through Darkness: Chronicles of an Archaeologist*. University Press of Virginia, Charlottesville and London.

Wrecks of East India Company ships confirm the practice of using bricks as ballast for outbound ships, replacing the bricks with pepper, cowries, textiles, and porcelain for the return voyage. Mounds of cowries were found on the wreckage of the *Oosterland* in Table Bay, sunk in 1697. Slate pencils found in a colonial Dutch site in South Africa are as much like those from 17th-century East India Company shipwrecks as they are like the slate pencils used in the Netherlands today. The various stamps and seals on the Bellarmine jugs found on the wreck of the *Batavia* of 1629 show that they do not form a chronological sequence of styles.

Schröder, Birgit, Robert Neyland, and Mason McDaniel

1995 Excavation of a Late 17th-Century Dutch Freighter. In *Underwater Proceedings from the Society for Historical Archaeology Conference, Washington, D.C., 1995*, ed. by Paul Forsythe Johnston, 154–158. Published by the Society for Historical Archaeology.

In 1993 remains of a Zuiderzee freighter were excavated. It had sunk in relatively shallow water about 1700, or between 1692 and 1710. The bow area contained shoes, clay pipes, an adze, a knife, lead tokens, and other objects. In the stern were found two ceramic vessels: a cooking pot contained tar, while a green-glazed storage pot had been re-used perhaps as a chamber pot. A tobacco pipe and a ceramic bowl are decorated with the Roman Catholic IHS monogram. Illustrates lead tokens and a cast-iron cooking pot.

Sheaf, Colin, and Richard Kilburn

1988 *The Hatcher Porcelain Cargoes: The Complete Record*. Phaidon-Christie's Limited, Oxford.

Description of the contents of two shipwrecks in the South China Seas recovered by Captain Michael Hatcher. The ships were a Chinese junk sunk between 1643 and 1646 and the *Geldermalsen* sunk in 1752. From the junk were recovered some 23,000 pieces of porcelain, and from the *Geldermalsen* are 140,000 pieces of porcelain and 125 gold ingots. Illustrates many of these objects in color and black-and-white photographs.

Simmons, Joe J., III

1997 *Those Vulgar Tubes: External Sanitary Accommodations aboard European Ships of the Fifteenth through Seventeenth Centuries*. Second Edition. Texas A&M University Press, College Station; Chatham Publishing, London. First published in 1991.

The *Amsterdam* was wrecked in 1749 perhaps

because the crew was weakened from prolonged storm exposure in the North Sea. Chamber pots are often found at wreck sites, such as that of the *Hollandia* sunk in 1743. In two areas of the wreck of the *Kennemerland* (1664) a layer of matted organic remains including wood splinters, patches of wood tar, resin, coal, seeds peppercorns, pieces of leather, fragments of oakum and rope, and other artifacts probably originated in the bilges of the ship. When recovered, the sample was said to have smelt strongly like the contents of any wooden ship's bilges.

Smiesing, P.K., and J.P. Brinkerink

1988 *Onder de rook van Utrecht: Twee eeuwen tabakspijpenmakerij in Lauwerecht (1600–1800)*. Stichtse Historische Reeks 14. De Walburg Pers, Zutphen.

In order to satisfy the growing demand for tobacco pipes in the 17th century, pipe makers established themselves in the large cities. The potteries in Lauwerecht, a jurisdiction of the Vecht outside of and north of the city Utrecht, offered opportunities to the pipe makers. Thus, there arose here through close cooperation with the potters a unique branch of the industry. In 1662 the Utrecht pipe makers addressed the town council with the request to restrict the sale of pipes in the city. From then on nobody was permitted to sell pipes in the city individually or by auction, upon penalty of forfeiture of the goods and a severe fine. Moreover, only the merchants from outside the city were permitted on the prescribed market day to offer tobacco pipes for sale. The tobacco pipe, because of its changing form and the various marks, is extremely useful to the modern archaeologist for dating. The characteristics and descriptions of the products of Utrecht pipe makers provide a means of identifying excavated examples. During construction work in old areas and from plowing in the country, many utility earthenware items from early times come to the surface. A considerable number of these consist of fragments of clay tobacco pipes. The extremely fragile pipes were, mostly after a short period of use in the most diverse places, dumped into privies. When the privies became full their contents were used as manure and spread over the land. Around 1600 farmers in the area became increasingly interested in this use of human waste and house refuse from the city. The farmers of Oostveen, the later Blauwkapel, themselves hauled sheep dung and ashes from the Utrecht dumps. Also, Utrecht manure and house refuse were used for the improvement of the agricultural lands in Doorn and Langbroek. Consequently, in the fields in these regions one can still find pipe bowls of Utrecht make. The best opportunities to survey former pipe production are from the discoveries of so-called "pipe dumps." In the summer of 1985 on the Kortedijk in Gorinchem, after the demo-

lition of several old houses, such a deposit was discovered in the cellar of a pipe maker. The cellar appeared to be entirely filled with pieces of clay and thousands of fragments of broken pipes and wasters. The Friederich dating method applied only to Dutch pipes from the 17th century. Discoveries of complete Utrecht pipes give an idea of the size of the 17th-century Utrecht tobacco pipe. A complete pipe from about 1625, from the edge of the bowl to the mouthpiece, has a measured length of 25 cm. Complete glazed and marked pipes of the period from 1630 to 1650 have lengths of 38 to 40 cm. Moreover, the stem length of the pipe can be derived from the thickness of the stem. The FVDV-marked pipes of Filip van der Valck have very thick stems. After the 17th century Gouda pipe makers, especially, made pipes of a different type and of differing bowl size. The earliest pipes found in Utrecht appear to be of English origin and to date around 1600. In the second quarter of the 17th century most pipe makers in Lauwerecht marked only their initials on their pipes. The marks that have been found indicate that in the second quarter of the 17th century in Lauwerecht a certain ten pipe makers were active. The marked pipes were those of the best quality. After 1670 the pipes made in Lauwerecht came in so many different shapes that there is no more a specifically recognizable Utrecht model. The late-17th-century pipe with the thick wall and the heavy stem was made for a considerable time in Lauwerecht in the beginning of the 18th century before the pipe with the thin-walled funnel-shaped bowl made its entrance. The Utrecht pipe makers from the middle of the 18th century chose the "Vecht swan" as the mark on their pipes. The Versluijs family marked their pipes in Lauwerecht for the entire 18th century. In the second quarter of the 18th century Claasje Versluijs marked her pipes with a crowned CVS near the base of the pipe bowl. "Hendrik Versluijs" marked his pipes with his entire name printed on the side of the bowl. A raised rose consisting of five to seven dots on both sides of the pipe bowl became not a mark, but rather embellishment of the unglazed bowl. This type of relief decoration came to be used in many variations on Utrecht pipes. Written in Dutch.

Sotheby Parke Bernet & Co.

1977 *Catalogue of Oriental Ceramics and Works of Art: Day of Sale, Tuesday, 15th March, 1977*. Sotheby Parke Bernet & Co., London.

Catalogue of ceramics including porcelain salvaged from the wreck of the Dutch East India ship *De Witte Leeuw* sunk in 1613. Illustrates examples.

Spitzers, Thomas

1997 *Houten huizen aan de middeleeuwse Polstraat*. Archeologie Deventer, Deventer. <<http://www.deventer.nl/Txt/Cultuur-Archeologie-Papenstraat.html>>.

It is clear that since the 15th and 16th centuries all houses, mostly provided with storage cellars, have been built out of brick. The beginning of the cesspit, or privy, also dates from this period. The inhabitants conveyed their household waste and sewage to separate privies below ground level behind the houses. These privies were built of bricks with sand in the seams between them to allow drainage. Until then the privy was a wooden box within the rear yard. Written in Dutch.

2003 Olst-Wijhe, Olst-Averbergen, juni en oktober: Jaaroverzicht 2002. In *Overijssels Erfgoed: Archeologische en Bouwhistorische Kroniek 2002*, p. 42. Stichting Promotie Archeologie, Zwolle.

Construction monitoring was performed on the grounds of Averbergen, a *havezate*, or country house, abandoned around 1970. A large number of soft brick fragments and single tile fragments indicate that a building at least partly built of brick stood in the vicinity by 1500. A 15th-century iron harness or armor buckle was also found. The brick predecessor of the existing late 17th-century mansion may have been to the west of the site. A double channel that was filled in the 17th century may have enclosed the late medieval house site. Written in Dutch.

Stanbury, Myra

1998 *Land Archaeology in the Houtman Abrolhos*. In *The ANCODS Colloquium: Papers Presented at the Australia-Netherlands Colloquium on Maritime Archaeology and Maritime History*, ed. by Jeremy Green, Myra Stanbury, and Femme Gaastra, 101-117. Special Publication No. 3, Australian National Centre of Excellence for Maritime Archaeology. Western Australian Maritime Museum, Fremantle.

In 1840 Lieutenant John Lort Stokes of the British survey vessel *HMS Beagle* discovered ship's wreckage on Pelsaert Island and concluded it was remains of the *Batavia*, while on a nearby island he found a four-pounder breech-loading swivel gun marked "ZVOC" and "182A," glass bottles, clay pipes, and Dutch coins dated 1707 and 1720. He named the island Gun Island and concluded the artifacts were from the 1727 wreck of the *Zeewijck*. The bottles had been placed in rows in the sand, as if to collect water. The site of the *Zeewijck* encampment was also reported in 1879 in a survey, and coins dated 1720 and 1722 were found. Many other Dutch artifacts were recovered in the 1890s from Gun Island by guano miners. A skeleton was found on Beacon Island in 1960 associated with a trumpet garland inscribed with the date 1628 and the maker's name, Conrat Droschel. The first land excavations were commenced in 1967 by the Western Australian Maritime Museum, but no records of the work are known. In 1978 excavations occurred at the site of

the *Zeewijck* encampment. In 1992 systematic testing was conducted on Beacon Island, but prior to undertaking any further excavations there it is essential to consolidate all the existing historical and archaeological information. An archaeological survey of the island also should precede any further excavation.

Stanbury, Myra, comp.

1974 *Batavia Catalogue*. Department of Maritime Archaeology, Western Australian Museum, Perth, W.A. 6000.

Collection of drawings of artifacts recovered from the Dutch East India Company ship *Batavia*, wrecked in 1629. Illustrates Rhenish Westerwald and Bellarmine jugs, lead-glazed earthenware, decorated majolica albarelli, ivory knife handles, glassware, wood, silver, cannon, an astrolabe, pewter, lead bale seals, and lead and iron shot. Brass utensils include a vent pick, a spigot, dividers, a book clasp, seals, a nested set of apothecaries' weights, and other objects.

Steffy, J. Richard

1994 *Wooden Ship Building and the Interpretation of Shipwrecks*. Texas A&M University Press, College Station, Texas.

A Dutch freighter, once used to carry people and produce around the Zuiderzee, was discovered and excavated near Lelystad. It sank about 1620. It is built almost entirely of oak, and the hull has a wide, flat bottom with gently curving sides. The hull length is 18.25 m. The hull originally drew 5 Amsterdam feet of water. Later the vessel draft was increased to 6 feet. The broad rudder could not have been used in heavy seas. The original keelson was made from a single, 12-meter-long oak timber. The ship had a single mast. There was limited shelter for crew and passengers.

Sténuit, Robert

1974 Early Relics of the VOC trade from Shetland: The Wreck of the Flute *Lastdragger* Lost off Yell, 1653. *The International Journal of Nautical Archaeology and Underwater Exploration* 3 (2): 213-256.

The East India Company acquired this ship in 1648. The wreck was explored beginning in 1971. Illustrates a copper spoon, a spigot, wire-linked musket balls, a pocket sun watch, dividers, a sounding lead, marked clay pipes, coins, Bellarmine jug fragments, pewter bottle necks and caps, knife handles, a signet ring, and other objects.

1975 The Treasure of Porto Santo. *National Geographic* 148 (2): 260-275.

Report on the discovery and exploration of the wreck of the East India Company ship *Slot ter Hooge*, sunk in 1724 in the Madeira Islands. Illustrates in color porcelain, clay pipes, spoons, a fork, brass

spigots, nested apothecaries' weights, a mortar and pestle, brass tobacco box lids, and other objects.

1977 The Wreck of the *Curaçao*, a Dutch Warship Lost off Shetland in 1729 While Convoying a Fleet of Returning East Indiamen: An Interim Report. *The International Journal of Nautical Archaeology and Underwater Exploration* 6 (2): 101-126.

The wreck was located in 1972. The wreckage lies in the bottom of three vertical canyons. Illustrates dividers, breech-loading cannon, gun parts, pewter spoons and a fork, a copper ladle, a marked pipe bowl, a brass candle stick, a French silver spoon, monetary weights, and a fragment of printed paper.

1978 The Sunken Treasure of St. Helena. *National Geographic* 154 (4): 562-576.

Description of the discovery and exploration of the East India Company ship *De Witte Leeuw* sunk in 1613 in its return voyage from the East Indies. Illustrates in color cannon, a brass oil lamp, porcelain, and a silver whistle.

Swimberghe, Piet, and Jean Verbeemen

1983 Archeologisch onderzoek op het terrain Van der Ghote te Brugge in 1982. In *Jaarboek 1982: Stad Brugge Stedelijk Musea*, 173-204. Walleyndruk pvba, Brugge.

During 1982 two trash pits were excavated at the site of the Van der Ghote brewery in Bruges. One trash pit built of bricks (29 by 15 by 8 cm in size) has the form of a quarter circle. The original form was perhaps a complete circle, but this could not be confirmed. It was used from the 16th through the 18th centuries and contained many pieces of ceramics, glass, shoes, bones, and other food remains. The ceramics were mainly earthenware with or without white slip decoration, including sgraffito-decorated wares. There were also pieces of yellow earthenware, tin-glazed earthenware, porcelain, stoneware, small figures made of pipe clay, a large number of pipes, a bronze buckle, and a pewter spoon. Most of the material dates from the 17th and 18th centuries. The three fragments of plates with sgraffito decoration have a flat bottom and slanting, heavier sides. The fronts are covered with lead glaze. One of the plates is completely covered with green glaze on the front and decorated with two incised concentric circles. An edge fragment of a majolica plate would date from the end of the 16th or the beginning of the 17th century. It has a motif that rarely appears. The edge is decorated with a yellow frieze on which radial slanting lines run (blue alternating with orange). This decoration is entirely between concentric circles. It is quite possible that this majolica is from the Southern Netherlands, perhaps an Antwerp or even a local product. This trash pit also contained majolica with Chinese motifs. The pipes

include a pipe with a bulbous bowl possibly made in Gouda and dating from 1641 to 1645 according to the Friedrich formula. The heel is marked "IDW," and the stem has fleur de lis marks. A pipe of about 1715 has a Gouda heel mark consisting of two crossed keys below a crown, from the arms of Leiden. A third pipe has a crowned "DR" heel mark, for Dirk Ronse of Gouda, and dates from about 1735 to 1740. The "DR" is a monogram with the "R" inside the larger "D". A pipe with a crowned "CD" heel mark is from Gouda, dates from 1680 or 1685 to 1706, and was made by Cornelius Direxse van Wijk. The second pit, built of brick in rectangular form, contained mostly 18th-century ceramics. There were large amounts of red earthenware and porcelain as well as some faience, probably all made in Delft, the wooden sole of a shoe, and other objects. There were also many food remains, for example garbage bones and shells of mussels, oysters, and eggs. Includes a catalogue of the artifacts. Illustrates with line drawings and black-and-white photographs the various ceramics and bottles. Written in Dutch.

ter Avest, Hugo P., ed.

1992(?) *Opmerkelijk afval: vondsten uit een 17de eeuwse beerput in Harlingen*. Gemeentemuseum Het Hannemahuis, Harlingen.

Report and collection of articles on excavation of a 17th-century privy. Thoroughly illustrates in drawings and both black-and-white and color photographs the red and yellow earthenwares, stoneware, majolica, faience, clay pipes, glassware, metal objects, wood objects, and cereal and faunal remains. A faunal analysis is included. Written in Dutch.

ter Molen, J.R., A.P.E. Ruempol, and Alexandra G.A. van Dongen, eds.

1986 *Huisraad van een molenaarsweduwe: Gebruiksvoorwerpen uit een 16de-eeuwse boedelinventaris*. Museum Boymans-van Beuningen, Rotterdam/De Bataafsche Leeuw, Amsterdam.

Objects have been catalogued that relate to objects mentioned in the inventory of the estate of Oude Maria Dircksdochter. Illustrates from excavations in Rotterdam a Raeren stoneware jug of ca. 1580, another one dated 1570, a Raeren mug from about 1525, a 16th-century Raeren jug with a pewter lid, a knife with a brass and horn handle, a 16th-century pewter plate, a pewter salt cellar with folding lid, and 16th-century stone spindle whorls. Also illustrates from excavations in Reimerswaal a stoneware jug made in Cologne about 1550, a 16th-century earthenware milk jug, an earthenware skillet made about 1500, and a three-legged pipkin of about 1575 to 1600. Also illustrates from excavations in Delft a stoneware jug made at Raeren about 1600, another stoneware jug made at Cologne about 1550,

two plain 16th-century glass beakers, a majolica plate made in 1580, a plain earthenware plate made about 1525, a wooden plate made about 1600, an earthenware bowl of about 1500, and a wood and brass candle stick. Also illustrates from excavations in Leiden a pewter tankard from the 16th century, and another from about 1600. Also illustrates from Amsterdam excavations a pair of brass spigots from about 1600, a two-tined fork with bone handle of about 1600, and a pair of brass or bronze decorated key rings of about 1575. Also illustrates a pewter spoon of about 1550 found at Leede. Also illustrates a decorated majolica plate of about 1575 and a 16th-century needle case and thimble found at Middelburg. Also illustrates an earthenware fire-cover of about 1600 found at Edam. Also illustrates a small 16th-century lace bobbin found at Utrecht. Also illustrates a 16th-century bone comb found at Haarlem. Also illustrates a 16th-century pewter ear spoon and a brass tongue scraper found at Oud Krabbendijke. Written in Dutch.

Thijssen, J.R.A.M., ed.

1981 *Van huisvuil tot museumstuk: vondsten uit een afvalput aan de Nonnenstraat*. Nijmeegs Museum Commanderie van Sint Jan, Nijmegen.

In 1980 an almost intact well was discovered south of the Nonnenstraat in Nijmegen during construction-related archaeological rescue work. The well was built of bricks between which were laid pieces of slate. The well was abandoned shortly before 1750, but the earliest deposits of artifacts in the well date from the last quarter of the 16th century. The pipes date from about 1635 to 1725. Illustrates decorated clay pipe stems and bowl heel marks, a wide variety of red earthenware vessels, green-glazed white bodied wares, Dutch majolica and faience plates, tin-glazed wall tiles, Raeren and Westerwald stoneware, and glass *roemers* and baluster-stemmed wine glasses. Other photographs illustrate beer glasses and small bottles. Written in Dutch.

Thijssen, Jan

1985. De analyse van 17e- en 18e-eeuws aardewerk uit vondstcomplexen van het Waterloooplein te Amsterdam. *New Netherland Studies: Tijdschrift van de Koninklijke Nederlandse Oudheidkundige Bond*, Jaargang 84, nummer 2/3, Juni, 113-119.

Description of ceramics from the excavation in 1981 and 1982 of two blocks of houses at the Waterloooplein in Amsterdam, in an area of which that was developed beginning in the 1590s. Much of the population was Jewish. The privies behind the houses contained an enormous quantity of artifacts. The relative amounts of various ceramics by type are compared by weight. Comparisons are also made between this material and material exca-

vated in Nijmegen. It is clear that the presence of Chinese porcelain in the 17th and 18th centuries is a criterion for determining social status. Includes tables of ceramic data. Written in Dutch with English summary.

- 1993 Status and the Weighing of Pottery. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 119–124. Stichting Promotie Archeologie, Zwolle.

Further recognition of the fact that archaeological assemblages allow for economic interpretations is needed. In Nijmegen material was retrieved between 1979 and 1989 from more than 100 privies associated with identifiable houses. Further interesting work occurred on the Piersonstraat in 1990 and 1991. Quantification of the ceramics is by weight and by minimum number of specimens (MNS). Similar research was done with the material from the privies from the Waterlooplein excavations in Amsterdam, where two blocks of houses were excavated. These are shown on the 1625 map as an area separated from the River Amstel by timber yards. The population was predominantly Jewish. Privies at the Waterlooplein reveal that Chinese porcelain became popular in varying amounts from the second quarter of the 18th century onwards, while in Nijmegen its popularity was delayed until the middle 18th century. It is clear that the presence of porcelain in the 17th and 18th centuries is a criterion of social status. High percentages of stoneware in domestic waste also reflect a comparatively high social status before 1500. In addition, the presence of imported Italian faience is an indication of wealth both in Nijmegen and at the Waterlooplein. Includes tables of ceramic data.

Thijssen, Jan, Wim de Mul, Jaap Kottman, Frits Laarman, Louis Swinkels, and Olav Goubitz

- 1991 *Tot de bodem uitgezocht: glas en ceramiek uit een beerput van "Hof van Batenburg" te Nijmegen, 1375–1850*. Stichting Stadsarcheologie Nijmegen, Nijmegen.

The period after 1525, when Dirk van Bronchorst purchased the "Hof," to 1612 is the period stoneware declined in use. The usually anticipated types such as beer jugs from Raeren and salt-glazed funnel beakers (mugs) with appliqués from Siegburg are conspicuously absent. Stoneware was not present during the second half of the 16th century. Earthenware of other types is often less closely datable than the stoneware. The most persistent types of artifacts date from the beginning of the 17th century. Luxury goods in the form of rare Chinese porcelain, Italian faience, and particularly glass and large stoneware jugs are difficult to attribute other than as the possessions of burgomaster Johan Kelffken. This is also true for some of the glass and

possibly a part of the exclusive faunal material. Yellow-glazed paving tiles would have formed a colorful floor when used with green and/or brown examples. They date from the late 16th or 17th centuries. A number of Nijmegen houses still have brick floors. An entire collection of pipe fragments from around 1750, from the time that Johan Michiel Roukens lived in the storehouse, is remarkable. Illustrates a complete long-stemmed 18th-century clay pipe with on its heel the mark of M. Velder of Gouda, representing a small round table with three tea cups. Includes analyses of faunal remains, a woman's shoe from the first half of the 18th century, and various brushes. The glassware includes examples of *façon de Venise* glass. Illustrates many examples of red and white earthenware, stoneware, majolica, faience, porcelain, creamware, and pearlware. Written in Dutch.

Throckmorton, Peter

- 1990 *The World's Worst Investment: The Economics of Treasure Hunting with Real Life Comparisons*. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference, Tucson, Arizona, 1990*, ed. by Toni L. Carrell, 6–10. Published by the Society for Historical Archaeology.

The modern salvagers of the *Geldermalsen* (the Nanking ship) are said to have dynamited the almost intact wreck after removing the porcelain so its location would remain unknown and the government from which it was stolen could not prove jurisdiction.

Tichelaar, J.P., P.J. Tichelaar, and A. Wassenbergh

- 1960 *Vrienden van de nederlandse ceramiek mededelingenblad*. No. 19, Juni.

Catalogue of an exhibition for the 300-year anniversary of the Tichelaar ceramic factory in Makkum, Friesland. Harlingen was the main center of Frisian tile works and potteries. There was a tile factory in Bolsward and two in Makkum. The exhibition includes fragments of majolica plates excavated at various sites in Leeuwarden and in Makkum. A fragment of a blue-decorated Frisian plate dated 1667 was found on the site of the Van Hulst pottery at Harlingen. Written in Dutch with English summary.

Tiri, Wim

- 2003 *Opgraving van de site Chevalier Marin*. Lezingen, 21 maart. Mechelse Vereniging voor Stadsarcheologie vzw. <<http://users.pandora.be/mvsa/Lezing21maart.htm>>.

In 1993 the group was authorized to investigate the site of the former Chevalier Marin brewery in Mechelen. The Carmelite convent on the site was demolished in 1580 by order of the Calvinists. It was restored in 1585, and a baroque style church was built in the 17th century. A study of the privies

reveals increasingly rich contents in the 18th century. Written in Dutch.

van Alphen, G.K.J.

1999 *De Arendsvlucht in vogelvlucht: Nieuw licht op de duistere middeleeuwen van Oss*. In *AWN-afdeling XVI, jaarverslag 1999*. Nijmegen, Archeologische Werkgemeenschap voor Nederland. <[http:// httpd.chello.nl/~a.hendriks01/](http://httpd.chello.nl/~a.hendriks01/)>.

Late in 1999 archaeological investigations were performed in Oss, North Brabant, at the proposed site of a senior apartments complex. The Arendsvlucht House was built on the site of an old castle that was sold in 1687 and then demolished. The new house, with accompanying carriage house, stood outside the city and was surrounded with its own moat connected to the city moat. The excavations revealed the junction of the two moats. Along the bank of the city moat were found four wooden posts, two of which supported old foundations built of re-used brick of different sizes generally dating from the 15th to the 17th centuries.

van Alphen, G.K.J., and J.P.A. Pennings

1996 *Onderzoek naar het voormalig 'Hooghuis' van Oss*. In *AWN-afdeling XVI, jaarverslag 1996*. Nijmegen, Archeologische Werkgemeenschap voor Nederland. <[http:// httpd.chello.nl/~a.hendriks01/](http://httpd.chello.nl/~a.hendriks01/)>.

Late in 1996 new construction commenced at the site of the "Hooghuis" in Oss, North Brabant, built in 1771 and demolished in 1925. The gate house of the eastern city gate, De Graafsche Poort, was converted and expanded in 1771 to become the attractive mansion named the Hooghuis. The wall of this structure, found by means of an 1828 map, consisted of two parts cut through by a recent drain. The wall was built with a mixture of re-used bricks on a well-built, stepped foundation. The construction work also cut through remains of the city moat for a distance of about 70 m. A set of four profiles of the ditch was measured and drawn. In the fill were found remains of board campsheeting, and the bottom of the ditch still contained timbers placed lengthwise. Written in Dutch.

van Dam, J.D.

1982 *Geleyersgoet en Hollants porceleyn: ontwikkelingen in de Nederlandse aardewerk-industrie, 1560-1660*. *Mededelingenblad Nederlandse vereniging van vrienden van de ceramiek*, 108.

By 1550 a number of potters in the province of Holland were making tin-glazed majolica. Haarlem became the most important center for the industry. The industry began in Delft somewhat later, with only eight factories set up by 1620. Around 1620 regular imports of Chinese porcelain began, and attempts were made to refine majolica during the

1620s with the development of faience. The improved faience or "Delftware" was known as "Dutch porcelain," "white," "Delft porcelain," and "Haarlem porcelain" and was being produced after around 1625. Illustrates many examples in color and black-and-white photographs of majolica and faience, in addition to fragments excavated in Delft, Rotterdam (majolica dated 1627), and Haarlem (including faience wasters). Written in Dutch with English summary.

van der Pijl-Ketel, C.L., and J.B. Kist, eds.

1982(?) *The Ceramic Load of the "Witte Leeuw" (1613)*. Rijksmuseum, Amsterdam.

The wreck of the *Witte Leeuw* was discovered in 1976 by Robert Sténuit near St. Helena. The ceramics from the wreck include not only porcelain but other ceramics. There are *kraakporselein* pieces, Swatow plates, and martavans illustrated with drawings and photographs. Also illustrated are European ceramics (Bellarmine jugs, a white stoneware jug dated 1585, and tin-glazed albarelli).

van der Sleen, W.G.N.

1963 *Bead-Making in Seventeenth-Century Amsterdam*. *Archaeology* 16 (4): 260-263.

Waste and refuse transported out of Amsterdam was deposited as fertilizer in areas east of the city. With the mud and waste were included pieces of clay pipes dating between 1610 and 1650, German stoneware with dates of 1630 or 1640 and the Amsterdam coat of arms, Chinese porcelain, and broken and malformed glass beads and tubular bead glassmaking debris. Beads and beadmaking refuse have also been found near Hilversum, Hoorn, Velzen, Haarlem, and many other towns. In Amsterdam, in excavating a new cellar at 292 Keizersgracht, not only beadmaking refuse but also glass furnaces were found.

1973 *A Handbook on Beads*. Librairie Halbert, Liege. Illustrates rounded and tubular beads found in market gardens near Amsterdam and marked and decorated clay pipe bowls and stems dating between ca. 1610 and 1650 from the same fields. A few hundred beads, including misshapen ones clearly from a bead factory, were collected in fields at 's-Graveland. In Amsterdam, glass furnaces and remains from glass working were found in digging on the Keizersgracht. The Dutch beads made there are indistinguishable from the Venetian ones. Refuse spread on the fields outside Amsterdam includes not only beads but also many broken clay pipes, blue-decorated gray German stoneware with dates including 1632, 1640, and 1644, porcelain, clay marbles, and lead apothecaries' weights. Beads have also been found at Hoorn, Velzerend, Heemstede, and the island of Ameland.

van Dongen, Alexandra G.A.

1993 *Medieval and Post-Medieval Pottery and the*

Search for Authentic Terminology of Utensils. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 29–34. Stichting Promotie Archeologie, Zwolle.

The Van Beuningen-de Vriese Collection of pre-industrial utensils from archaeological excavations was loaned to the Museum Boymans-van Beuningen in 1983; the collection was officially donated in 1991. It consists of about 10,000 ceramic, glass, metal, and wooden objects from the 12th through the 19th centuries. Includes a comprehensive glossary of the functional names in Dutch of various ceramic utensils with their English equivalents.

1995 "The Inexhaustible Kettle": The Metamorphosis of a European Utensil in the World of the North American Indians. In *One Man's Trash is Another Man's Treasure*, 115–173. Museum Boymans-van Beuningen, Rotterdam, and Jamestown Settlement Museum, Williamsburg.

Archaeological evidence and documents indicate two types of kettles in the 16th and 17th centuries: hemispherical kettles beaten from single sheets and cylindrical kettles made with two pieces of sheet metal rivetted together and with straight sides and flat bottoms. The cargo of a wreck from the North Sea includes examples of unfinished kettles of the hemispherical type, without rims, lugs, or handles (illustrated in color). The second type is the only type of kettle found on Dutch inland waterway craft in the period before 1650. Most pre-1600 kettles were made of copper, whereas 17th-century kettles tend to be brass.

van Dongen, Alexandra G.A., and Harold E. Henkes
1994 *Gebruiksglas in beeld en verbeelding/Utility Glass in Image and Imagination*. Museum Boymans-van Beuningen, Rotterdam.

Eight forms of glass are discussed and are documented by a variety of iconographic sources that illustrate the role and symbolic meanings of utility glassware. Occasionally, for example, *roemer* glasses were placed on pedestals and were elevated to the rank of ceremonial drinking vessel and status symbol. The eight forms, represented by excavated examples, are cabbage-stalk beakers, case bottles, plain beakers (beer glasses), the "Ringing out Duc d'Alf" glasses, beakers with checkered spiral-trail decoration (also beer glasses), *roemers*, medicine bottles, and *passglasses* (*passgläser*). In archaeological contexts, glass beakers for drinking appear commonly together with drinking vessels of earthenware, stoneware, and wood from all levels of society after about 1400. The form of medicine bottles changed scarcely at all between 1500 and 1800. The square case bottle appeared shortly before 1600. Window glass did not come into general use until

the 17th century. The "Ringing out the Duc d'Alf" glasses commemorated a victory over the Spanish at the end of the Twelve Years' Truce. Examples have been excavated from a privy near the Prinsenhof in Geertruidenberg and in the Kasstraat in Antwerp. Written in Dutch and in English. Illustrates black-and-white photographs of a checkered spiral-trail decorated beaker excavated in Rotterdam dating about 1575 to 1625 and, from Delft, a German *passglas* of about 1600 to 1650 and a *berkemeier* of about 1600 to 1625.

van Gangelen, Hans

1993 Working with the Groningen Model for Presenting Post-Medieval Ceramics from Closed Assemblages. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 89–96. Stichting Promotie Archeologie, Zwolle.

The contents of two privies excavated in 1984 in the center of Groningen formed the basis for the system of classifying utilitarian ceramics from closed contexts. The ceramics are divided into six principal categories: unglazed earthenware, lead-glazed earthenware, tin-glazed earthenware, stoneware, porcelain, and English pottery. The unglazed earthenware is represented by white earthenware, red earthenware, and gray-bodied ware. Gray-bodied ware is primarily medieval but is sometimes found, perhaps representing earthenware that was accidentally fired with insufficient oxygen in the kiln. Glazed earthenware consists of red and white earthenwares. Tin-glazed earthenwares are majolica and faience. Eight functional categories have also been identified: light and heat, food utensils, recreation, physical care and hygiene, ornament and religion, trade and industry, sundries, and "unknown." It is possible that the functional categories should be replaced by vessel form categories. Also, the different types of porcelain and English pottery should be further distinguished.

van Hees, Christel

2002 *Baardmannen en puntneuzen: Vorm, gebruik en betekenis van gezichtskruiken, 1500–1700*. Uitgeverij Waanders b.v., Zwolle; Drents Museum, Assen.

Both paintings from the 17th century and archaeological excavations demonstrate that Bellarmine (*bartmann*) jugs were vessels of everyday use. Presumably Cologne is the oldest production center of these jugs, which were first made about 1500. Illustrates a brown jug of about 1500 to 1550 found in Reimerswaal in Zeeland, a place that was devastated by floods in the 16th century and was lost around 1550. The jug therefore dates before then. Illustrates brown Frechen jugs from about 1600 to 1675 and 1600 to 1700 found in Rotterdam. The first

has a carelessly finished foot. On the belly of the jug is an oval medallion within which is a rosette with a wheel at the center. The face is careless and has a fierce expression. On the other jug the neck has a very coarse face, while on the belly is a round medallion within which is a rearing lion. A Raeren jug in the form of a boot with a face on the toe dates about 1500 to 1550 and was found in Alkmaar. It probably relates to the expression "he has a boot on" which means that someone is stupidly drunk. Illustrates the neck fragment of a Siegburg Bellarmine jug found in Hoor with a face having pointed devil's ears. In the Netherlands and in Germany are known examples of pots and jugs that were buried under a threshold or hearth dating earlier than the 17th-century "witch's bottle" that was found at St. Paul's Wharf in London. Thresholds and hearths were traditional places for the burial of protective amulets. Considering the fact that from several East India Company shipwrecks come Bellarmine jugs that have served as holders of mercury, it can be assumed that the jugs after about 1630 were mostly used for packing mercury. In 1991 in Noordwijk a Bellarmine jug decorated with a horizontal frieze of acanthus leaves and portrait medallions was found. This type of jug was made in Cologne or Frechen from about 1525 to 1575. Inside the jug was found two silver spoons, a sundial, a set of utensils, a gilded medal, and 241 coins. Written in Dutch.

van Herck, Chris, ed.

1997 *Graspoort 1992; Begijnenstraat 1995.*

Archeologische Vereniging Oud-Mechelen, Mechelen.

The amateur archeologist's work consists mostly of very quick measurement of uncovered foundations and related features. In May 1992 construction of new buildings began along the Graspoort in Mechelen [between Brussels and Antwerp]. During the construction, a long sandstone wall was exposed. The wall rested on pilings. Archival research indicated this wall formed part of an important 14th-century building, "The Steenken." In 1594, the building was property of Guillaume van Grypsperre, council member and public prosecutor of the Grand Council. In 1647 the Count of Antwerp was the owner, and from 1743 until 1787 the *jonkheer* Marcke de Lummen, secretary of the Grand Council, owned it. Artifacts from the site include the handle and rim fragment of a majolica handled bowl (*oorkom*), with beige lead glaze outside and white tin glaze with cobalt blue flowered decoration inside. It dates probably from the 17th century. The leaf-shaped handle has a hole for hanging and is decorated with little curls in cobalt blue. A reconstructed pipkin, with a rim diameter of 150 mm and a height of 180 mm, has a rust-brown lead glaze. Inside the lead glaze is incomplete. This pipkin or cooking pot

still has its handles and three legs and dates from the 16th or 17th centuries. As the chaotic construction site was cleared by machines, a number of covered streams were revealed. Among the rubble were discovered significant smaller objects, most of which are difficult to date. A Maria-Theresa silver half crown coin dated 1757 was found. Also, there were at least 34 marbles of various materials (stoneware, glazed earthenware, and turned natural stone) dating from the 16th to the 19th centuries. One trash pit found in the corner of the site, next to Number 10 Begijnenstraat, was a garbage pit of about 1 meter width and .80 cm depth. It contained mainly 17th-century garbage from a kitchen. There were numerous earthenware strainers and saucepans, besides food waste such as oyster and mussel shells and eggshells. There were also clams and fish (fish vertebra and bones) represented. There was a quantity of sheep and cow butcher waste. The earthenware consists mostly of red earthenware with orange and green lead glaze, such as the following. A fragmentary cooking pot (or pipkin) and a strainer were both nearly completely reconstructed. Also pieces of a large water pitcher with a striking orange lead glaze were found and largely reconstructed; its height is 350 mm (illustrated). A beautiful fragmentary bowl of Weser earthenware also appeared. The high quality of the earthenware and the presence of the expensive Weser earthenware suggest that this was the trash pit of a well-to-do family. A number of copper pins and a little glassware were found also. One very fragmentary strainer originally with three legs is covered inside with orange lead glaze, which leaked outside through the holes. Another strainer is nearly completely reconstructed and has an orange-green lead glaze, within as well as outside (illustrated). A nearly complete cooking pot or pipkin, with a height of 102 mm and a body diameter of 180 mm, has an orange-green lead glaze, within as well as outside. It has two horizontal handles and three legs (illustrated). Part of a bowl with a height of 75 mm and a rim diameter of 225 mm has slip decoration. The outside is unglazed. The inside of the bowl is decorated in orange, yellow, and green slip. The yellow inside is decorated on the bottom with a broad and two thin rings in orange slip, and a cross pattern of alternately orange and green slip was applied. The interior sidewall is decorated in the middle with four orange rings, above which is decoration consisting of groups of four vertical, wavy lines respectively in green and orange slip. The bowl has a flat bottom, and yellow slip leaked over the edge. The glaze within is very fragile and was treated with a conservation medium to prevent further exfoliation. This type of earthenware was imported from the Weser area and can be dated to the late 16th century (illustrated). A small saucepan, with a height of 40 mm and a rim diameter of 135 mm, is nearly completely reconstructed. Inside is an

orange lead glaze, and the outside is unglazed, except for glaze that splashed. The handle, 86 mm in length, is folded. The pan has a slightly convex bottom. Written in Dutch.

van Holk, André F.

- 1997 *Family Life on Board: The Dutch Boat People Between 1600 and 1900*. In *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution*, ed. by Mark Redknap, 219–228. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology Society and Society for Post-Medieval Archaeology, Oxford.

A total of eight wrecks of pram-like ships, barges, or cargo vessels from the 16th century through the 18th century in the IJsselmeerpolders have provided evidence for the study of family life on board the ships. Lists of gender- and age-related artifacts have been used to identify the presence of women and children on wrecks. These include shoes, jewelry, thimbles, and toys. A thimble is attributed to a woman because of its small size. The wreck of a vessel built in 1702 and lost in 1742 may be the oldest ship found in the Netherlands with evidence for a family on board. There were hearths both fore and aft, creating clearly separate living spaces. Illustrates tin-glazed earthenware plates from this wreck.

van Made, Herman

- 1978 *Seventeenth Century Beads from Holland*, ed. by N.C. Buckwalter. Gerald B. Fenstermaker, Lancaster, Pa.

Discoveries of beads in the Netherlands have not included any evidence that large chevron-type beads were made there. Beads have been found in many places in the Netherlands, but mostly in Amsterdam. In Amsterdam they are found throughout the city, in privies, during construction projects, and in dredging the Keizersgracht and the Amstel. Outside Amsterdam, 17th-century refuse areas in gardens at 's-Graveland and Boeren-Wetering have produced beads.

van Meir, Barbara

- 1994 *A New Home for the Mysteries of the Pipe Wreck. The Broadside 1 (1): 5*. Published by the Pan-American Institute of Maritime Archaeology.

The collection from the wreck site will be exhibited in the Dominican Republic. In 1992 an unidentified brass turned object was recovered from the site. It measures 30.8 cm in height and has notched rims around it. It has been identified as a multi-piece lamp (chandelier). A brass candlestick arm and bracket that fits into a notch on the upper rim has also been found at the site.

van Regteren Altena, H.H., R. Brandt, and H.J. Zantkuyl

- 1976 *Amsterdam in de Put: opgravingen rond het Damrak, een archeologische bijdrage aan de*

vroegste geschiedenis van Amsterdam. Amsterdam Historisch Museum, Kalverstraat 92, Amsterdam.

One of the greatest problems in the medieval city was the risk of fire. After the fire of 1452 structures were required to have brick-covered sidewalls. New houses had to have roofs of slate or of tiles. By the end of the 16th century wooden façades were also prohibited. Time after time the city government had to proclaim that brick sidewalls were compulsory. Because a brick house is heavier, the foundation was regulated by law. A firm foundation was necessary; a foundation wall of brick was started on rows of driven small posts. On this deep wall rested the house wall. Such a foundation was costly. After a fire a lot with its old foundation was frequently offered for sale. Illustrates with a black-and-white photograph the excavated foundation walls of a 16th-century brick house. During the excavations evidence of the occupation of the house was found in the rear yard area. There were many privies including indoor privies. For a long time not every house had such facilities, and three houses had to share one privy. Documents established how a privy was to be kept clean and empty. The contents were emptied into barges that discharged their loads into the Y. The excavations revealed broken ceramic remains of skillets, pots, and small jugs and plates. There were also leather artifacts and faunal remains including shells of shellfish. Other finds were an iron key, glassware, children's toys, and coins. Written in Dutch.

van Rooij, Hans H., and Jerzy Gawronski

- 1989 *East Indiaman Amsterdam*. H.J.W. Becht, Haarlem.

Documentary history of the loss of the *Amsterdam* on the south coast of England in 1749 and of the investigation and recording of the remains. Illustrates with drawings and photographs cannon, a copper priming wire, a lead vent hole cover, leather cartridge cases, remains of pet dogs, seeds and vegetable remains, clay pipe heel marks, a smoothing iron, pewter, wooden barrels and chests, wine bottles, a Leiden bale seal (cloth seal), medical equipment, ceramic ointment jars, and a salt-glazed stoneware storage jar.

Vandenbergh, Stefan

- 1983 *Een asttegelvondst te Brugge en enige verwante tegels in België*. In *Jaarboek 1982: Stad Brugge Stedelijk Musea*, 267–271. Walleyndruk pvba, Brugge.

During demolition work in Bruges in 1982 at the corner of the Zwarte Leertouwersstraat and the Engelstraat, on the site of the former Van der Ghote brewery, fragments of a so-called malt-tile were found. It is an unusual-looking pierced red earthenware tile, used in the ripening process of malt.

Archival as well as archeological evidence of such tiles in other cities in Belgium, the Netherlands, France, and Germany indicate their use was widespread, especially in the 17th and 18th centuries. In Mechelin, during demolition work of some old houses along the Dijle, square tiles of smaller dimensions were found. The numerous soot traces on one side were clear proof of their use. The place where they were found was the site of the Sleutel brewery in 1647. Discoveries of such tiles have also been made in the Netherlands and in England in sites dated between 1450 and 1525, but beyond the possible dates there is nothing mentioned. Illustrates examples of malt-tiles from Mechelen, Ghent, and Waudrez-les-Binche. Written in Dutch.

Veerkamp, J.

2001a Opgraving Valkenburgerstraat. January/February. Bureau Monumenten en Archeologie, Amsterdam. <<http://www.bmz.amsterdam.nl/adam/nl/archeologie/valkenburgerstraat.html>>.

In January and February 2001 excavations were conducted along the Uilenburgergracht in Amsterdam. This area was formerly the island of Marken and was the location of shipyards established early in the 17th century. Strewen with thickly packed wood chips and coarse splinters, remains of the ways for the construction of ships were uncovered. There was also a deposit of hand-wrought nails, oak pins, and small wedges. A wooden rudder was also found, where it had been sawed in half for the construction of a later house foundation. Calking, oakum, and pieces of chalk were found. Other artifacts include two pewter spoons, ceramics, and a section of a mast. A comparison with the recently excavated East India Company dockyard on Oostenburg reveals significant contrasts between the two operations. Written in Dutch.

2001b Opgraving Sint Jansstraat. April. Bureau Monumenten en Archeologie, Amsterdam. <<http://www.bmz.amsterdam.nl/adam/nl/archeologie/sintjansstraat.html>>

In April 2001, a brief excavation occurred in a lot between the Sint Jansstraat and the Leidekkersteeg. According to the earliest map there was a large garden here in the middle of the 16th century. On the Pieter Bast plan of 1597, the lot appears built upon for the first time. From the excavations, however, it can be inferred that a house already stood along the Leidekkersteeg in the second half of the 14th century. Under the level of the garden the traces of three successive houses were found. Fragments of a floor, consisting of bricks, were found in a wooden house from the second quarter of the 14th century (phase I). From the second phase of the house during the second half of the 14th century were found brick footings (the foundation for the wood frame). In this house from phase II at the end of the 14th century was also a tile floor. The house from the first half of the 15th century (phase III) had an oak foundation built without pilings. It is remarkable

that the locations of these 14th-century houses all correlate with the later lots of 17th-century houses along the Leidekkersteeg. Written in Dutch.

Verhaeghe, Frans

1993 Medieval and Later Ceramic Studies in Flanders: Methods and Current Problems. In *Assembled Articles 1: Symposium on Medieval and Post-Medieval Ceramics, Nijmegen, 2 and 3 September 1993*, 5-27. Stichting Promotie Archeologie, Zwolle.

Several new discoveries and related documentary research have provided clues as to the production of majolica in Antwerp. At Tongeren a brick kiln site has been excavated, and research has focussed on medieval but primarily post-medieval production of bricks. Includes an extensive bibliography.

Vlierman, Karel

1997a The IJsselmeerpolders: A "Source Book" for Late Medieval and Early Post-Medieval Wreck Inventories. In *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution*, ed. by Mark Redknap, 15-36. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology Society and Society for Post-Medieval Archaeology, Oxford.

In 1932 the Zuiderzee was renamed the IJsselmeer. Polders began to be drained, and shipwreck excavations have been occurring since 1942. Of 435 registered shipwrecks, 350 have been excavated and recorded. Three exceptional ships have been conserved. These are a mid-17th-century merchant ship and another vessel from ca. 1700 both currently on exhibit at Ketelhaven and a freighter of the early 17th century, which will be exhibited at Lelystad. Since 1975 the philosophy has shifted away from "excavation whenever feasible" to "excavation only if essential." Wooden remains are threatened if soil settles or if the water table falls; otherwise the priority has become that of conserving wrecks *in situ*. The most common ship types to have been excavated are the small- to medium-sized cargo vessels with lengths up to about 60 feet. The oldest sea-going vessel excavated so far is a three-masted cargo ship or war ship of about 100 feet that sank about 1500. The remains of an East India Company ship sunk by ice in the winter of 1759-1760 were found in 1958. Illustrates drawings of artifacts and black-and-white photographs of wrecks and artifacts. Illustrates an earthenware colander, a spoon, and other artifacts *in situ* in the wreck of a mid-18th-century cargo vessel. Illustrates shoe buckles from a late 18th-century wreck, a shoe from the early 17th-century freighter, an iron cooking pot from an 18th-century pram, and other objects.

1997b The Galley, Galley Utensils and Cooking, Eating and Drinking Vessels from an Armed "Tjalck" Wrecked on the Zuiderzee in 1673: A Preliminary Report. In *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to*

the Industrial Revolution, ed. by Mark Redknap, 157–166. Oxbow Monograph 84. Published by Oxbow Books on behalf of the Nautical Archaeology Society and Society for Post-Medieval Archaeology, Oxford.

The *tjalk* was a type of round vessel with flat bottom built for carrying cargo on shallow water. Two cast-iron guns were found inside this vessel, and one was found outside. This is unusual, and the vessel must have had at least four guns originally. The vessel had been burned, and the stern had been blown away in an explosion. In the hold were found muskets, pistols, swords, lead shot, iron shot, three pairs of compasses, and the ship's bell. A fireplace was behind the mast, and in the forward area was a second fireplace with galley utensils, eating and drinking utensils, storage pots and barrels, and burned remains of food. Three copper kettles were found in the forward part of the ship; the largest contained a copper skimmer, a wooden colander, and a wooden dead-eye from the rigging. A smaller kettle contained cow bones and carbonized peas. There was an oak barrel filled with cow bones. There was a bronze saucepan, Bellarmine jugs, two northern Dutch majolica dishes, other Dutch tin-glazed ware, red earthenware cooking pots and other vessels, and two pewter spoons. Green glass bottles, with and without pewter screw tops, had burned, melted, and exploded.

Vos, Aart

1999 'Een tric-tracbord, de Razende Roeland en een gogeltas': Ontspanning en vermaak in de zeventiende en achttiende eeuw. In *'s-Hertogenbosch binnenskamers: Aspecten van stedelijke woon- en leefculturen, 1650–1850*, ed. by Charles de Mooij and Aart Vos, 60–77. Stichting woon en leefculturen 's-Hertogenbosch 1650–1850, Waanders Uitgevers, Zwolle.

Illustrates a stoneware tankard and two glass tumblers from the 18th century excavated in t's-Hertogenbosch. Written in Dutch.

Wesselius, Jacqueline

1998 Digging for History. *Holland Horizon* 10 (3): 8–11.

Plans to build a new network of roads and railways in the Netherlands could destroy many of the country's historical artifacts that are still buried in the ground. Archaeologists are stepping up their efforts to retrieve these hidden treasures before the bulldozers move in. The plans include a metro line linking northern Amsterdam to the southern outskirts of the city and a railway through the Betuwe orchards along the Rhine. From excavations in the Betuwe region and slightly to the east more may be learned about the Stone Age as well as Roman times. Deposits in Amsterdam have already produced useful evidence of diet in the 17th century, with the discovery of plant seeds and different kinds of fruit, dates, olives, and cucumbers. A collection of shoes excavated in Amsterdam provides some idea of how

tall people were and what was the state of their health. In Dordrecht, recent archaeological finds have changed theories about the social and economic history of the city. The parts of the town farther away from the Maas River were thought to be the poorer sections, but shoes and other objects recovered from excavations in that area show that those residents were not at all poor in the late Middle Ages. It was later that the outskirts of the city fell into decline. The Netherlands signed the Treaty of Malta in 1992, which declares that developers or others who create a threat to archaeological resources must pay the cost of the archaeological research that is necessary to rescue and study the remains. Illustrates in color medieval shoes, 16th-century Siegburg stoneware, a delft tile with a portrait of Jan Beuckels (1509 to 1536), and stoneware vessels (including Bellarmine jugs) from Cologne and Frechen.

Wilcoxon, Charlotte

1982 Dutch Majolica of the Seventeenth Century. In *American Ceramic Circle Bulletin*, Number 3, ed. by Hedy B. Landman, 17–28.

During the early 16th century, many Italian potters moved northward to Antwerp, taking with them their craft of making tin-glazed majolica. Some of these potters began to leave Antwerp in the second half of the 16th century, going to England as well as to the northern Netherlands. In Haarlem, a document shows that a new ware, delft (faience), was being made by 1642. Between 1640 and 1670 the Dutch majolica industry died slowly while the new ware replaced it. Early in the 20th century sherds of Dutch majolica were found during a construction project in Delft, probably the first time its significance as a ceramic type was recognized. In 1914 more sherds were discovered in Rotterdam, and in 1926 a fill deposit from 1646 was excavated in Amsterdam, revealing majolica sherds. Illustrates a number of excavated Dutch majolica sherds found in Rotterdam.

1985 Household Artifacts of New Netherland, from its Archaeological and Documentary Records. *New Netherland Studies: Tijdschrift van de Koninklijke Nederlandse Oudheidkundige Bond*, Jaargang 84, nummer 2/3, Juni, 120–129.

Illustrates Dutch majolica and faience plates and a Bellarmine jug excavated in Amsterdam matching fragments of similar plates and a jug excavated at Fort Orange in Albany, New York.

1987 *Dutch Trade and Ceramics in America in the Seventeenth Century*. Albany Institute of History and Art, Albany, N.Y.

Illustrates a kiln prop excavated from a site in the Netherlands and sherds of Dutch polychrome-decorated majolica with Italianate designs excavated in Amsterdam in 1931, dating from the first half of the 17th century. These sherds as well as complete Dutch majolica plates are compared with sherds excavated at Fort Orange. Also illustrates in color

examples of Dutch majolica plates and both red- and white-bodied utility earthenware vessels excavated in the Netherlands and in the collection of the Albany Institute of History and Art. A complete red earthenware colander is compared with a sherd from Fort Orange.

2001 Journey of Discovery: A Retrospective. In *Ceramics in America 2001*, ed. by Robert Hunter, 212-214. Published by the Chipstone Foundation; distributed by University Press of New England, Hanover and London.

As a result of the excavations at Fort Orange in Albany, New York, in 1970 and 1971, the author travelled to the Netherlands to consult Dutch collections and researchers to identify the tin-glazed ceramics from Fort Orange. At the Boymans-van Beuningen Museum in Rotterdam was a large collection of sherds of early 17th-century Dutch majolica, many of them excavated from canal beds and construction sites. The sherds exactly duplicated the patterns on those from Fort Orange. An insight was gained into the significance of the two distinct forms of Dutch tin-glazed earthenware: Dutch majolica and delft. Illustrates in color two examples of Dutch hand-decorated majolica of the period 1610 to 1640.

Wills, Richard K.

1994 The Monte Cristi Shipwreck Project: The 1994 Interim Report. *The Broadside* 1 (2): 8-11. Published by the Pan-American Institute of Maritime Archaeology.

The fourth season on the wreck site, near Isla Cabrita in the Dominican Republic, was completed in 1994. A large number of clay pipes made by Edward Bird of Amsterdam were found, of both the bulbous and elbow-shaped bowl types. Heel marks on the pipes, besides EB, include WH and P*C, possibly for Willem Hendricks and Pieter Claesz, both also pipe makers of Amsterdam. A fourth heel mark, D*C, remains unidentified. About 30,000 clay pipe fragments have been recovered. Dutch faience and stoneware Bellarmine jug fragments have also been found in significant numbers. Illustrates drawings of the Bellarmine fragments including a medallion depicting a soldier holding a glass. Illustrates with black-and-white photographs a Dutch faience fragment, clay pipes, and a set of nested apothecaries' weights. Coins include pieces of eight. It is thought the ship sank between 1651 and 1665, carrying a Dutch cargo.

Wouters, Werner

2003 Grote archeologische werven in Mechelen: Acht jaar onderzoek. Lezingen, 21 maart. Mechelse Vereniging voor Stadsarcheologie vzw. <<http://users.pandora.be/mvsa/Lezing21maart.htm>>.

The 1993 law for the protection of archaeological sites has provided a firm legal basis for archaeological research in Flanders. In 1997 in Mechelen construction on the Katelijnepoort was stopped and remains of the Holy Trinity Almshouse dating from the 14th century to the beginning of the 17th century were documented. Written in Dutch.

Ypey, J.

1976 Mondharpen. *Antiek* 11 (3): 209-231.

The origin of the Jews harp is traced back to Roman times. Illustrates Jews harps from Nijmegen, Amsterdam, Heemstede, Maastricht, Vianen, and many other places. Written in Dutch.

Paul R. Huey received an M.A. degree in museum administration from the Cooperstown Program of the State University of New York at Oneonta. Subsequently he completed his Ph.D. in American Civilization at the University of Pennsylvania. He developed and directed the Archeology Unit of the Bureau of Historic Sites in the New York State Office of Parks, Recreation and Historic Preservation from 1969 to 1995. The Bureau of Historic Sites is responsible for the preservation, management, operation, and public interpretation of more than 35 State Historic Sites and State Historic Parks in New York State. Dr. Huey has directed excavations at these sites both to rescue data and to facilitate research and improved interpretation. He has also directed excavations at 17th-century Dutch colonial sites including a part of Fort Orange in Albany and the historic 17th- and 18th-century Van Curler and Schuyler farm site at the Schuyler Flatts north of Albany. From 1995 to 2006 he served as the senior historical researcher for the Bureau and beginning in 2006 is once again director of the Archeology Unit.

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