Postmedieval Pottery in Sweden

Some Notes on Local Red Earthenwares

BY MAGNUS ELFWENDAHL



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Increased Swedish archaeological interest in postmedieval remains brings up the question of how archaeology can increase our knowledge about a time when historical documents are the main form of source material. This article suggests some of the potential offered by the local utility pots from the period, the red-fired earthenware with lead glaze and finds of waste from potters' workshops.

Magnus Elfwendahl, Institute of Archaeology, University of Lund, Sandgatan 1, S-223 50 Lund.

Introduction

During the 1980s and 1990s there has been an increased archaeological interest in postmedieval remains in Sweden. This also raises questions such as: What archaeological knowledge do we have of this period? In what spheres can the archaeological data make significant contributions to our knowledge?

How are we to reveal the gradual change of material culture from the Late Middle Ages to the modern era? How is this seen in the stock of household pottery? To answer these questions, the fragmentary pottery can be important source material, alongside extant inventories from before 1734, when the new law made it compulsory to compile inventories of the estates of deceased persons.

To make the pottery usable in the description of an ongoing change, it must be ordered so that it can answer the questions we ask of this category of material. This requires an initial knowledge of the origin of the pottery, that is, an ability to distinguish local manufacture from pottery from other regions in Sweden or possibly from

abroad. One way in which local pottery can be distinguished is by studying finds of waste from pottery workshops, which reflect both the Swedish craft and the local pottery needs.

This article seeks to provide a survey of archaeological research in Sweden concerning postmedieval pottery, and to cite some documentary sources in order to sketch the development of local pottery as we know it today. The geographical limit of the study is the territory of Sweden as it was until 1658, the year when Karl X Gustav's war policy led to Denmark's cession of the provinces of Blekinge, Scania, and Halland, with the Peace of Roskilde, which meant that a Danish pottery tradition gained a foothold in Sweden.

The pottery – a description of the vessels

A red-fired earthenware with mostly internal lead glaze is found in large quantities in archaeological excavations in Sweden. There are also finds of unglazed vessels of red earthenware and pots with both internal and external glaze (the latter variants make up a small proportion). The red ware is found in a number of pot forms. From works dealing with both individual and general features of the red-fired earthenware we have data which, when put together, give a survey pic-

ture of its chronological development (Strömbom 1924; Selling 1946; Ohlsson 1947; Hansson 1950; Plath 1966; Lindqvist 1981; Broberg et al. 1982b; Ersgård et al. 1984; Bergold & Öhnegård 1987; Bergold 1992). Red earthenware in modern times was also used in the making of a number of other objects found in the

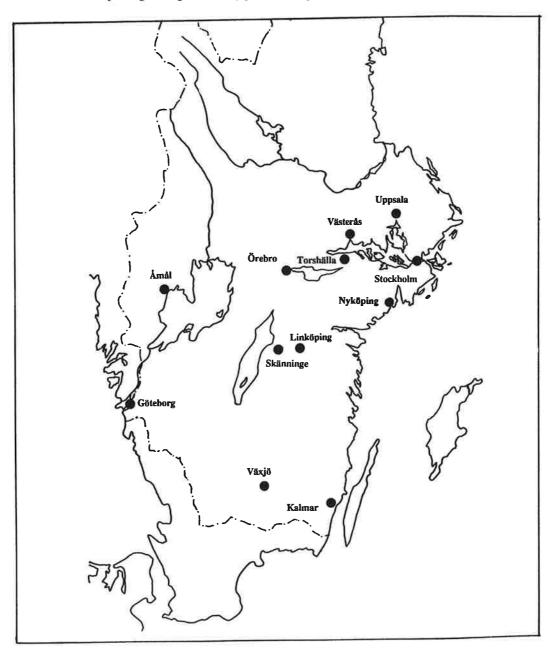


Fig. 1. Archaeological finds of waste from potters' workshops.

household, such as savings-boxes (Rehnberg 1947), bowls for train-oil lamps (Lithberg 1916), candlesticks (Lithberg 1918), moulds, flowerpots, chamber-pots, mortars (Lithberg 1919), ocarinas, and so on.

At least in Swedish towns, there is a noticeable rise in the number of pots just before 1500. Pottery becomes a visible element in many households, gradually comprising more and more forms. In the 16th century there are large numbers of tripod cooking pots and pipkins with a tubular shaft. With minor changes of form, these pots remained in use until the 18th century, with a proportional decline from 1600 onwards. Tripod frying pans with a shaft are less common, disappearing during the 17th century. Plates, dishes, and bowls begin to appear in the middle of the 16th century, and are assumed to have accounted for the majority of the potter's production from the 17th to the 19th century. Plates, dishes, and bowls undergo development in form, decoration, and execution. Certain elements change: the brims of plates, for example, become broader in the 16th century, and both dishes and plates have broader brims in the 17th century. Bowls in the 16th and 17th centuries usually have straight sides ending vertically and handles, but after this they seem to become more closed in form. Bowls with palmette-shaped handles with plastic spiral decoration are dated to the first half of the 17th century. The number of vessel forms increases during the 17th and 18th centuries. Apart cooking from pots, pipkins, frying pans, plates, dishes, and bowls, a number of new forms arise, such as dishes on pedestals, cups, four- and six-sided bottles, large storage vessels, colanders, jars, mugs, pitchers, etc. Vessel forms for special occasions include puzzle jugs, wedding dishes, and pots with lids for taking food along to feasts; the latter were common in the Mälaren Valley and the provinces of Dalarna and Hälsingland. When tea and coffee began to spread in the 18th century, cups and pots of earthenware were made for drinking and serving these beverages.

Until the second half of the 16th century, red earthenware was only decorated in exceptional cases. After this, a trailed slip decoration in white clay begins to appear, especially on bowls and dishes. The trailed slip decoration is still often used at the start of the 18th century. During the 17th century we find vessels, often dishes and bowls, with the coating of a white slip. After the mid-17th century we find scratched decoration, known as sgraffito, on the white-slip-coated inside surfaces of the dishes; this was still used in the 18th century. Dotted decoration, known as "hemring", on wide white concentric bands of trailed slip first appears on a dish dated 1630, but the technique seems to become more general after the mid-17th century. From the start of the 18th century we have dishes with white coated slip both inside and outside, with polychrome painted slip decoration, and the middle of the 18th century sees the introduction of green- and black-glazed earthenware. The decorative motifs vary through time. In the 16th century there is trailed slip decoration in the form of concentric circles, strokes, stripes, spirals, and wavy lines, motifs which still occur at the start of the 18th century. In the middle of the 17th century vegetable motifs begin to appear, along with painted slip circles, and these continue into the 18th century. From the end of the 17th century the slip-coated dishes are often decorated with bird and flower centre motifs. Dishes with centre motifs depicting anthropomorphic images are found regionally, with a concentration in Hälsingland as early as the end of the 17th century. Marbled and splattered spot decoration occurs in the latter half of the 18th century.

The lead glaze on the vessels is generally colourless, but we do find glaze with elements of colouring oxides, above all a green tone caused by the addition of copper oxide. The colour could also be affected by more intense firing, which caused more of the iron in the clay to be deposited on the surface. Until the 19th century, lead glaze was powdered on the vessels. It may have been possible to vary the content of lead to

influence the surface lustre of certain types of vessel, depending on their intended function.

History of research

Swedish earthenware is mentioned in early works as a folk craft, often designated "peasant ceramics". It is mostly ethnologists, along with art historians, who have shown an interest in postmedieval Swedish earthenware. It is only recently that archaeologists have also begun to show any great interest in this pottery, the volume of which greatly exceeds all other pottery found in remains from the closing phase of the Middle Ages and into the modern era. The pottery is presented in the archaeological accounts under the labels "red earthenware", "late red earthenware", and types BII:4 and B2:b, usually described in terms of the number of sherds. Detailed descriptions of the ware, the forms and variations of different vessels and decorations are only described in exceptional cases. The datings that are cited are very general, and sometimes all earthenware is ascribed to the postmedieval period. Although we still lack general syntheses and exhaustive publications of Swedish earthenware material, a great deal has been written on the topic. Different scholars have either dealt with parts of large collections of material, phenomena connected with the craft, or the potential of the pottery to describe and date the environment in which it was used. Recent surveys of the state of research include Augustsson 1995 and Roslund 1995.

One of the persons who showed an early interest in Swedish earthenware was the ethnologists Nils Lithberg, who compiled material in 1915 for an exhibition of Nordic peasant ceramics from the collections of the Nordic Museum (Nordiska museet) in Stockholm. An account of the exhibition and its structure was produced by Arvid Bæckström (1915), who also presented a classification into yellow ware and brown ware. The division followed the colour that the vessel took on depending on whether it was white-slipcoated or not. This division of the material characterized the studies of ethnologists and art historians for many years afterwards. Lithberg treated the earthenware in an essay in 1932, where he observed that no clear picture of the old pottery craft in Sweden could be obtained until excavation finds made it possible to determine local material with greater certainty (Lithberg 1932). To distinguish regional patterns in the pottery, Lithberg suggested studies of patterns, glazes, colours, and techniques for the application of colour.

Several of the accounts from ethnological or art-historical angles start with whole artefacts in collections, divorced from their original environment (e.g. Plath 1966; Lindqvist 1981), or compile inventories of a vanishing craft whose original market no longer exists (e.g. Bæckström 1915; Lithberg 1932; Järlgren 1973; Gustafsson 1980; Lundell 1986; Lindqvist 1989). In some cases, the pottery craft in individual towns is presented, but the works depend heavily on written sources (Fischer 1925; Lindqvist 1966, 1987). The account in many of the works is descriptive. Archaeological interest in postmedieval earthenware has been associated with the chronology and methodology of medieval pottery (e.g. Selling 1976; Broberg & Hasselmo 1981, 1983; Broberg et al. 1982a, 1982b; Carlsson 1982; Ersgård et al. 1984; Bergold 1992; Elfwendahl 1988, 1995; Elfwendahl & Gaimster 1995), individual features of the pottery (Broberg 1982), or pots as consumer goods revealing socio-economic differences (e.g. Hansson 1960; Andersson et al. 1986; Bergold & Öhnegård 1987; Broberg & Svensson 1986, 1987, 1989; Pihlman 1989; Andersson & Hållans 1992). A shipwreck with a cargo of pots has been studied (Edgren 1979). Despite the long-term interest, the red-fired earthenware has been given very little space in excavation reports; Strömbom's well-illustrated catalogue of finds from Nya Lödöse 1473-1624 has long been unsurpassed (Strömbom 1924).

Apart from the above studies, there are also

some articles dealing with finds of ceramic workshop waste in Stockholm, dated to the 16th and 17th centuries (Hansson 1950; Galt 1981; Århem 1981), Linköping (Lindqvist 1987), and Örebro (Ohlsson 1947). Besides these, workshop waste has been published from the Vimplen quarter in Åmål, dated to the first half of the 18th century

(Ekre 1987), as well as a partially excavated potter's site in Gothenburg, the Göta Kanal quarter, dated to the second half of the 17th century (Kihlberg 1986, p. 87). Potters' workshops have also been touched upon by excavations in Nyköping (Andersson et al. 1990, p. 130) and Kalmar (A.i.S. 1986, p. 427; Blohmé

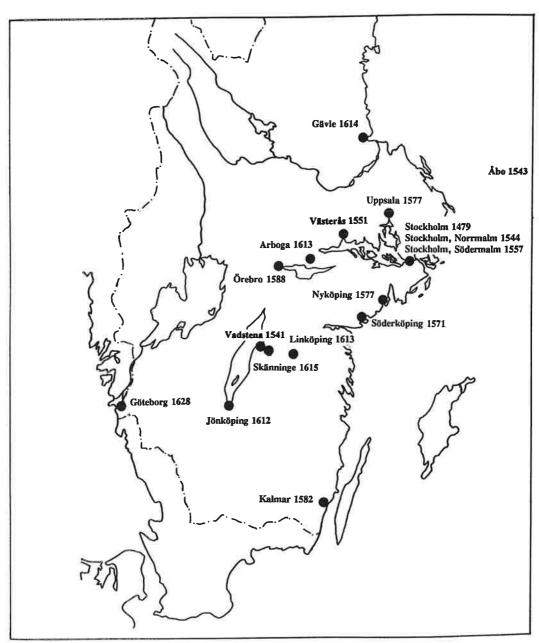


Fig. 2. Early written references to potters.

1995) and dated to the 18th and 17th centuries respectively. Notes of ceramic waste have also been reported Skänninge (Ljungstedt 1969), Torshälla (A.i.S. 1989, p. 387), Uppsala (Upl 1966, p. 136), Västerås (Nygren 1959), and Växjö (A.i.S. 1988, p. 423).

A ceramic tradition?

No overall evaluation of the testimony of written sources about pottery in Sweden after 1500 has been made hitherto, but pottery in modern times has been considered to lack roots in an indigenous medieval ceramic tradition. The occurrence of foreign names in written sources from the 16th and 17th centuries has been taken as an indication that the craft reached Sweden along with immigrant craftsmen, especially from the area south of the Baltic (Selling 1946; Ohlsson 1947; Lindqvist 1981). Pottery in Sweden has long been viewed as a decidedly urban pursuit. It is known, however, that there was some pottery activity in rural Sweden: for example, there is a report from 1696 of two potters in Eksjö with the right to extract clay and maintain a workshop at Flisby, outside the town (Lindqvist 1966). A potter in the village of Skene became a freeman of the town of Borås in 1769 (Lindqvist 1989, p. 184).

Since the raw materials needed for pottery could be found in Sweden, it would be more natural to envisage that the local need for household pots would have been mostly satisfied by native potters working in Sweden. There is some evidence of imports in written sources from the 16th century, but this does not account for any great quantities (Strömbom 1924, p. 276; Selling 1948, p. 31). The imported pottery must have comprised vessels which in some way were complementary to the local pots. In the discussion of whether pottery was made in medieval Sweden, scholars have pointed out the absence of clear evidence. In my opinion, the use of brick to build churches is evidence that an ability to fire clay at high temperatures existed, at least in the

Mälaren Valley, from the 1240s. In addition, archaeological indications of presumed local manufacture of ceramic products have recently been discerned among jugs found in Uppsala, where the pot-making appears to be connected with the establishment of religious institutions at the end of the 13th century (Elfwendahl 1995).

The organization and development of pottery

For a detailed survey of various crafts, their organization and special characteristics, the reader is referred to works such as Nyström et al. 1989, Lindberg 1964, and Augustsson 1991. The first mention of a potter in Sweden in a written source comes from 1479 (STb 1479, p. 207). From the 16th century there are a number of written records of potters and their products from several Swedish towns, e.g. Stockholm and Vadstena (Unnerbäck 1963, p. 116). From 1587 at the latest comes the first statement that the potters in Stockholm were incorporated in a kind of control organization, through which the town council exercised some supervision of the craft (Lindberg 1964, p. 104). A seal stamp from the potters' guild in Stockholm from 1622 still survives (Palme 1947). By this year the Stockholm potters appear to have been organized, and a potter named Daniel in Norra Förstaden (Norrmalm) is mentioned as the alderman of the guild, with Jöran the potter from Södermalm as his assistant (NFTb 1622, p. 282). The Stockholm guild of potters appears to have organized most of the potters in the whole country during much of the 17th century. An uncertain statement suggests that the town of Gävle established its own potters' guild in 1622 (Englund 1932, p. 18). In the second half of the 17th century and the 18th century the organization of potters became increasingly widespread in Swedish towns, and a number of new guilds were established. The old Danish provinces of Scania and Halland appear to have been particularly rich in potters' workshops. The vigorous growth of the craft in the towns in the latter part of the 18th century has been associated with a growing demand for tiled stoves of a new design, giving more heat but consuming less wood. This shift of focus in the production of the potters is also indicated in the change to the term "Stovemaker's and Potters' Guild", which took place in Stockholm in 1784 (Raphael 1915, p. 124).

Decisive turning points in the development and orientation of pottery in Sweden in the modern era have included the establishment of indigenous faience manufacture in 1726, the foundation of the Swedish East India Company in 1731 and the subsequent large-scale import of Chinese porcelain, a ban on the import of pottery products in 1739 (with the exception of socalled Waldenburger vessels), the coming of the modern tiled stove around 1760, the production of creamware following English models from the 1770s, and the introduction of cast-iron stoves after 1800. There has not yet been any research into the effects of all these events on the earthenware in the archaeological archives. It is also unclear how the statute of 1604 on the immigration of rural craftsmen to the towns, the regulation of crafts in 1621-22, and the law abolishing the guild system in 1846 can be detected in archaeological source material.

The potter's raw materials

Pottery requires a supply of suitable clay and plenty of firewood. Details are scarce about how the potters acquired the raw materials that did not occur naturally in the immediate surroundings of the workshop. An important question to clarify is therefore whether the potters were dependent for their supplies on someone who may have had an interest in their production. This could be answered by cartographic and archival studies; very little work has been done on the oldest sources from the 17th century.

In Sweden the material used for earthenware

production was Quaternary clays, primarily varved clays, known as red clay. The advantage of this clay was that it did not shrink much and allowed great temperature margins when firing. Red clay often contains 5-8% iron substances, which gives the ware a distinctly red colour after the oxidizing firing. The known potters' workshops from 1700 onwards are generally close to sources of clay. From the 18th century there is also evidence that the potters shared clay pits, either in or just outside the towns, and that the same pits were also used by brickmakers. It sometimes happened that the clay pits were regulated by royal decree (Lindqvist 1966). The white clay that was used does not occur naturally in Sweden, so it had to be imported. Metal oxides giving different colours for decoration could in some cases be of local origin; copper oxide, for example, which gave a green colour, could be obtained from a coppersmith, and iron oxide, giving a black colour, could be got from the blacksmith. Other colours may have been bought.

A plentiful supply of firewood for the kilns would have been essential, but we know very little about how this need was normally satisfied. An interesting record in this context is that a potter in Stockholm in 1479 testified in connection with the theft of wood from town land (STb 1479, p. 207). Another question is whether the kind of wood that was chosen for the firing affected the quality of the ware. From recent times we know that potters use spruce and pine as fuel (Englund 1932; Lindqvist 1981).

We have a statement suggesting one way to obtain lead for glazing: in 1576 Jakob the potter in Stockholm was accused of being a thief for having bought lead from the lead smelter of the King in Council (STb 1576, p. 27 f.).

Professional specialization – degrees of differentiation?

Apart from the question of the link of postmedieval pottery to an earlier indigenous pottery tradition, we must also clarify the degree

of professional specialization that occurred in different towns in the period, and whether this may be the reason that pottery is first mentioned so late in the written sources. Stockholm was the town in Sweden where professional specialization had come furthest, but there were still only about 50 occupations represented among the artisan burghers from the middle of the 15th century to the start of the 17th century. It is true that a sharp growth in the proportion of specialist craftsmen can be observed in Stockholm in the 16th century, but they are crown artisans set apart from the burgher craftsmen. The great increase in their numbers was a result of a growing royal interest in certain crafts (Lindberg 1964, p. 171 ff.). Accounts from the royal castles show that potters were also found among the crown artisans, often in connection with the installation of tiled stoves (e.g., Gardberg 1959, p. 105) and that they could be moved from one place of work to another (Nordberg 1975, p. 93). Sometimes the crown brought potters from abroad (Olsson 1961, p. 259).

Occupational specialization in other towns did not go as far as in Stockholm. For instance, the tax rolls drawn up for the redemption of Älvsborg castle in 1571 inform us that there were about 30 different professions in Kalmar, about 15 in Västerås, and so on. Towns where the crown was not active as an employer generally appear to have had a smaller number of specialized craftsmen. Some records indicate that specialization was not a matter of course even when an occupation was ascribed to a craftsman. From 1585 we have a report of a potter named Lars who fired 7000 tiles for the roof of Västerås castle (Nordberg 1975, p. 94). An example of a potter also being a brickmaker comes from Vadstena in 1642 (Andersson 1967, p. 253). A source from 1668 from Jönköping states that one of the town's potters delivered 10,000 glazed roofing tiles (Lindqvist 1966, p. 124). Finds of waste from potters' workshops should help us to clarify the degree of professional specialization among the potters and the degree of specialization in the town where they worked.

Yet another question which the archaeological workshop finds from postmedieval times could answer concerns the influence of the guild organization over production, and how an organizational change in craft work is reflected in pottery finds. Craft guilds were not formed in any large numbers in Swedish towns until the 16th century, their aim being to offer the members a secure livelihood in their work, to eliminate competition about the price of the goods, and to combat tendencies towards deteriorations in the quality of the products through regulations, training, and requirements for specialist skills. Archaeological study of artefacts should be able to determine how successful the guilds were in attaining high quality in the craft.

Consumers of pottery

One of the very first to describe ceramic vessels in Sweden and their contemporary significance was Olaus Magnus in his *Historia de gentibus septentrionalibus* from 1555. He noted that "earthenware pots are not manufactured, nor are they in use apart from those that may be imported from Germany for sale" (Olaus Magnus, book 13, ch. 35). In his commentary on Olaus Magnus, Granlund (1951, p. 265) notes, without specifying why, that it nevertheless is probable that earthenware pots were made in Sweden too.

The Reformation and the subsequent period under Gustav Vasa brought about a change and a reorientation of the pattern of consumption in Swedish society. Before this, the Catholic church, with its nationwide organization, had played quite a significant role in the creation of new consumption needs. With the consolidation of the national kingdom, however, large economic resources were concentrated in the royal court, which also became the country's biggest single consumer, presumably with quite different needs from those of the Catholic church. The latter half of the 16th century brought new opportu-

nities to sell goods, when the considerable wealth that had previously been used for the king's needs was passed on to an aristocracy which established close contacts with continental culture as a result of education and culture. As a consequence of this, a greater number of people than before demanded comfort and beauty in their lives, and were willing to pay for exquisite craft products, quality goods, and luxury articles. The new situation also meant that a larger group of people freed themselves from what had previously been a common material culture. At the same time, this social group communicated new ideals to the mass of the people, by exposing in various ways their relationship to the goods with which they surrounded themselves. With the new ideals, the artefacts acquired more meanings than they had before, with the occurrence of the same form in different materials, as well as different forms in the same material. It is therefore important to classify the possibilities for variation if we are to be able to detect changes in the pattern of consumption.

There were about 50 towns in Sweden before 1658, but only some of these had the chance to absorb and spread external cultural influences. At the end of the Middle Ages the strongest impetus for the use of ceramic vessels in the household still came from the ports; this is at least indicated by archaeological finds (Hasselmo & Broberg 1983). At the end of the 16th century the towns accounted for only 5 per cent of the population of Sweden. Self-sufficiency was widespread in many of the towns, and this is reflected in the number of people occupied with food processing; there are few mentions of bakers and butchers from the small towns. The majority of the potential consumers lived in agrarian settings, but they were the part of society which retained the inherited pattern of consumption longest, with a high degree of self-sufficiency as regards the stock of household goods they used. A reflection of this is that the use of pots appears to have been adopted in the countryside long after its breakthrough in urban households.

Archaeological research in Sweden has above all been interested in postmedieval pots as consumer goods, with respect to the presence or absence of certain types of ware. The pottery has been used as an indicator of different social settings in comparisons of contemporary objects (e.g. Broberg & Svensson 1987, 1989; Andersson et al. 1986; Andersson & Hållans 1992). The results show that it is an important task for archaeology to continue to clarify the need for pottery in certain user settings, but on the basis of the function of the pots. In addition, regionalization must be elucidated, and answers must be sought to the question why similarities and differences arise.

The potters in 16th-century towns, and later, have been assumed to have worked only to cater to the needs of the town and its immediate hinterland for simple utility goods. It is known that the potters working in Stockholm sold part of their produts outside the town. From 1576 there is a report that the potter Adam Budzern had been to Strängnäs market (STb 1576, pp. 27 f.). In 1577 Duke Karl offered a German potter the exclusive right to practise his craft in the town of Nyköping, while simultaneously prohibiting the import of pots (Lindberg 1964, p. 122). The question of pottery as a consumer commodity also raises the question of the availability and distribution of pots.

Workshop waste from Stockholm, Örebro, and Linköping

The actual production process and the organization of manufacture in Sweden is not known until later sources. No complete workshop has yet been studied archaeologically, or at least there is no known find. On the other hand, there are several finds of potters' workshop waste, including those from Stockholm, Linköping, and Örebro.

Stockholm

Early settlement in Stockholm was concentra-

ted in the town proper on Stadsholmen and the nearby islands of Helgeandsholmen and Gråmunkeholmen (Riddarholmen), situated in the watercourse which marks the transition from Lake Mälaren to the Baltic Sea. In addition, there was settlement on the mainland to the north and south of the islands, Norrmalm and Södermalm respectively. In 1479 a potter named Bengt is recorded as a witness in a case in which a person had unlawfully chopped wood on town land (STb 1479, p. 207). This is also the oldest attested instance of the occupational designation of potter in Sweden. From 1493 there is a mention of the big potter and the little potter, suggesting that, at least at this time, there were two potters in the town (STb 1493, p. 96). It is not until 1544 that we learn where the potters worked, through a note that the potter Tile had his house in Norrmalm (STb 1544, p. 39). From 1557 there is a report of a potter named Fauctor in Södermalm: he was allowed to retain the site where he had built a house, to replace the one he had lost beside the town shipyard (STb 1557, p. 198). The Stockholm council records show that, in the first half of the 17th century there were several potters living in the western quarter of Norrmalm. In the years 1613–17 there are mentions of five potters, each with his own house and yard. After a regulation of settlement in the 1640s the potters had to leave. We do not know where they went.

In 1978 ceramic waste was found in the Björnen quarter in Norrmalm. It was part of the filling material which can be associated with the creation of the new town plan. Most of the waste probably comes from a pottery operating in the area. The waste includes both simple and exclusive household vessels, as well as stove tiles and other ceramic objects. On the basis of foreign models, especially from Germany, the material has been interpreted as representing pottery production from the mid-16th century to the 1640s at the latest. Among the finds was a dish bearing the date 1630 (Galt 1981).

Örebro

In 1588 Jöran the potter was recorded as having delivered pots to the kitchen and the pharmacy at Örebro castle (Waldén 1960, p. 64). A tax roll from 1613 includes a potter in Örebro. In the 1670s there were at least four potters practising their craft simultaneously in the town. In the mid-18th century the potters lived along the present street Kyrkogårdsgatan (Ohlsson 1947). By 1779 the potters were organized in a guild (Raphael 1915, p. 125).

In 1913 a large amount of potter's waste was found on a plot in Kyrkogårdsgatan. The waste comes from production which took place in the area, but not on the plot where it was found. In 1784 this was still unoccupied, lying on the outskirts of the town. The vessels that were found had been spoiled during the firing. The waste is dated to the second half of the 17th century and into the 18th century. The years marked on surviving fragments lie in the range 1664-1729 (Ohlsson 1947).

Linköping

In the tax rolls drawn up for the second redemption of Älvsborg castle in 1613 we find the earliest mention of a potter in Linköping. In the 17th century there may have been only one potter working in the town. Towards 1700 there were five potters working at the same time. It was not until around 1776 that they were organized in a guild. In the 1740s the potters were assembled in the quarter nearest the church of St Lars (Lawrence), on the northern edge of the town. There are signs to suggest that they were already here at the end of the 17th century. The potters appear to have used a common clay pit by the River Stångån, but no clay could be extracted here after the building of the Stångebro bridge in

Close to the St Lars quarter there have been finds of workshop waste from pottery production. The misfired pots found here have 17th-century forms. Potter's waste has been found in the Adam quarter, at the western entrance to the town,

dating pottery production in this workshop to the 18th century (Lindqvist 1987).

Workshops – the key to local pottery production and consumption

Workshop waste from the towns of Stockholm, Örebro, and Linköping together give us information about the production and consumption of pottery in each town. Unfortunately, the find circumstances do not allow the material to be attributed to the production of one and the same workshop in each town. The suggested datings indicate that the finds span a period of 200 years, from the middle of the 16th to the middle of the 18th century. The find spots and the written evidence suggest that the potters in these towns lived together on the outskirts of the settlement. In Linköping there are details of a move to a new area in a later phase. Availability of clay and firewood in the immediate vicinity of the workshop is hinted at in some records. There were clay pits near the workshops in Linköping at least until the 18th century. Wood for kilns may have been difficult to find close to the workshops in Stockholm, as suggested by a case of unlawful wood-cutting on town land to which a potter was witness.

The finds from Stockholm and Örebro appear particularly interesting because of their narrower dating framework and the diversity of vessel forms, comprising pots, frying pans, bowls, dishes, and so on, the latter perhaps due to the find circumstances. In Stockholm, Örebro, and Linköping the predominant vessels are tripod cooking pots, suggesting that these accounted for a significant part of the workshop production. From Stockholm and Örebro there are also finds showing that, apart from pots, the workshops produced stove tiles (in Stockholm) and miniature vessels and glazed clay pipes (in Örebro). The potter in these places can presumably be described as a ceramic jack-of-alltrades, catering to a variety of local needs in order

to make better use of the capacity of the workshop for better profitability.

Conclusion

Earlier research on red-fired earthernware from postmedieval times has been dominated by ethnologists and concentrated on the craft of the potter. Art-historical studies have focused on decorated vessel types. It is only in recent years that archaeologists have also begun to show an interest, mainly concerning methodological and chronological questions, but also pottery as a consumer commodity. Archaeologists have considered the presence or absence of types of ware in different settings.

This examination of red-fired earthenware has shown that the written sources have an increasing number of references to potters in Sweden from the 16th century, and that a parallel development can be discerned in the volume of archaeological ceramic material. The red ware is used for vessels of various forms, as well as objects with other functions. A chronological development has been outlined for vessel forms and decorations, but it will need to be supplemented with many findings concerning both dating and form variations. In addition, it has been observed that the number of vessel forms increases with time until the 18th century.

The pottery craft that begins to appear in the written sources in the 16th century has been assumed to have been brought by potters immigrating from south of the Baltic, but an indigenous medieval tradition of pottery cannot be ruled out. The archaeological material suggests that this manufacture should probably be sought in other settings than the later production. In the 16th century potters begin to be visible in the towns and the royal castles, and it was presumably these settings that had an increased demand for ceramic products. It is uncertain whether there were potters in the countryside at this time, and if so, what they produced. It is not until the end of the 17th century that we have a mention

of potters working in the countryside. In the 1580s the potters of Stockholm appear to have been encompassed by the control exercised by the town authorities, and by 1623 they had established a guild in which potters from much of the country were enrolled. Potters' guilds were later set up in several other towns. In the 18th century there was a change in the orientation of production, caused by a number of events; production was to be geared more towards tiled stoves. In 1846 the craft guilds were abolished in Sweden.

The availability of the raw materials - clay and wood - probably dictated where the craft could be established. We do not know whether potters were dependent on someone else for their supplies. The potters of the 16th and 17th centuries at least appear to have had a variety of pursuits. Records in the documents show that potters also made bricks and tiles at this time. The workshop finds discussed here reveal that the potter not only made vessels of various kinds but also other goods such as stove tiles, ceramic toys, and applied glazing to clay pipes.

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