

MAGOR PILL (GWENT) MULTIPERIOD SITE: POST-MEDIEVAL POTTERY, AND THE SHIPPING TRADE

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Over the period from the late 16th century to the mid 18th century, the landing place at Magor Pill on the Gwent coast received pottery by water from chiefly four sources. Whereas wares travelled down the Severn and its estuary from the Malvern Chase (up to 1633) and Stroat industries, the potteries in South Somerset and, particularly, North Devon supplied wares from across the Bristol Channel. The other wares recorded are in very low ratios, but originate as far afield as Essex, the Surrey-Hampshire border, the Midlands and North Wales, and the Continent. Welsh industries seem to be unrepresented

The pottery imported at Magor Pill is largely of the kind that would have been needed in the immediate hinterland for the making and export of dairy products. Finewares for the table are few. There is archaeological evidence for the export of livestock from the site, probably for fattening in the West and Southwest of England.

The highest proportion of recorded wares came from the Bideford-Barnstaple area of North Devon, located on navigable estuaries. The prominence of these wares at Magor Pill illustrates well the cost-advantages of cheap water transport in the early post-medieval period, which allowed North Devon products to be vigorously traded at many ports and landing places on the Severn Estuary, and upriver, the Bristol Channel, the Cornish and South Devon coast, the coast of Ireland, and in the Channel Islands and mainland France. Burgeoning British settlements in the West Indies and on the American East Coast were also supplied with pottery from North Devon. There was an important secondary dispersal from Cornwall, Wales and Ireland of North Devon jars and crocks (lidded jars), which were used in the export of butter and salted fish. In the wide dispersion of its wares chiefly by water, the North Devon pottery industry may be compared to the long-lived Romano-British enterprise of Southeast Dorset (BB1).

Introduction

Magor Pill and its associated palaeochannels emerge on the shores of the Caldicot Level on the Welsh side of the outer Severn Estuary. They form the tidal lower reach of the St. Bride's Brook, rising in hills north of the medieval village of Magor. Although

deserted today, the pill was a focus for significant human activity from the late Iron Age into post-medieval times (Nash-Williams 1951; Boon 1967; Courtney 1986-87; Whittle *et al.* 1989; Allen and Rippon 1997; Allen 1996a, 1996b, 1998, 1999; Nayling 1998). The material remains demonstrating that activity, however, are difficult to interpret, since few now lie in a stratified context, either primary or secondary, on account of the severe and episodic erosional retreat experienced by the shores of the Caldicot and Wentlooge Levels over the last two millennia (e.g. Allen 1987, 1997; Allen and Rippon 1997). Many settlement/activity sites have been destroyed, only the more durable physical remains, such as pottery, metallurgical residues, building materials and animal bones, surviving today as intertidal dispersions of 'archaeological pebbles'. The pottery at Magor Pill is chiefly Romano-British, as earlier reported (Allen 1999), but the important post-medieval element is comparable in abundance, and there are also medieval and prehistoric wares.

This paper has two aims. One is to describe the rich post-medieval pottery assemblage from Magor Pill, especially in regard to its implications for the shipping trade in the Bristol Channel, the Severn Estuary and the River Severn itself. Courtney (1986-87) reported post-medieval pottery vessels - two from Magor Pill - recovered as casual finds from the Gwent coast. He assigned these to Continental sources and suggested that, although the pots were not themselves trade goods, they had nonetheless been discarded from ships plying the Bristol Channel. Allen and Rippon (1997) briefly noted a small collection of post-medieval pottery from Magor Pill, drawing attention to the preponderance of wares from Southwest England. They proposed that these articles had been landed from vessels which called for the purpose of a return trade in store cattle and sheep. The second aim stems from the confirmation of the importance of southwestern wares at the site, especially vessels representing the North Devon industry. Building on Grant's (1983) largely documentary studies, which necessarily are briefly

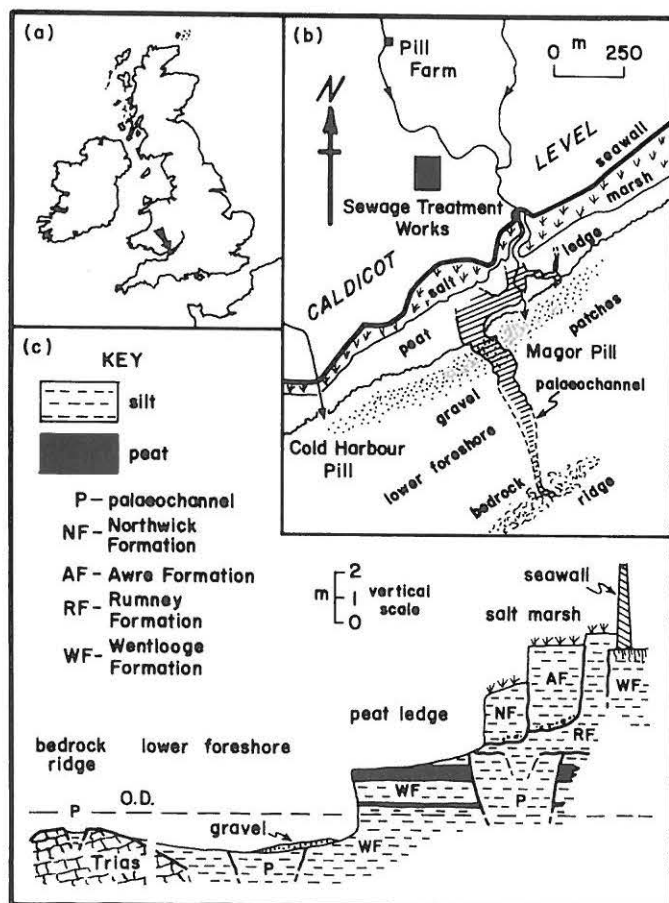


Figure 1: Magor Pill. (a) Setting. (b) The features of the intertidal zone. (c) Partly schematic (but vertically accurate) cross-section illustrating the geomorphology and geology of the intertidal zone.

reviewed, it is to place Magor Pill in the network of trading in North Devon products, and to make a hitherto unattempted, preliminary analysis of the archaeological evidence for the general dispersion of these wares. The North Devon enterprise emerges as a giant large enough to rival the greatest of the Romano-British coarseware industries.

Setting

The landscape at Magor Pill (Fig. 1a, b) is divided into two zones by a bold sea wall stabilized after set-back largely on a probably late medieval line (Rippon 1996; Allen and Rippon 1997). Southwest of the pill the wall consists of a tall armourstone apron and concrete wave-return cap, but is a large earth bank to the northeast. Inland lies a distinctive historic landscape (Rippon 1996) which includes, to the southwest of the St. Bride's Brook, canalized as Mill Reen, farmland (Lower Grange) owned by the Cistercians of Tintern Abbey.

Seaward of the wall lies a complex outcrop

(Fig. 1b, c) of Holocene peats and silts (Wentlooge, Rumney, Awre and Northwick Formations) with a total thickness of about 10 m (e.g. Locke 1970-71). Far out on a low ridge the beds (lower Wentlooge Formation) rest on Triassic sediments affected by probably late Pleistocene ice-wedge casts. Conspicuous intertidally is a bold cliff and wide ledge displaying peats and silts of mid Holocene age (middle Wentlooge Formation). The former channel of Magor Pill cuts these and some higher beds, and ranges across the shore at least as far out as the bedrock ridge. It was silting up from around the end of the Roman period and, after an important erosional break of early medieval date, again in later medieval-modern times. The break divides the fill into early (olive green) and late (pale brown) phases.

Abutting the wall on its seaward side is a descending flight of three salt marshes, each underlain by silts deposited on an erosional, wave-cut platform backed by a largely concealed cliff (Fig. 1c). The oldest deposit (high marsh) is the Rumney Formation of possibly 17th-century inception. The intermediate marsh (Awre Formation) is of late 19th-century origin. Beneath the lowest marsh lies the Northwick Formation, dating from the middle years of the 20th century. These marshes show that the long-term tendency for coastal retreat in the area (Allen 2000) is accompanied by a short-term instability, expressed as repeated episodes of retreat and advance.

Taphonomy

The post-medieval pottery assemblage consists of a total of 938 sherds (including clay tobacco pipes) which come from two contexts (Table 1). Most of the collection was assembled over a period of years by systematically line-walking discontinuous patches of semi-mobile gravel (Allen and Rippon 1997) that range for about 1.25 km along the lower foreshore (Fig. 1b). Vigorous reversing tidal currents sweep this part of the intertidal zone at all seasons. The gravels are further stirred during gales by waves as much as 2 m high. Trapped in the gravels lie sherds of post-medieval pottery vessels which were either transposed from some stratified context or, perhaps in some cases, dumped overboard from ships. Accompanying the post-medieval pottery are sherds of late Iron Age, Romano-British and medieval wares, together with prehistoric flakes and tools (flint,

Table 1. Summary of pottery assemblage at Magor Pill

	no.(%)
Malvern Chase Ware (late fabric)	126 (14.1)
Stroat Ware	106 (11.8)
N. Devon <i>Sgraffito</i> Ware (fabric A)	6
N. Devon Gravel-tempered Ware (fabric B)	42
N. Devon Gravel-tempered Ware (fabric C)	195
N. Devon Gravel-tempered Ware (fabric D)	4
(sub-total of North Devon Wares)	247 (27.6)
South Somerset Wares	178 (19.9)
North Somerset Wares	3 (0.3)
Ashton Keynes Ware	45 (5.0)
Cistercian-type ware	8 (0.9)
Bristol/Staffordshire Wares	
cream-bodied	4 (0.4)
pressed	4 (0.4)
iron-glazed ('tiger' ware)	9 (1.0)
Staffordshire Black-glazed Ware	2 (0.2)
Post-medieval Welsh Borderland Ware	2 (0.2)
Black-glazed kitchen wares (?Buckley)	5 (0.6)
Midland Purple Ware	1 (0.1)
Surrey-Hampshire Border Wares	1 (0.1)
Metropolitan Ware	2 (0.2)
London-type stoneware	15 (1.7)
Derby-type stoneware	7 (0.8)
Nottingham Stoneware	1 (0.1)
Miscellaneous white stonewares	7 (0.8)
Giant stoneware vessel	18 (2.0)
Sugarmoulds	3 (0.3)
Miscellaneous red earthenwares	79 (8.8)
Miscellaneous glazed white earthenwares (19-20th century)	9 (1.0)
Unprovenanced wares	
fabric A	3 (0.3)
fabric B	1 (0.1)
fabric C	1 (0.1)
Martincamp Ware	5 (0.6)
Merida-type ware	2 (0.2)
Westerwald Stoneware	2 (0.2)
Total	896 (99.8)
Clay tobacco pipes	
stem fragments	41 (97.6)
bowls	1 (2.4)
Total	42 (100.0)

tuff), primitive iron-making tap slag, furnace lining, and a few angular lumps of iron ore, some possibly scoured up from the medieval boat-wreck in the palaeochannel (Allen 1996b; Allen and Rippon 1997; Young and Thomas *in* Nayling 1998). The bones and teeth of domestic animals abound (Allen and Rippon 1997).

A little post-medieval pottery was recovered along with bones, teeth and building materials from several stratified contexts in the main palaeochannel, exclusively from pale brown silts of the late-phase fill. Those sherds lacking signs of abrasion may be in a primary context, but others, with rounded edges and corners, were probably reburied. The stratified sherds and those from the gravels represent the same wares, and the transposed and stratified parts of the assemblage are accordingly combined.

The post-medieval pottery is very variable in preservation. Representing chiefly large vessels (e.g. pancheons), the sherds are generally substantial in size, as exemplified by the North Devon Wares (Fig. 2). Consequently, it is unsurprising that many became severely abraded while in the intertidal zone. In the worst cases, edges and corners are fully rounded, and glazes, slips and washes have largely or wholly disappeared. Surviving glazes tend to be minutely fractured and dulled. Repeated wetting-and-drying and, during cold weather, freeze-thaw while exposed at low tide have further hastened damage to glazes and to slips, especially slip-trailed decoration. Bacterial staining is an additional obstacle in identification. Other sherds are, however, comparatively pristine, displaying bright, unscratched glazes and edges and corners with a barely perceptible smoothing. Despite the harsh conditions, there is little to suggest

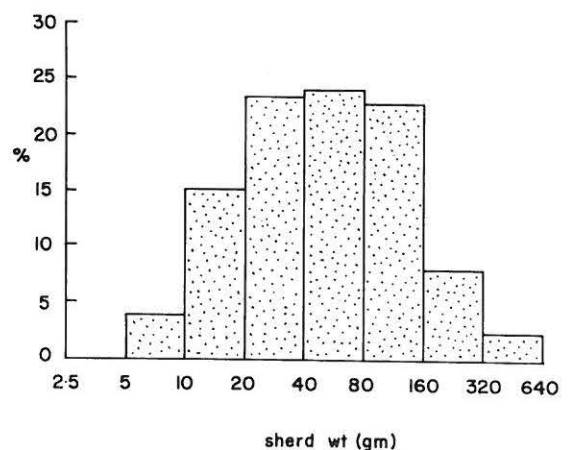


Figure 2: Post-medieval pottery from Magor Pill. Distribution of weight among 247 sherds of North Devon Wares (see Table 1).

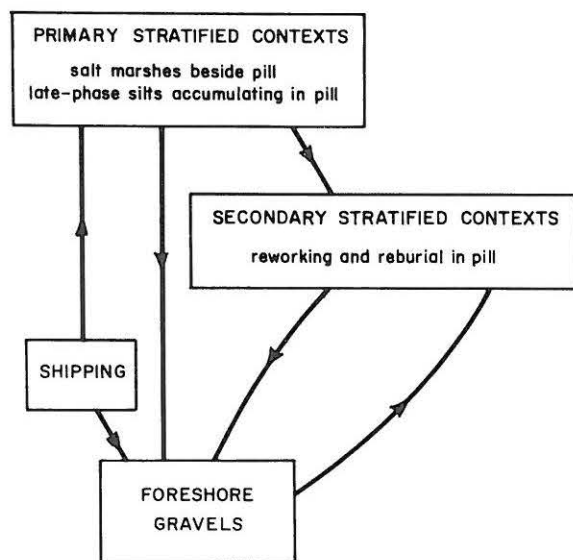


Figure 3: Preservation pathways of post-medieval pottery and other durable artefacts of the period at Magor Pill.

that the assemblage experienced significant post-depositional modification. Although abrasion is generally marked, the 100-fold range in sherd weight (Fig. 2), and the observation that at least 38 (4.2%) out of the total of 896 vessel sherds are clearly joining (14 pairs, two trios, one quartet), although variously worn, suggests a low degree of size-shape sorting and translation at the site. The various currents seem simply to stir the sherds and shift them back and forth across the line of the palaeochannel, diffusing the material only very gradually.

The post-medieval pottery at Magor Pill has experienced a shorter sequence of geological events than the Iron Age and Romano-British groups (Allen 1999 fig. 5), and the preservational pathways are both fewer and simpler (Fig. 3). As the shoreline shifted, sherds were either (1) passed directly from primary stratified contexts to the foreshore gravels, (2) redeposited in secondary stratified contexts in the palaeochannel, or (3) reworked into the gravels from secondary deposits. In view of the many stray finds from along the Gwent coast, including Magor Pill (Courtney 1986-87), the possibility cannot be denied that some sherds were dumped onto the foreshore directly from ships. Others may have reached the gravels after redeposition in either the Awre or Northwick Formations (see Fig. 1c), but of this there is no proof.

General character of the pottery assemblage

The assemblage (Table 1, Appendix A) dates from the late 16th to the mid 18th century and is dominated by four wares originating within the general region, accompanied by numerous others in low proportions also from the region or from further afield.

The Malvern Hills area has afforded pots since the Iron Age, and the industry persisted at Hanley Castle (Hurst 1994), overlooking the Severn, until Malvern Chase was enclosed in 1633 (Vince *in* Heighway 1983). The vessels at Magor Pill assigned to the post-medieval period (Tables 1, 2, Fig. 4) are all in the 'late' or 'pink' Malvern Chase fabric (MALVP), included in Vince's (1977, table 1) petrological group 3 typified by low proportions of Malvernian rock fragments. It is moderately hard but porous and susceptible to weathering, generally pale orange-pink in colour throughout, and with abundant, moderately rounded, fine-coarse grained quartz sand. There is no published monograph of the wares, but forms are described by Barton (1968-9), Vince (1977; *in* Bond and Hunt 1977; *in* Heighway 1983; *in* Shoesmith 1985), and Morris (1980). Hurst (1994) describes vessels from a kiln site at Hanley Castle. Most pots in the late fabric at Magor Pill are plain and many carry a thin red-brown wash. Decoration is restricted to thumb-printing externally on rims, a turned cordon or groups of a few coarse, horizontal grooves (see Vince *in* Shoesmith 1985, fig. 40.9). Glaze is generally sparse and restricted to the lower interiors of vessels and the insides of rims, both sites of wear. Typically, the glaze is clear, but black and olive-green colours were occasionally seen.

Stroat overlooks the west bank of the middle Severn Estuary on the Gloucester road about 5 km northeast of Chepstow. Here at a known kiln site (Hart 1967) potters worked from around the end of the 16th century to supply Gloucester into the 17th century (Vince *in* Heighway 1983). Stroat Ware (STR) may not have been produced much after the end of that century. The ware is poorly documented as to origins, character and distribution, although there is a strong affinity with South Somerset and, especially, North Devon products. Stroat Ware is quite plentiful at Magor Pill, but less so than Malvernian, South Somerset or North Devon products (Table 1). Typically, the fabric is hard to very hard, red to dark red with a brown to dark grey core, and abundantly sandy with occasional limestone and sandstone grains. The range of forms is narrow, with the emphasis on pancheons and bowls (Fig. 5, Table 2). Most recovered vessels carry a strong and

Table 2. Vessel forms of the main coarsewares, as indicated by numbers of distinctive sherds

<i>form</i>	<i>no(%)</i>			
	MALV	STR	SSOM	ND ¹
dishes	1 (4.3)	1 (3.2)	3 (8.3)	5 (5.8)
jugs	2 (8.7)	7 (22.6)	-	6 (7.0)
pancheons/large bowls	11 (47.8)	15 (48.4)	17 (47.2)	56 (65.1)
small-medium bowls	3 (13.0)	6 (19.4)	6 (16.7)	1 (1.2)
pipkins	-	-	-	2 (2.3)
chamber pots	-	-	-	1 (1.2)
cups/tankards/porringers	-	1 (3.2)	3 (8.3)	4 (4.7)
jars	3 (13.0)	-	5 (13.9)	4 (4.7)
crocks	-	-	-	6 (7.0)
cisterns/pitchers	2 (8.7)	-	-	1 (1.2)
other	1 (4.3)	1 (3.2)	2 (5.6)	-
total	23 (99.8)	31 (100.0)	36 (100.0)	86 (100.2)
¹ -all fabrics				

bright, green to olive glaze internally or, in a few cases, overall. Brown glazes are infrequent. Decoration is limited to simple painted designs and, very occasionally, thumb-printing or turned horizontal grooves.

South Somerset Wares (SSOM) come from the Royal Forest of Neroche, where the heyday of the industry fell in the late 16th, 17th and early 18th centuries (Coleman-Smith and Pearson 1988). The materials used were micaceous Jurassic clays, combined with variable amounts of quartz sand (<1 mm), ferruginous, concretionary material, and occasionally flint, yielding a soft, red, easily weathered fabric. The products are enormously varied, ranging from *sgraffito*-decorated or slip-trailed tablewares to coarsewares for the kitchen and dairy. Coleman-Smith & Pearson (1988) give a detailed type-series, and from Exeter Allan (1984) described many closely-dated groups. Another large group is at Plymouth (Gaskell Brown 1979). In the assemblage from Magor Pill, South Somerset Wares (Fig. 6) lie second only to those from North Devon (Table 1), the emphasis again falling on the larger coarseware vessels (Table 2).

Especially well represented at Magor Pill are products of the post-medieval North Devon potting industry (Tables 1, 2), which started around 1600, flourished in the middle and late 17th century, and gradually declined through the 18th (Watkins 1960; Grant 1983). Based on Bidford, Barnstaple and Great Torrington, it exploited Pleistocene lake clays and tills dug near the village of Fremington (Edmonds *et al.* 1985), together with very coarse sands and fine gravels from the tidal Torridge and Tawe. North

Devon Wares (ND) are represented at Magor Pill by a modest variety of almost exclusively large, plain vessels in four related fabrics (Tables 1, 2, Figs. 7, 8), which may partly reflect the work of different potters. Tablewares are conspicuously few. Evans (1979), Grant (1983) and Allan (1984) give limited type-series, but the enormous North Devon industry remains without comprehensive monographic treatment.

The minor wares present at Magor Pill (Table 1, Fig. 8) have a wide provenance. Some come from within the general region (e.g. Bristol/South Staffordshire), others from more distant British sources (e.g. North Wales, Essex), and others again from the near-continent.

Character and function of the Magor Pill site

What was the role and character of Magor Pill from the late 16th to the mid 18th century?

The pottery is specialised, of a carefully selected range of vessel types, and definitely utilitarian. Under each of the four main wares, pancheons and large bowls make up about one-half of all vessels (Table 2). Jugs, jars and crocks are also well-represented, collectively amounting to about one-third to one-half of the large bowls and pancheons. It is tablewares that are narrow in diversity and low in frequency. Surprisingly, this pattern is not matched at Port Eynon, a small coastal settlement to the west (Wilkinson *et al.* 1998), but is not unexpected in comparison with regional urban centres (Radcliffe and Knight 1972-73; Webster and Webster 1974; Evans and Wrathmell 1978; Gaskell

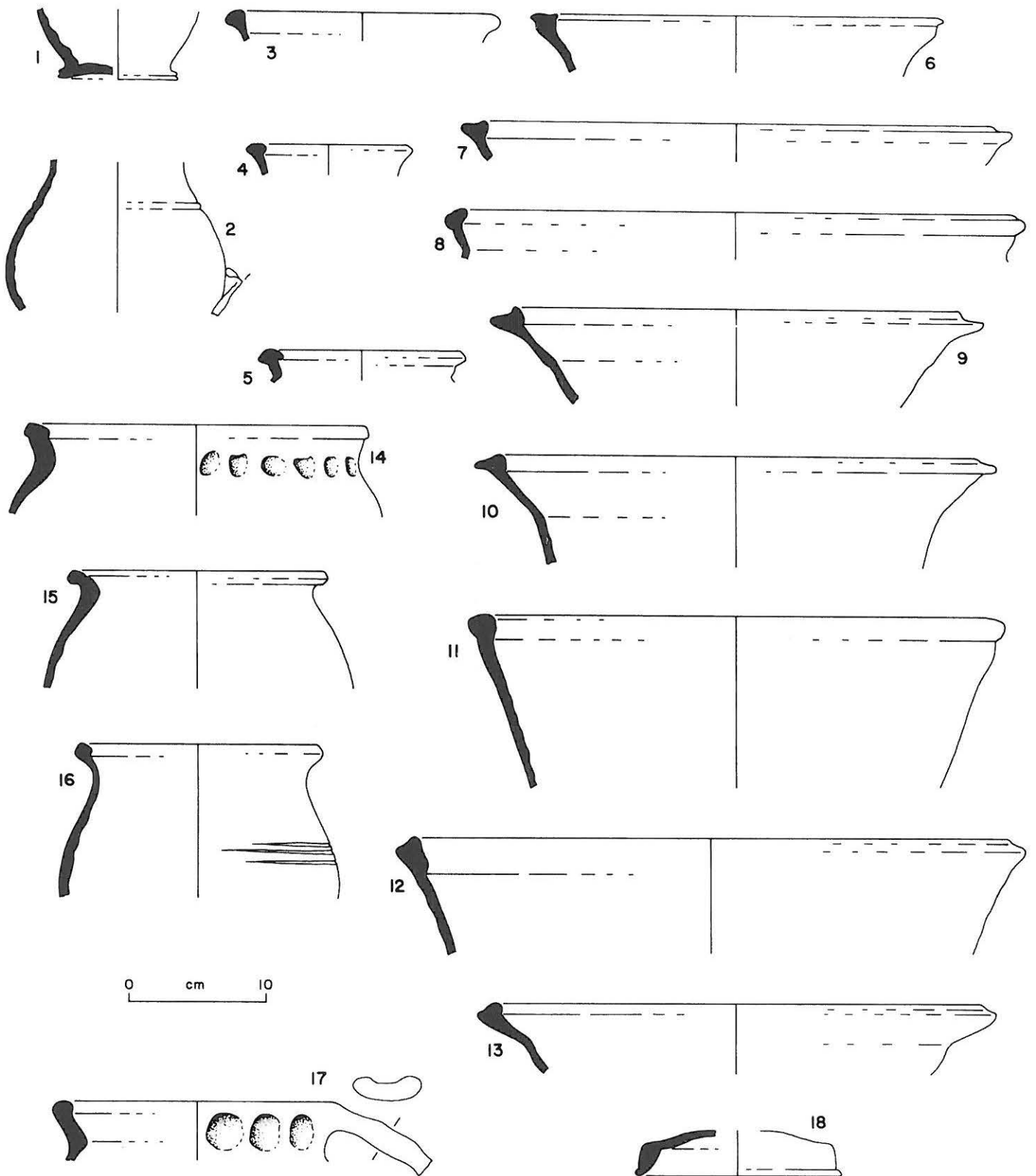


Figure 4: Pottery from Magor Pill. Malvern Chase Ware (late fabric).

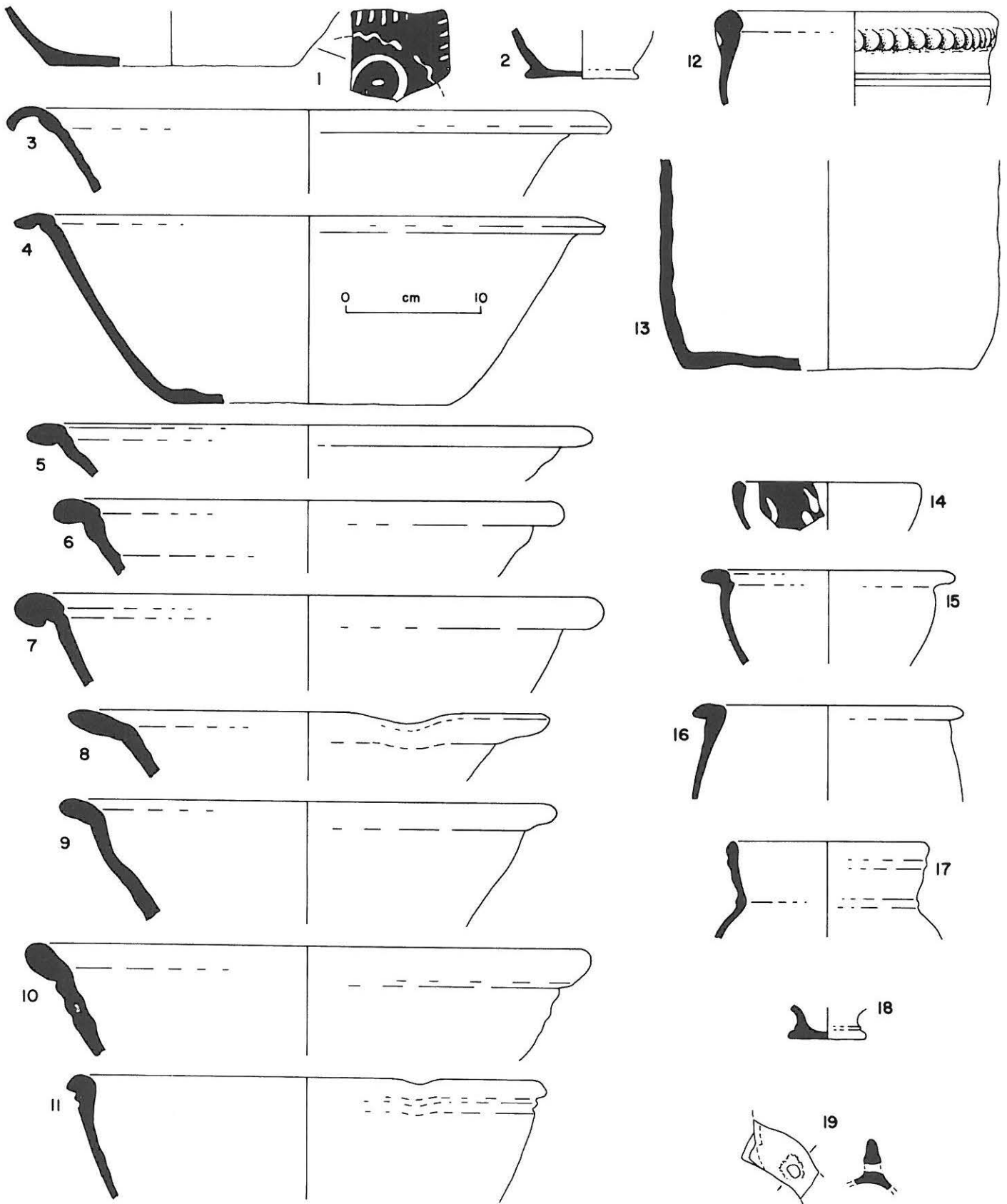


Figure 5: Pottery from Magor Pill. Stroat Ware.

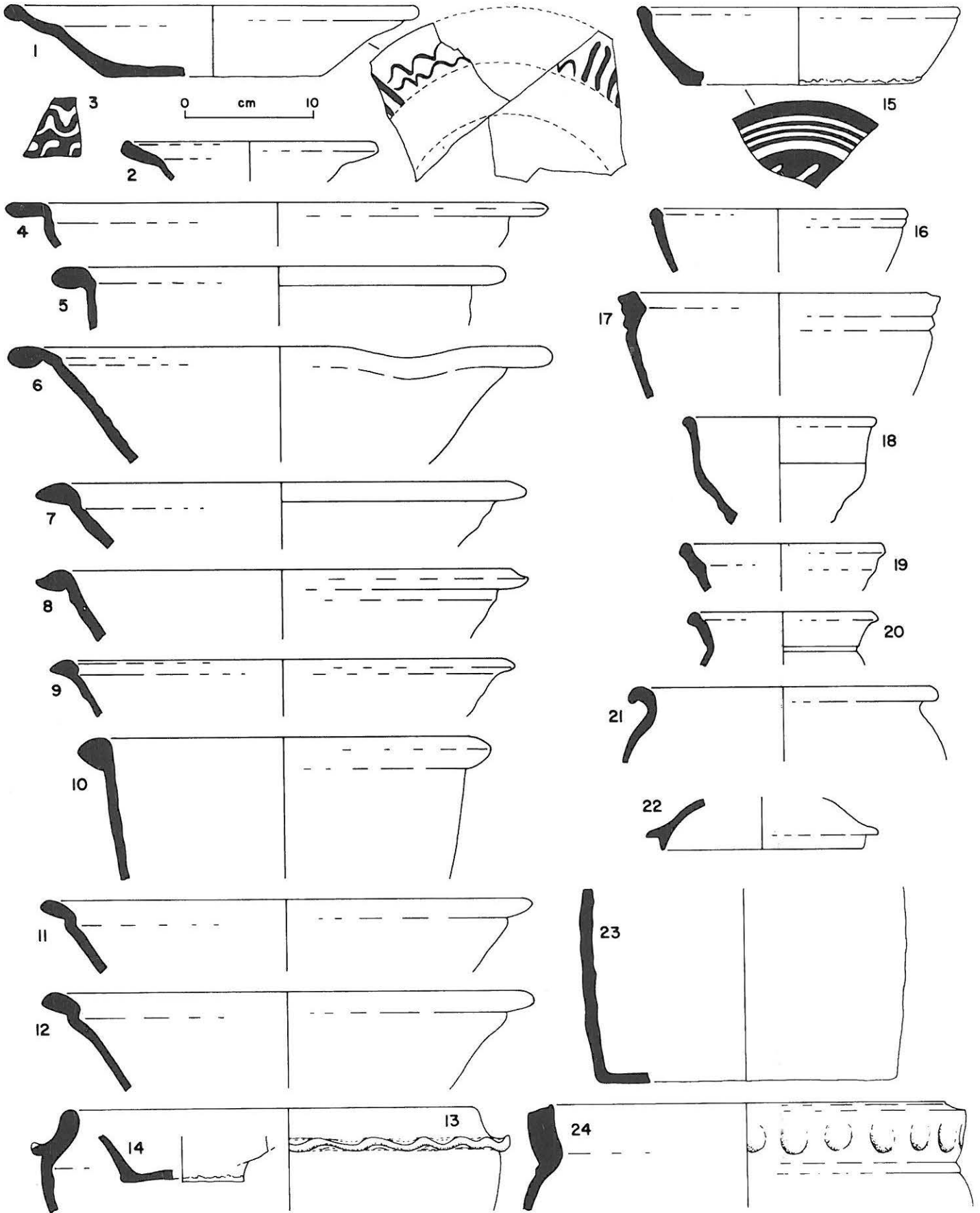


Figure 6: Pottery from Magor Pill. South Somerset Wares.

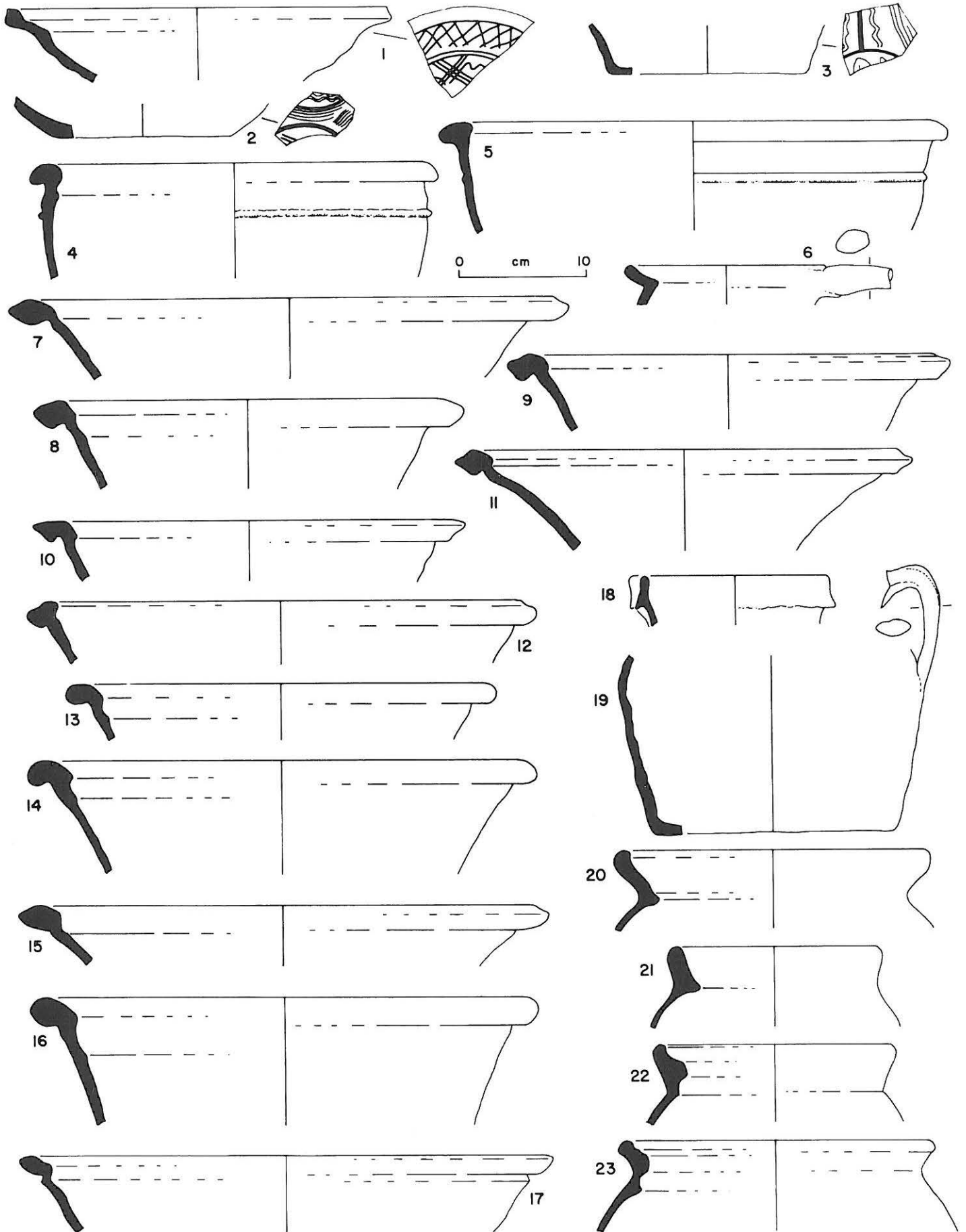


Figure 7: Pottery from Magor Pill. North Devon Wares.

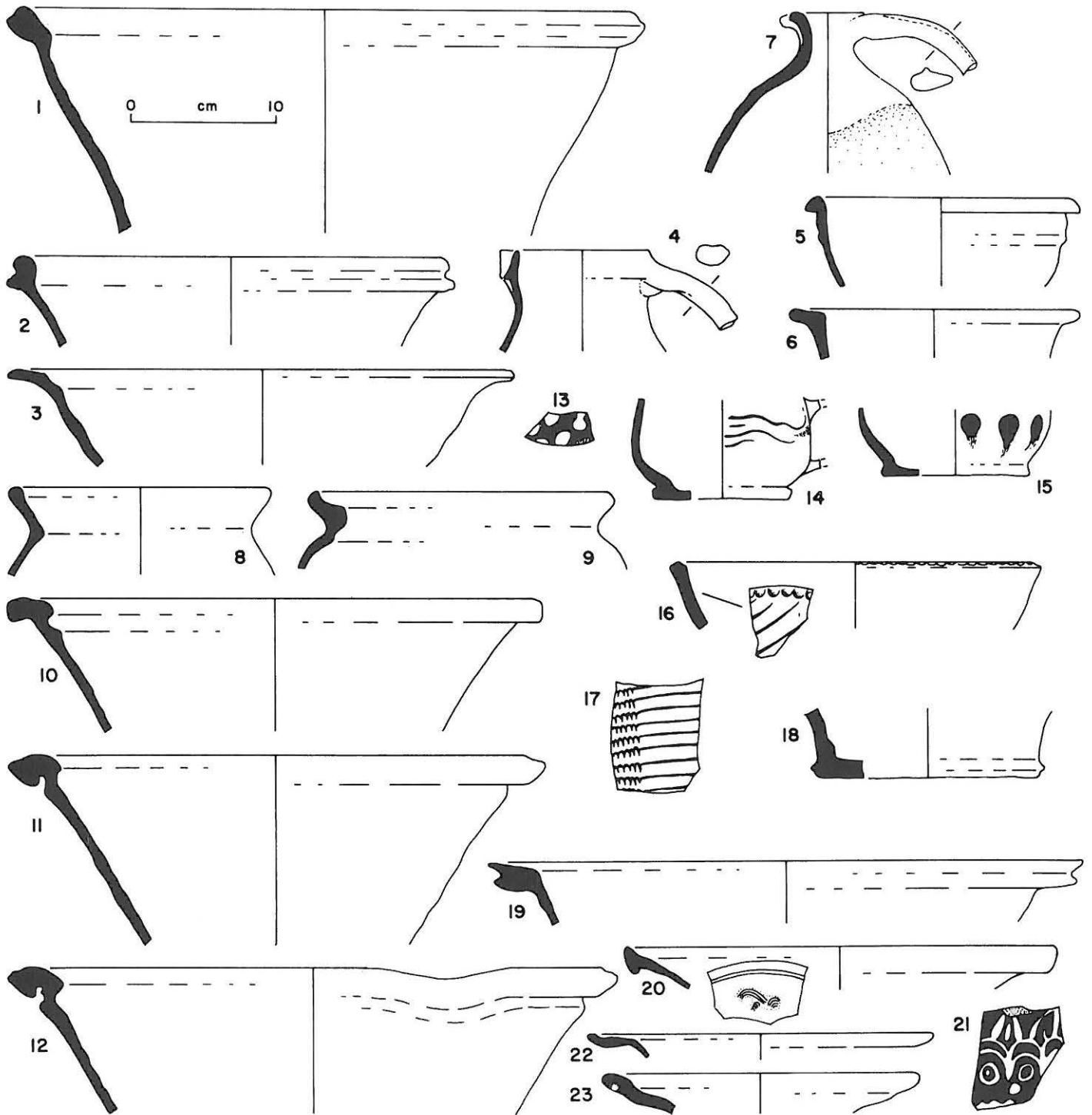


Figure 8: Pottery from Magor Pill. North Devon Wares (1-12) and other wares (13-23).

Brown 1979; Vince *in* Heighway 1983; Allan 1984; Webster 1984, 1989, 1991). Furthermore, the tablewares at Magor Pill point much more, although not exclusively, to the 18th century than do the pancheons, jugs and jars.

The kinds of vessel emphasized at Magor Pill suggest that the pottery was destined chiefly for the dairy industry of the hinterland. Pancheons, especially spouted ones, are well-adapted to the separation of cream, which could have been temporarily stored in crocks or cloth-covered jugs before being churned into butter. Jars and crocks are cheap, sturdy and convenient vessels in which to carry butter to distant markets. The larger ones can also be used to transport such coastal produce as oysters and salted herring and pilchards. Deep bowls and to some extent pancheons are ideal vessels in which to curdle milk in cheese-making.

Even more striking than the specialised character of the assemblage is the lack of indisputably Welsh elements, even at low frequencies, and despite the activities of several contemporaneous potteries in southern and southeast Wales (e.g. Talbot 1968; Evans and Vyner 1978; Hughes 1980; Thomas 1980; Evans 1983; Clarke *et al.* 1985; Vyner 1987). To reach Magor Pill the chief wares recorded had travelled more than 100 km from sites in Southwest England or 75 km from the West Midlands (Fig. 9b).

The predominance of wares from distant sources, the dearth of local products, and the specialised character of the assemblage show that Magor Pill from the late 16th to the earlier 18th century was a significant landing place involved in the shipping trade, confirming the preliminary analysis (Allen and Rippon 1997). Quarried stone and some light timbers are preserved in the late-phase palaeochannel fill, but no standing structures survive to define the physical appearance of the site. Nevertheless, it may be conjectured that a limited range of landing and storage facilities existed somewhere beside the pill. In this light, the more common pottery could represent largely discarded goods damaged either at sea or while being unloaded and stored. The sparse tablewares could have either been used on board ship or at the landing place before being discarded, or they may represent speculative purchases on the back of the chief traded goods.

Written sources confirm that Magor Pill could have been a significant landing place, at least during the early part of the period spanned by the pottery,

although overshadowed by neighbouring Caerleon, Newport and Chepstow (Dawson 1932; Waters 1977). Dr Thomas Phaer, reporting during Edward VI's reign, describes the site as "a pill or creke belonging to Chepstow [the legal or head port] where is grete ladyng of small boats with butter, cheese and other kyndes of vitelles to ships..." (Robinson 1972, 493). Phaer listed the pill among supervised landing places - Rumney, Peterstone Wentlooge, Newport and Goldcliff - situated between Cardiff and Chepstow. As Williams (1963, 95) notes, John Cole of Cardiff was appointed in 1549 "searcher [supervisor] in the the ports of Chepstow, Magour, Newporte...to have the giving of the cocketts [official cargo lists and valuations], taking securities especially for transport to other regions of butter, wool, cloth, grain, metals or anything else without royal licence..." Commenting on a document of 1578, Lewis (1927, 320) and Dawson (1932) find Magor Pill among the "havens and creeks of the County of Monmouth" under its medieval name of Aberwaythelles (or Abergwaitha), identifying further supervised landing places of a similar standing on the Gwent Levels. Rippon (1996) and Allen and Rippon (1997) have also comprehensively stated the case for Magor Pill as the site of this medieval port (see again Redknap *in* Nayling 1998).

Just as the southeast coast of Wales possessed numerous havens and creeks engaging in trade, so also did the Severn Estuary in Gloucestershire (e.g. Green 1997) and the Severn far to the north above tidal limits (Green 1999). Gloucester itself was always an important port, but so also for a time were Newnham on the inner estuary (Herbert 1979) and Upton-on-Severn upstream from Tewkesbury (Grant 1983, Green 1999). Upton thrived in the 17th century, as it was a stopping point for both up- and down-river traffic and the gateway to rich Herefordshire and south Shropshire. Newnham was most powerful in the 18th century, sending boats regularly to distant places, including London. Now forgotten were minor havens such as Horse Pill, on the Severn 8 km upstream from the Wye, the home port of the *Francis* (23 tons, master William Davies), which in December 1586 landed raisins at Chepstow (Waters 1977, 16). This small landing place flourished into the late 17th and early 18th centuries, judging from artefacts stratified at the mouth of today's Horse Pill (see below). Hence Magor Pill need not be thought unique.

Magor Pill - temporal and spatial trading patterns

The post-medieval wares discharged at Magor Pill in the late 16th and early 17th centuries came almost exclusively from Malvern Chase (Hanley Castle) and probably Stroath (Fig. 9b). Supplies from Stroath probably continued throughout the 17th century, but those from Malvern Chase ceased after 1633 (Vince *in* Heighway 1983). The demise of the Malvern industry roughly coincided with the rise of that in North Devon (Fig. 9b), which dominated supplies from the mid 17th century. South Somerset manufactures (Fig. 9b) reached the pill from the early 17th century and, together with North Devon products, appear to have continued into the early 18th century. Throughout the span of the major wares, and to a degree beyond, a trickle of pottery from far-flung sources reached Magor Pill. These products originated chiefly in southern Britain. A link, possibly direct, with the Thames Estuary and London is suggested by the Surrey-Hampshire Borders Wares and Metropolitan Ware. The few continental wares are of a kind familiar from Wales (Lewis and Evans 1982; Evans 1983; Courtney 1986-87, 1988; Campbell 1993) and from the West and Southwest of England (e.g. Allan 1984; Good 1987).

In early modern times the freshwater Severn, Severn Estuary and Bristol Channel was a continuous, major highway for both inward and outward trade in southwest Britain. That trade (Grant 1983; Wanklyn 1996) was organised on two main spatial scales, the trans-oceanic and the coastal (including to Ireland). The coastal trade itself was either short-distance, between river ports, or long-distance, involving river and salt-water ports or marine ports only. Throughout and beyond the period under consideration, first through improvements to river navigation (Willan 1937; Green 1999), and then the construction of canals (Underdown 1984; Green 1999), the scale of the region influenced by the coastal and oceanic trades gradually increased. Probably Magor Pill was directly engaged only in the coastal trade, for the size of the modern tidal channel suggests that vessels of more than about 50 tons (say 20 m long) would have been difficult to handle. Most of the ships that called are likely to have been small (say, 10-30 tons), and probably included early trows (Green 1999).

Post-medieval Malvern Chase wares are widely dispersed in central and southern Wales and the West of England (Vince 1977; Campbell 1993). As for the pottery destined for Magor Pill, the freshwater Severn and the estuary furnish the obvious

route for its movement (Fig. 9b). Hanley Castle, the seat of the later Malvern industry, lies a mere 0.75 km by road from the river, and the port of Upton-on-Severn is only 2 km away by either water or road. Similarly, the estuary offers the most direct and cheapest route for the supply of pottery from Stroath (Fig. 9b). The kilns lie only 1 km from Horse Pill, whence came the *Francis* (see above). The post-Roman pottery recovered from the alluvium at Horse Pill is made up of Stroath Ware pots and tiles, together with late 17th to mid 18th century tin-glazed and slip-combed Bristol/Staffordshire products and also tobacco pipes. Another plausible location for the shipping of Stroath products is an un-named creek below Pill House, Tidenham, about 3 km by road to the southwest of Horse Pill, where settings of stout timbers and stepping stones suggest a former jetty. The alluvium here yields a little Romano-British pottery (Allen & Fulford 1987) but a large quantities of post-medieval wares, among which Stroath Ware dominates and North Devon products abound.

The movement of North Devon Wares to Magor Pill represents a long-distance, inward coastal trade between salt-water ports (Fig. 9b). As Grant (1983) showed from written sources (but see also Lewis 1927; Talbot 1968), North Devon pottery in the 17th century was shipped in vast quantities to many places on the South Welsh littoral and in the West of England, including Tenby, Carmarthen, Swansea, Neath, Cardiff, Chepstow and Bristol, and often direct to such northerly ports on the inner estuary or river as Gloucester and Tewkesbury (Fig. 9a). In 1700 the *Samuel* of Upton-on-Severn brought pottery from Barnstaple to Gloucester and may have carried some upstream to the home port (Grant 1983, 95). Earlier, this same ship had voyaged from Gloucester to Bridgwater, and from there to Ilfracombe and Minehead before returning again to Bridgwater (Green 1999, 107). Family connections and enduring commercial arrangements apparently counted for much in the organisation of this trade. Some vessels served a number of ports whereas others traded at just one. The *Swallow*, for example, regularly visited Swansea from 1654 to 1691 (Grant 1983, 87). Similarly, over a 20-year period ending in 1700, a single ship, the *Speedwell*, carried for William Oliver, potting in Barnstaple, well over half the North Devon Wares discharged at Neath (Grant 1983, 90). Similarly, George Middleton of Barnstaple sailed for over 20 years to Aberdovey, and the Barnstaple merchant Timothy Lang maintained a long marine connection with Chester. At present, however, we do not know whether Magor Pill was linked to North

Devon in this or a different kind of way. Transshipment at Cardiff, Newport or Chepstow is possible, but there is currently no reason to suppose other than direct contact.

Why at Magor Pill do South Somerset Wares greatly outweigh those from the north of the county (Table 1)? At Bristol, similar in position to Magor Pill, the northern pottery tends to predominate (e.g. Good 1987). In general, the South Somerset industry looked southward for markets, toward such growing urban centres as Exeter (e.g. Allan 1994). But was there trading by sea between Exeter and the Severn Estuary? Alternatively, South Somerset Wares could have been transported direct to the Bristol Channel down the Parrett or along the Polden Ridge (Fig. 9b), but these routes pass close to competitor kiln-sites in the northwest of the county.

The pottery discharged at Magor Pill was probably part of a general cargo, but what was shipped out in return? Allen and Rippon (1997) found rich evidence that cattle, sheep and horses had been brought to the site. Individual bones and teeth abound in the foreshore gravels, but many are found stratified, and some even lie partly articulated, in the late-phase palaeochannel. Whole animals apparently were present, ruling out the possibility that the remains originated as food residues or abattoir waste, for all parts of the skeleton are encountered and butchery marks are lacking. No written evidence to the effect that livestock were shipped from Magor Pill is known, but there is convincing documentary proof, both general and specific, for a vigorous trade during the later 16th and 17th centuries in store beasts from southeast Wales to such Somerset ports as Bridgewater, Minehead, Porlock and Watchet (Skeel 1926; Lewis 1927; Dawson 1932; Williams 1963; Betty 1983). Devon and Cornwall also took Welsh livestock (Robinson 1972). In Somerset alone there were 180 annual fairs in the early 18th century at which livestock, and especially cattle, were the staple (Hulbert 1936). Welsh drovers accompanied their animals and ranged far and wide before returning home after all had been sold. In the mid 17th century, for example, drovers said to be from Glamorgan sold beasts on a number of occasions at the Saint White Down Fair, in the extreme south of Somerset (Hamer 1968). These drovers reportedly came from "Lanquat Major". This could be modern Llantwit Major (NGR SS9768), with Aberthaw or perhaps Ogmere as a possible embarkation point, although Llantwit's own port of Colhuw (Davies and Williams 1991) was perhaps still functioning. The less likely home for the drovers is the diminished

(Gloucestershire) village of Lancaut (NGR ST5396), nestling in a bend of the Wye not far above Chepstow.

Dairy produce, and particularly butter, seems also to have been exported from Magor Pill during its post-medieval phase of activity. Dr Phaer recorded in the mid 16th century that small boats carried cheese and butter out to ships (Robinson 1972). During the later 16th and 17th centuries, much butter and cheese was shipped from the South Welsh littoral to ports in the Southwest and West of England (Dawson 1932; Williams 1963; Robinson 1972). Much of the butter sent to Bristol was there transhipped and exported to France. In these essentially coastal movements, jars and crocks of North Devon gravel-tempered wares apparently served as cheap and reliable containers for Welsh butter (Grant 1983, 92). These pots were also used in Cornwall for marketing salted herring and pilchards.

The wider trade in North Devon Wares

Magor Pill was one of many havens involved in a network of trade by water in North Devon pottery, the predominant ware at the site. But what was the overall scale of this network, and what was the magnitude of the industry, and the reasons for its success, both at the time and in comparison with earlier coarseware enterprises? These questions are further explored here by means of a preliminary, qualitative analysis of the archaeological evidence for the distribution of North Devon Wares, using chiefly published excavation accounts with testable pottery reports. The analysis gains an important dimension from Grant's (1983) essentially documentary study of the industry, which allows the two kinds of evidence to be compared as well as integrated. Similar patterns result but there are differences pointing to the limitations of archaeological evidence in distributional studies. The dispersal of North Devon Wares occurred at two levels. While much pottery was intended for domestic and agricultural-industrial use, the jars and crocks in particular achieved a wider, secondary distribution as containers for salted fish, exported from Cornwall, and butter, sent from South Wales, and from Ireland, as far as mainland France and the West Indies (Grant 1983). In southern Ireland, from the early 1630s, small wooden barrels (Firkins) appear also to have been used as containers for exported butter (Rynne 1998, 30). They were exclusively employed for this purpose following the establishment in 1770 of the ork Butter Market, by which time the heighday of the North Devon industry was over.

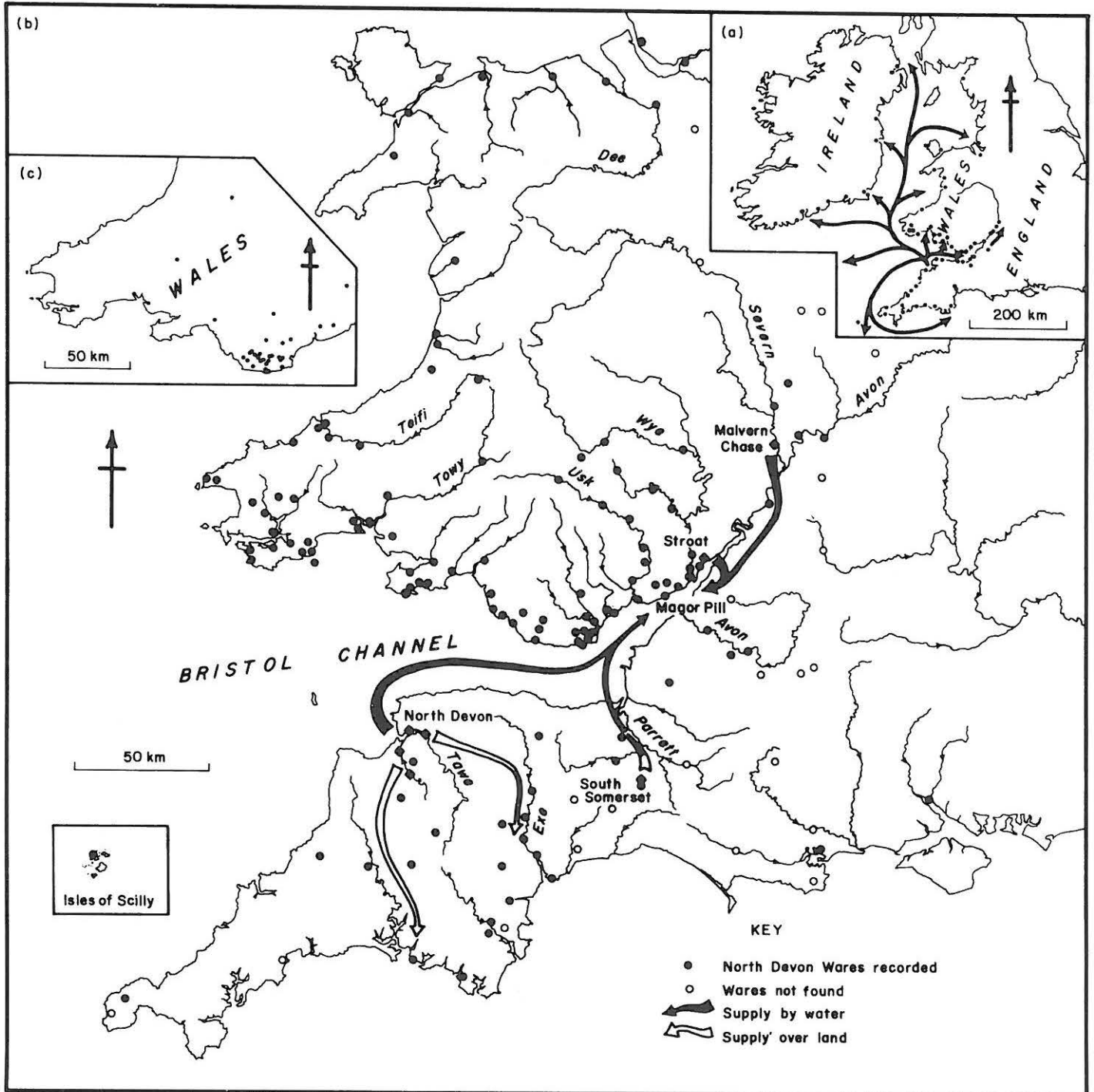


Figure 9: The supply of pottery to Magor Pill, and the distribution of North Devon Wares in the British Isles from documentary and archaeological sources. (a) Distribution of ports known from documentary sources to have received pottery from North Devon (data of Grant 1983). (b) Pottery supply routes to Magor Pill, and the archaeological distribution of North Devon Wares (see Appendix B for sources), together with the main overland supply routes in Devon. (c) Archaeological distribution of North Devon clay ovens in Wales (after Wiliam 1979).

Grant (1983) approached the North Devon industry in the 17th century essentially from a documentary standpoint, using port books to establish where and in what quantities the pottery was shipped (Fig. 9a). The trans-oceanic trade brought the wares westward to the New England coast, the Chesapeake Bay area, and several West Indian islands (Jamaica, Monserrat, Antigua and Barbados). Other pottery

from Southwest England also crossed the Atlantic (Allan & Pope 1990), but none to the extent of the North Devon products. In the coastal trade (Grant 1983, figs. 29, 30, 33), there were shipments between 1660-1701, as well as some traffic dating from the earliest years of the century, to 15 Irish ports, the largest quantities entering Dublin, Waterford and Cork (Fig. 9a). On the eastern side of the Irish Sea, nine

ports in England and Wales ranging as far north as Whitehaven took cargoes between 1650 and 1700. The same period saw the pottery cross the Bristol Channel to 17 South Welsh ports, the largest amounts going to Milford Haven, Carmarthen and Swansea, and to 13 places on the southern shores of the Channel, in the Severn Estuary and up the Severn as far as Tewkesbury. Bristol and Gloucester saw most trade. Fifteen ports on the Cornish and South Devon coast (including Scilly) took the pottery, with Padstow the major recipient, but no shipments are recorded east of the Exe. However, North Devon pottery occurs, probably as a secondary dispersion, as far east as Poole (Grant 1983, 99) and Southampton (Platt and Coleman-Smith 1975).

The archaeological distribution of North Devon Wares in Britain (Fig. 9b) rests on the excavation accounts listed, together with Campbell's (1983) map for Wales, and the maps by Grant (1983, fig. 26 and additional citations) and Allan (1984) for Devon. Figure 9c summarizes finds in Wales (up to 1979) of North Devon clay ovens (William 1979), a prized, specialist product. A comparison of these distributions with that of the ports known to have taken North Devon products (Fig. 9a) immediately reveals deficiencies in the recorded archaeological evidence, a consequence of such factors as insufficient sampling, a bias against post-medieval sites, and variations in the taste and wealth of people at the time. Archaeological confirmation of the written record is especially weak for the coastal towns of Southwest England.

The high documented volume of trade in North Devon Wares (Grant 1983) to the South Welsh coast, the Severn Estuary and the Severn itself (Fig. 9a) is matched by an even denser distribution of findspots for both pottery vessels and ovens (Figs. 9b, c). These rapidly thin out inland, however, except up navigable rivers like the Usk, Monnow, Wye, Somerset Avon and Warwickshire Avon, with as Courtney (1985, 1994) noted the ratio of the pottery declining in the same direction. Similarly, the wares are largely restricted to the coastal zone in West and North Wales (Fig. 9b), although some ovens reached places far inland (Fig. 9c). Here and there on the Welsh littoral the written and archaeological evidence are at variance. One major post-medieval site in Carmarthen yielded no North Devon pottery (James 1978), whereas at others it is abundantly and rather fully represented (Brennan *et al.* 1993-94), despite the port being among the three most important recipients (Grant 1983, fig. 29). The same is true of

sites at Bristol (Barton 1960) and Chester (Matthews 1995), although a second site at the latter afforded both *sgraffito* and gravel-tempered vessels (Grant 1983, 93; see also Ward 1990). Conversely, the wares are found at Newport, Pembrokeshire (Brennan 1993-94), and Rhuddlan, North Wales (Grant 1983, 93), although neither town is in the port books.

Compared to that by water, the more costly inland trade in North Devon wares was modest in scale and areally restricted. As Grant (1983, fig. 26) and Allan (1984) showed archaeologically, the pottery left the kilns along two chief road routes, the ratios gradually falling in the face of competition. One route lay southeastward by way of Tiverton to the coast at Exeter and Exmouth (Allan 1984). The other ranged southward to Plymouth (Gaskell Brown 1979) through Okehampton and Lydford. Competition from the South Somerset and Ashton Keynes industries, among several others (Allan 1984, fig. 53), severely limited the eastward spread of North Devon wares. At Taunton, South Somerset Wares predominate and North Devon pottery is rare (Burrow 1983, 1988; Radford and Hallam 1953). Many Wessex and Midlands post-medieval sites yield none of the pottery, for example, Dorchester (Woodward *et al.* 1993), Ilchester (Leach 1982; Leach and Ellis 1991), Shaftsbury (Barker 1961), Devizes (Russell 1993), Farleigh Hungerford Castle (Wilcox 1980), Acton Court (Vince and Bell 1992), Cirencester (Leech and McWhirr 1982; Wilkinson and McWhirr 1998), Winchcombe (Ellis 1986), Temple Balsall (Goode 1984), Dudley Castle (Ratkai 1987), Shrewsbury (Barker 1961) and Beeston Castle (Ellis 1993).

The rich archaeological evidence for North Devon wares in North America and Ireland should be noted. Watkins (1960) and Hume (1969) described North Devon pottery in some detail from settler sites on the American East Coast, but another 20 years elapsed before Watkins's exemplary account was superseded in Britain (Evans 1979; Allan 1984). North Devon pottery seems to be distributed over practically the whole of the Irish seaboard and its immediate hinterland (where there are connections by river or inlet), typically dominating in great variety the post-medieval ceramic assemblages. It occurs at many far-flung, post-medieval sites, such as in Cork and its neighbourhood (Gowen 1978; Hurley 1985, 1986, 1989, 1990, 1995, 1996, 1997; Hurley and Sheehan 1995; Cleary *et al.* 1997), in Waterford and on Waterford Harbour (Fanning and Hurst 1975; Hurley and Scully 1997), and at Dublin (Simpson 1994), Carrickfergus (Simpson and Dickson 1981; Simpson and Delaney 1987-88) and Coleraine near

the mouth of the Bann (Robinson and Brannon 1981-82). Judging from the port books, the trade to Cork, Waterford and Dublin was large and that to Carrickfergus fairly frequent (Grant 1983, fig. 33). North Devon Wares of many kinds are also reported from the Channel Islands (Barton 1977) and, no doubt reflecting butter exports, are said to occur in northwest France (Grant 1983, p. 105).

It cannot be said that the earlier post-medieval pottery industry centred on Bideford and Barnstaple in North Devon was aimed at other than a market which in the main demanded an abundance of cheap utilitarian items, either for direct use or as packaging. The dairy and kitchen wares, and the containers, are merely rough-and-ready, and the tablewares relatively unsophisticated. That market could be satisfied, however, and on grand geographical and volumetric scales, through the efficiency and cost-advantages offered by water transport (Grant 1983), whether westward and southward across the sea to Ireland, North America, the Channel Islands and France, or nearer to home to Cornwall and around Lands End to South Devon, or eastward into the Bristol Channel and Severn Estuary. This post-Columbian manufactory was arguably larger than any other ceramic industry in 17th century Britain, and bore more than a passing similarity, in scale and in many of the areas supplied, and especially in the chief means of supply, to the Southeast Dorset BB1 enterprise of Roman times (Allen and Fulford 1996, fig. 13). Given the influence of abiding geographical factors in the region (Sherratt 1996), it is unsurprising that history should so repeat itself.

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Appendix A: Details of the pottery assemblage

Malvern Chase Ware (MALVP)

Late Malvern Chase swollen jugs are known from 16th-17th century Gloucester (Vince in Heighway 1983, fig. 79.90, 91) and Hereford (Vince in Shoesmith 1985, fig. 40.3). At Magor Pill they are represented by a base sherd with a patchy, external glaze (Fig. 4.1) and a cordoned body sherd with a handle-fitting (Fig. 4.2). Three rim-sherds could be from jugs of this date (Fig. 4.3-5), although the larger may be from a jar.

The chief vessels are pancheons or large, deep basins or bowls (Fig. 4.6-12). Rims are very varied, but three vessels (Fig. 4.7, 9, 10) are hardly distinguishable from late 16th-century forms at Pershore (Vince in Bond and Hunt 1977, figs. 10.11, 16), and find parallels in 16th-17th century Gloucester (Vince in Heighway 1983, fig. 79.85, 86). A similar date may be suggested for the others, including the large vessel with a wide, inturned rim (Fig. 5.13), perhaps a dish.

Three jars occur at Magor Pill. One has a thumb-printed rim (Fig. 4.14) in the manner of late 16th century forms (Vince 1977, fig. 3.3, 4; Vince in Heighway 1983, figs. 78, 72, 79.80;

Hurst 1994, fig. 6.3). The second (Fig. 4.15) could also be of this or early 17th century date (*cf.* Morris 1980, fig. 76.189c). The third (Fig. 4.16) resembles a late 16th century vessel from Pershore (Vince *in* Bond and Hunt 1977, fig. 10.12).

A large, thumb-printed, handled rim-shoulder (Fig. 4.17), and a similarly large handle from another vessel, are probably from cisterns or pitchers, as at Worcester (Morris 1980) and Gloucester (Vince *in* Heighway 1983). The lid (Fig. 4.28) is either from a cistern or jar.

Stroat Ware (STR)

The single dish (Fig. 5.1) is ornamented internally with a design of circular, sinuous and straight lines painted in white slip beneath a green glaze. The several jugs are chiefly glazed overall in olive-green (Fig. 5.2, 17).

Most of the recognisable vessels are pancheons/large bowls with rounded rather than straight walls and occasionally with shallow spouts (Fig. 5.3-11, 13). Rims are either hooked, rounded or upturned, resembling those on comparable South Somerset and North Devon forms (Figs. 6, 7). A large Gloucester bowl is recalled by the hooked forms (Vince *in* Heighway 1983, fig. 87.289), and another Gloucester form (Vince *in* Heighway 1983, fig. 87.285) is suggested by the bowl with the grooved rim (Fig. 5.11). Compared to North Devon forms (see below), a late 17th or even early 18th century date seems possible for the vessels with upturned rims.

Small/medium bowls are also present (Fig. 5.12, 14-16). Two are glazed overall, one carrying a design in painted white slip internally, whereas the other is thumb-printed and grooved below the rim. The brown-glazed base sherd (Fig. 5.18) may be from a cup.

An unusual find is the hanger from a bottle costrel with a bright olive-green glaze (Fig. 5.19). It resembles some South Somerset (Coleman-Smith and Pearson 1988, fig. 54.2/5-11) and North Devon (Gaskell Brown 1979, fig. 13.66) forms.

South Somerset Wares (SSOM)

Of the dishes present, two are white-slipped under a (discoloured) interior amber glaze, but only one is decorated (Fig. 6.1-3). The plain form (Fig. 6.2), paralleled at Plymouth (Gaskell Brown 1979, fig. 2.12), is unusual and may be of the mid or late 17th century (*cf.* Coleman-Smith and Pearson 1988, fig. 8.46). The *sgraffito*-ornamented dish carries around the rim alternating pairs of sinuous lines and groups of radial cuts. In terms of the rim, it resembles a form of *c.* 1650 at Donyatt (Coleman-Smith and Pearson 1988, fig. 81.8/7), as well as an undated sherd (Coleman-Smith and Pearson 1988, fig. 90.8/82). The third dish (Fig. 6.3) is decorated with trailed white slip under a yellow-brown glaze. Slip-trailing in South Somerset Wares is more characteristic of the 18th than the 17th century, but the motifs (e.g. Coleman-Smith and Pearson 1988, figs. 85.8/49, 92.8/103, 105) would suggest no later than the earlier 18th century.

Most of the recognisable vessels (Table 2) fall into the category of brown-glazed, occasionally spouted pancheons and large bowls (Fig. 6.4-13, 23, 24). The rims of three (Fig. 6.6, 7, 11) suggest the early 17th century (*cf.* Coleman-Smith & Pearson, fig. 120.12/34). One deep bowl (Fig. 6.13) combines a form of rim recorded from a large 17th century vessel with the unusual motif of a frilled flange (Coleman-Smith and Pearson 1988, fig. 128.14/90). The thumb-printed rim (Fig. 6.24) finds

some parallel with a late 17th century vessel at Exeter (Allan 1984, fig. 105.2349), but represents a long-ranging Donyatt motif of little chronological significance. The other, unmatched rims are plausibly 17th or early 18th century forms.

Bowls of small or medium size are less numerous (Fig. 6.15-17). They are mostly plain with an internal brown glaze, curved sides and simple rims, all suggesting a late 17th-century date (*cf.* Allan 1984, figs 99, 106). One carries internally painted bands of white slip beneath an amber glaze (Fig. 6.15), like a known late 17th-century form (Coleman-Smith and Pearson 1988, fig. 123.12/57).

Cups/porringer may be represented by two sherds with an interior white slip beneath amber glaze (Fig. 6.14, 19), and by a third which is unslipped (Fig. 6.18), but glazed internally and from the rim down to roughly the equator. A pre-18th century date seems most likely.

Most of the jars have a seating within the rim (Fig. 6.20) and resemble chiefly early 17th-century forms (Allan 1984, fig. 108.2418; Coleman-Smith and Pearson 1988, figs. 129.14/17, 130.14/29). The hooked-rim jar (Fig. 6.21) also probably dates from the first half of the century (*cf.* Allan 1988, fig. 88.2048; Coleman-Smith and Pearson 1988, fig. 132.14/44). Lids (Fig. 6.22) were also found.

North Devon Wares (ND)

Sgraffito wares

These are represented by a small range of generally decorated dishes (Table 2) in a hard, brownish-pink to pale grey, even textured, slightly silty fabric (fabric A) attributable to Allan's (1984) 'gravel-free' variant, but at Magor Pill devoid of all coarse temper (*cf.* fabric C below). The vessels were white-slipped, decorated by cutting through the slip, and finally bisque-fired before being lead-glazed and fired again. At Magor Pill, the originally rich amber glaze is commonly discoloured to a watery yellowish green.

The decoration is simple and exclusively geometrical, consisting of arrangements of single or combed, straight, curved and sinuous grooves (Fig. 7.1-3). The most distinctive (Fig. 7.1) is the asymmetrical lattice of single grooves cut in the rim of the type 1B dish (Grant 1983; Allan 1984). This motif appears on dishes figured by Knight (1970, fig. 1.5) and Grant (1983, pls.9, 10) from contexts prior to 1660-70. Lattices on the rims or sides of later dishes tend to be more symmetrical (e.g. Allan 1984, figs. 104, 106). The third dish (Fig. 7.3) closely resembles a deep form from 17th-century Waterford (Hurley and Scully 1997, fig. 11.20.4). Magor Pill yielded no dishes or other vessels with the floral or animal patterns prevalent in many middle and late 17th century groups (Watkins 1960; Grant 1983; Allan 1984; Wilkinson *et al.* 1998).

Fabric A is also represented at Magor Pill by a green-glazed pipkin.

Gravel-tempered wares

North Devon Gravel-tempered Ware forms the numerically largest group at Magor Pill (Table 1), occurring in three distinct but closely related fabrics based on a hard, brownish-pink to pale grey, even textured and slightly silty matrix. The differences lie in the kind, amount and grade of the often unevenly distributed temper. Fabric B is typified by very to extremely abundant, generally poorly rounded grains up to 5 mm in

diameter which, in thin-section, are seen to be chiefly quartz but with some feldspar (orthoclase, perthitic orthoclase, sodic plagioclase), a little quartzitic sandstone and slaty siltstone, and very occasional large shell fragments and large flakes of mainly biotite mica. The same particles are finer (2 mm) and merely sparse to common in Fabric C - also included in Allan's (1984) 'gravel-free' variant - but are accompanied by almost equal amounts of rounded shell debris (1.5 mm) and occasional foraminifera. Fabric D is marked by frequent large biotite flakes which sparkle on unglazed surfaces, but otherwise resembles Fabric B. The obviousness of this mineral need not denote the manufacture of Fabric D in Cornwall from imported North Devon clay (Grant 1983, 33), given that biotite is also present, albeit to a lesser extent, in the other two fabrics. Most vessels in Fabrics B and C are glazed green or olive-green internally.

Most of the Fabric B vessels belong to the category of pancheons/large bowls, but none seem to have been spouted (Table 2). Two are deep, cordoned bowls (Fig. 7.4, 5) assigned to type 3C of Grant (1983) and Allan (1984), and resemble, although are larger than, forms from late 17th-early 18th century Exeter (Allan 1984, fig. 107.2406, fig. 108.2422, fig. 111.2465). They are less close to a mid 18th century form (Allan 1984, fig. 120.2662). The other vessels are pancheons displaying a wide variety of rim styles. Many rims are essentially four-sided, flat-lying, and slightly to tightly hooked (Fig. 7.7-12), a few are rounded and flat to slightly hooked (Fig. 7.13, 14), and others are to a degree upturned (Fig. 7.15-17, 8.1). One vessel has an upright, pulley-like rim (Fig. 8.2), recalling a large bowl at Plymouth (Gaskell Brown 1979, fig. 28). North Devon large vessels are conservative, but evidence from the more closely dated contexts (Watkins 1960; Barton 1964; Greenfield 1964; Knight 1970; Fanning and Hurst 1975; Trudgian 1976; Caple *et al.* 1978; Allan 1984) suggests that rim profiles gradually evolved. Wide, flat, squared-off rims are recorded chiefly around the turn of the 17th century, whereas hooked and rounded rims typify the middle and later years. Upturned rims seem to range from around the turn into the middle of the 18th century. Hence the Magor Pill vessels are chiefly of the middle and late 17th century, but there are also earlier 18th century forms. The wide-rimmed bowl (Fig. 8.3) has no recorded parallels, but may be of early date.

The few other forms present in Fabric B (Table 2) include a possible pipkin (Fig. 7.6) and roughly made jugs (Fig. 7.18, 19) similar to those at late 17th and early 18th century Exeter (Allan 1984, fig. 97.2195, fig. 107.2407, fig. 117.2606). The jars (Fig. 7.20, 21) resemble forms appearing from the late 16th to the late 17th century (Allan 1984, fig. 83.1900, fig. 96.2193). Crocks like those figured (Fig. 7.22, 23) occur from the late 17th century (Allan 1984, fig. 107.2403).

Fabric C was used for lighter vessels (Tables 1, 2). Most of the recognisable forms are jugs (Fig. 8.4) similar to those from late 17th and early 18th century Exeter (Allan 1984, fig. 97.2195, fig. 107.2407, fig. 117.2606). The bowl (Fig. 8.5) is like a vessel from a context of 1690-1720 (Allan 1984, fig. 111.2465). The flat-rimmed form is possibly a chamber pot (Fig. 8.6), and the narrow-necked, handled vessel (Fig. 8.7) a cistern or perhaps a flagon. Jars and crocks like the illustrated forms (Fig. 8.8, 9) appear at Exeter from the late 16th to the late 17th century (Allan 1984).

Fabric D (Tables 1, 2) is represented by a few pancheons - unusually, one is spouted - with a brown to dark brown internal glaze (Fig. 8.10-12). The two with tightly-hooked rims could be of the mid or late 17th century. Given the rather flat, squared-

off rim (*cf.* Allan 1984, fig. 86.1996-8), the third vessel could be earlier.

Other post-medieval wares (Table 1)

Pottery from Ashton Keynes in the upper catchment of the Thames forms the largest element. The range of identifiable forms is narrow but, like the more plentiful wares from Malvern Chase, Stroart and North Devon, includes pancheons, small-medium bowls, and jugs. Production was from the 16th to the 18th century.

The Bristol/Staffordshire Wares are too poorly preserved for closer differentiation. The group includes three cream-bodied cups, one of which, with delicate horizontal slip-combing (Fig. 8.14), recalls a mid 17th century form of the same provenance at Donyatt (Coleman-Smith and Pearson 1988, fig. 176.40/1). A second cup is ornamented with a horizontal row of blobs of iron slip on a white ground (Fig. 8.15). A similar decoration, but just below the rim, is widely recorded on Bristol/Staffordshire cups of the late 17th and 18th century (Radcliffe and Knight 1972-73, fig. 15.76; Rackham and Read 1972, fig. 40; Gaskell Brown 1979, fig. 17.96; Webster and Webster 1979, no. 64; Allan 1984, fig. 121.2693-5). Another (?) cup (Fig. 8.13) carries blobs of white slip on a brown-black ground, recalling a Staffordshire honey-jar of the late 17th century (Rackham and Read 1972, fig. 60). The press-moulded, slip-combed dishes (Fig. 8.16, 17) are probably mid 18th century forms (Vince *in* Heighway 1983, figs. 89.324, 325, 90.369; Allan 1984, fig. 122.2710). The iron-glazed vessels seem to be chiefly cups/tankards.

The distinctive Black-glazed kitchen wares are probably from Buckley, North Wales, where large potteries flourished in the late 17th and 18th centuries (Barton 1956; Messham 1956; Amery and Davey 1979; Davey 1987). Included are the base of a jug/jar and a pancheon with a wide pulley-type rim (Fig. 8.18, 19). Similar pancheons, apparently of Buckley origin, are figured by Axworthy Rutter (*in* Ward 1990, fig. 132.24) and McCutcheon (*in* Hurley 1997, fig. 31.3).

Surrey-Hampshire Border Wares are represented by a green-glazed dish with a delicately combed, hammer rim (Fig. 8.20). The vessel most closely resembles mid 17th century forms (Pearce 1992, fig. 20.28B, 30G).

It is surprising to find dishes in Metropolitan Ware (Cooper 1968; Brears 1971), probably coming from the Harlow area, Essex. The fabric is hard and either pale pink throughout or pale pink at the exterior grading to yellowish pink in the core. The very fine grained, even-textured matrix includes scattered to common, angular fragments of red clay/grog (3 mm). One sherd (Fig. 8.21) retains a trailed pattern in white slip beneath a colourless glaze, the general style, consistent with recorded Metropolitan Ware, suggesting the mid or late 17th century. The weathered rim-herd (Fig. 8.22), probably of the same date, may have been similarly decorated, as there is no sign of *sgraffito* work.

The stoneware categories include little that is distinctive, but are compatible with an 18-19th century date, except for the Westerwald, which may be slightly earlier. An unusual item is a giant, flat-based, stoneware vessel, one sherd from which was sealed in the late-phase fill of the Magor palaeochannel. The fabric is hard, bluish-grey and coarsely granular, with abundant clay relicts (3 mm) and scattered, thermally-fractured quartz sand (<1 mm). A kiln glaze coats internal surfaces; externally there is a colourless-pale green silicate glaze. The sherds are from 24-42 mm thick but no wider than 2-3 times these values. Deliberate breakage, perhaps for hardcore, is suggested by the low ratios of width to thickness. The vessel was wheel-thrown and, judging from the curvature of the sherds, more than 0.5 m in

diameter. It was probably a container for liquids.

A number of distinctive but unprovenanced fabrics are present. Fabric A is dull yellow with very abundant, well sorted and rounded, fine-medium grained, white to rose-coloured quartz sand, very rare shell fragments, and pellets of white sandstone and red clay. It is strongly reminiscent of medieval fabrics from southeast Oxfordshire and the Oxfordshire-Buckinghamshire border (Mellor 1994), but the vessel itself - a carefully wheel-thrown, internally green-glazed, deep bowl or cistern 0.28 m in diameter at the base - is more suggestive of an early post-medieval date. Fabric B is pale grey, moderately hard, and visibly micaceous, including some angular quartz sand (<1 mm) and plentiful relicts of slightly calcareous clay (<3 mm). It is represented by the rim of a heavily-made plate carrying flakes of pale brown glaze (Fig. 8.23). Fabric C is hard and uniformly pale grey streaked with off-white, with scattered grey (<1 mm) and brown-black (<2 mm) inclusions. The single sherd comes from a press-moulded plate decorated beneath a greenish-yellow glaze with an iron-rich slip trailed in an acute lattice-pattern through white slip. It is not obviously a Bristol/Staffordshire product, but an 18th century date seems plausible.

Little dating significance attaches to the many stem fragments of clay tobacco pipes. The single unstamped bowl, although broken obliquely above the heel, suggests the mid 17th century by its size, rake, swollen form, and rouletted rim.

(1983), Hodder (1991), Leach (1982), Leach and Ellis (1991), Leech & McWhirr (1982), Quinnell *et al.* (1994), Radford & Hallam (1953), Ratkai (1987), Russell (1993), Saunders and Harris (1982), Wilcox (1980), Wilkinson and McWhirr (1998), Woodward (1983), Woodward *et al.* (1993).

Appendix B: Sources for archaeological distribution of North Devon Wares in England and Wales (Fig. 9b)

Wales

Booth, (1993), Brennan & Murphy (1993-94), Brennan *et al.* (1993-94), Campbell (1993), Clarke (1998), Courtney (1994), Dowdell (1990), Jarvis & Webster (1991), Locoock (1995, 1995-96), Newman and Williamson (1996), Parkhouse & Evans (1996), Webster (1991), Wilkinson *et al.* (1998).

England

Allan (1984), Arnold (1980), Barton (1964), Barton and Oswald (1987), Beresford (1994), Brown (1995), Brown and Laithwaite (1993), Burrow (1988), Coleman-Smith & Pearson (1988), Courtney (1985), Cunliffe (1979), Dalwood *et al.* (1994), Davenport (1999), Good (1987), Grant (1983), Heighway (1983), Hughes (1990), Leach (1982b 1984), Lennox (1994-95), Miles and Saunders (1970), Morris (1985), Pearson (1979), Platt and Coleman-Smith (1975), Saunders (1980), Shoesmith (1985 1991)), Trudgian (1976), Ward 1990), Williams (1988), Woodiwiss (1992).

North Devon Wares unrecorded in post-medieval contexts

Allan (1984), Barker (1961), Barton (1960), Bell and Durham (1997), Brown (1996), Christie (1979), Draper (1987), Draper and Papworth (1996), Ellis (1986 1993), Gooder (1984), Grant

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