

EXCAVATIONS AT ANGEL COURT, WALBROOK, 1974

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Finds research co-ordinated by MICHAEL RHODES

Excavations carried out at Angel Court located a small eastern branch of the Walbrook stream. The Roman sequence recorded was similar to that found by Professor Grimes at the Bucklersbury House site at Walbrook in 1951-54. This sequence showed the build up of deposits on the sides of the Walbrook and the way in which the rise in the water table was contained by the building of timber revetments. It also partially supported the numismatic sequence from the excavations at Bucklersbury House, discussed by Merrifield. The possible supports for a timber footbridge were also excavated and gravel tracks along the south bank of the stream were recorded.

The medieval deposits were small, and the only feature excavated was a ditch, for which there is evidence in the early 14th century.

I INTRODUCTION AND ACKNOWLEDGEMENTS

Angel Court (Fig. 1) was selected for excavation in the hope of throwing more light on the northern part of the Walbrook in Roman times. In the past, the course of the stream had been presumed to run through the north-eastern sector of the site¹. This presumption was proved to be correct. The excavation also confirmed that for the Walbrook, in the northern part of the City, the pattern that Grimes had found further south² and the dating sequence that Merrifield established from the coin evidence³, was substantially the same. This pattern was that the stream was not very wide — in the case of this tributary only about 1m; that the stream-bed was continually rising in the deposits of its own silts, perhaps due to the rise in the water-table; that attempts were made to control these rises and consequent floodings, by timber revetments; and finally that the coin evidence from the stream-bed itself ended in *c.* AD 150 (see Coin Report, p. 57), with a possible change in the character of the early occupation on the stream's bank.

The valley of the Walbrook cuts through the fluvial gravels of the Flood Plain Terrace of the Thames. The deepest deposit in Trench A (Fig. 2, layer (27)) was most probably the familiar brickearth, which occurs in pockets all over the gravel plateau of the river terrace. This gravel was only seen in the base of Trench D (Fig. 3, layer (38)).

The parts of the site investigated were — Trench A (controlled excavation) and Area B and Trenches C-H (observations during building work). The excavations took place during February and March 1974, and were carried out by a team from the Department of Urban Archaeology. The supervisor was Mark Guterres. His assistant was David Jones. This report is compiled from the records of the former.

Thanks are due to the Clothworkers Company, the owners of the site; Fitzroy Robinson and Partners, the architects; and Sir Robert McAlpine and Sons, the contractors.

(The complete archival report is lodged in the Department of Urban Archaeology, Museum of London.)

II HISTORICAL SURVEY

BY TONY DYSON

The Walbrook, a generic term for a network of convergent south-bound streams, one of which formed the principal feature of the present excavation, dominated the early topography and habitation of the area north of Lothbury and Throgmorton Street. The Angel Court tributary, originating beyond London Wall north of Winchester House, flowed south-west to meet the main stream, flowing due south from the present Finsbury Circus, some 100 feet to the west of the site. In the medieval period it first appears in 1311⁴ and was usually referred to, like other such tributaries, as the Walbrook or *cursus rivuli de Walbroke*. But in a deed of 1335 it appears as *le Mordyche*, the northern bound of a property which extended south as far as Broad (now Throgmorton) Street⁵, while six years later a tenement immediately to the east was similarly delimited by the term *Mora*⁶. The *Mora* (whence Moorfields and Moorgate) was primarily the large swamp north of the City wall, but there is evidence that in the medieval period it extended considerably farther south into the central northern sector of the City⁷. One of the most interesting features of the present site is that it marked a limit of the marsh as late as the 14th century.

Although Roman structures in this area are far from numerous, they are sufficient and of a nature to suggest that the land was adequately drained or controlled during the occupation⁸. There are several instances of Roman revetting of the Walbrook streams⁹, in addition to the provision of culverts which admitted the water through the wall on its way to the Thames¹⁰. During the post-Roman period the neglected revetments and culverts collapsed and became blocked, and thereafter no comprehensive area drainage seems to have been undertaken until the 15th and 16th centuries¹¹. The consequently unattractive nature of this land is reflected in the unusually large size of many of the tenements. William King who died shortly before 1396 appears to have held most of the land between Coleman Street and the Walbrook¹². The same is true of the parishes, particularly St. Stephen's and St. Peter le Poer.

Doubtless because of the unreliability and cheapness of the ground, much of the area was moreover occupied by extensive gardens. That of the house of the abbots of Rewley (de Regali Loco, Oxon) stretched, by the late 14th century, from Coleman Street to the boundary of the parishes of St. Stephen and St. Bartholomew the Less (or by the Exchange), just west of the Angel Court site¹³. In 1370 the abbot of Rewley complained that in wet weather water from the adjoining tenement of Thomas of Salisbury came into his land for want of a gutter¹⁴. This evidence gives some indication of the prevailing conditions, and also of the differing attitudes to them on the part of lay and clerical owners. From 1287 until the mid-14th century reference to ditches and streams as property bounds are common, and it is significant that thereafter they cease to serve this purpose. After 1412 there is no further mention of the Angel Court tributary¹⁵. By the 16th century, when large scale drainage schemes were underway, Thomas Cromwell laid out a large garden, later of the Drapers' Company, which, together with the Carpenters' garden further north, occupied the whole area of the former *Mora* between London Wall and the Angel Court site.

The area of the excavation itself falls just inside the small rectangular enclave, 100 feet from east to west, which forms the northern edge of the parish of St. Bartholomew by the Exchange. Although large scale and well documented developments took place to the west, north and east, from 1287 the site was in the hands of small private owners and tenants, and a variety of trades were practised there. The tenorial descent is: 1287 William le Slepere

(tanner) to Walter Hauteyn (mercier)¹⁶; 1325 Thomas Hauteyn to Adam de Salesbury (pepperers)¹⁷; 1327 Salesbury to William Tithinglamb (poulterer)¹⁸; 1355 Tithinglamb to John of Chichester (goldsmith)¹⁹; *ante* 1381 Chichester to Thomas Barton (goldsmith)²⁰; *ante* 1491 Thomas, then Andrew Windsor²¹; 1491 Windsor to Thomas Morys (grocer)²²; 1494 Morys to Thomason, Williamson and others²³. Thereafter the tenure is uncertain, but in 1543 this land, together with the Rewley garden to the west was in the possession of Sir Robert Rich. By 1518 the land to the east, consisting of a large messuage with a garden, was bequeathed to the Grocers' Company²⁴, and beyond that again, west of the former precinct of Austin Friars, a large area of land which also included the garden north of the Angel Court site was granted to the Drapers' Company by the Crown in 1543²⁵. The Drapers' lands had previously belonged to Thomas Cromwell who had used his position to encroach on his neighbours' property²⁶.

For the next 250 years the basic topography of the area remained largely unchanged. The small garden at the south-west corner of the Drapers' garden remained intact until the early 18th century, a surviving remnant of the Rewley Estate. In 1694 it became the subject of a parish boundary dispute between St. Stephen's and St. Bartholomew's²⁷ which may well have arisen from some previous adjustment of the main course of the Walbrook, a natural boundary feature, on the part of Rewley. By the 1670s a large house, occupied by the Royal Africa Company until its removal to Leadenhall in 1678, stood at the north end of the Grocers' land on Warneford Court, and by 1746 both these features were either destroyed or cut back to make way for the new thoroughfare which linked the northern ends of Angel and Cophthall Courts. Along the north side of this new extension six street numbers were assigned to a range of buildings covering the archaeological site. Finally, in 1876 work began on Throgmorton Avenue which runs from London Wall, through the eastern edge of Drapers' garden to emerge on Throgmorton Street just east of Warneford Court. At the same time a western spur was run through the southern edge of Drapers' garden, and immediately north of the Angel Court site, towards Cophthall Buildings.

III THE EXCAVATION

i) — Trench A (Figs. 1 and 2) and Area B (Fig. 1)

Trench A was situated in the north-east corner of the site, at basement level (OD +10.30m) and against the northern edge of the 19th century building which faced on to Throgmorton Avenue. It was 10.72 m long and between 2.00m and 1.08m wide. The variation in width was due to the fact that along the western side there was a series of concrete stanchions intruding into the trench, and furthermore these concrete stanchions (layer 8) had destroyed in the section the important deposits across the actual stream-bed.

Area B lay to the west of Trench A. Observation was maintained consistently throughout February and March 1974. All archaeological deposits were sited at a depth below +9.89m OD. Heavy machinery destroyed the evidence immediately beneath the basement.

DESCRIPTION

TRENCH A

Although not certain, it is likely that the natural brickearth (Fig. 2, layer (27), OD +6.90m) was reached in the greater part of the trench. Stratigraphically the first feature is the streamlet in its original form (28) and its fill. Above this were found various layers of silting (20a b and c), (9) and (7). Although excavated as one layer, it is quite clear now that though this process of silting up produced an identical type of deposit, the deposition of layer (20) took place over many years, interrupted

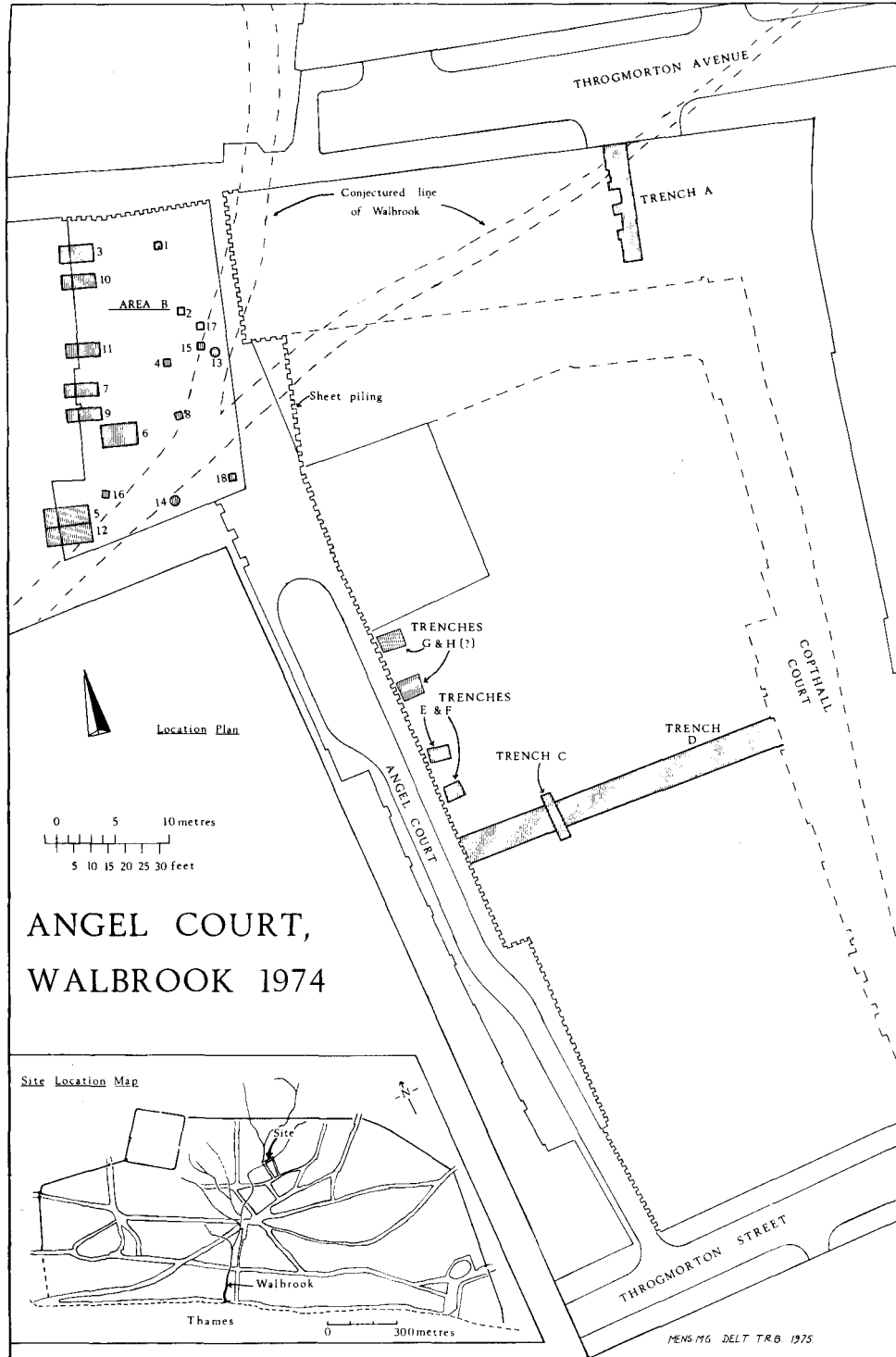


Fig. 1. Angel Court: Location map and site plan

periodically by the laying down of dumped deposits (see Fig. 2). The division of layer (20) into three parts, a, b, and c is therefore a post-excavation division. In amongst this black silt were found two phases of upright timbers and horizontal planks, in the form of revetments — (24iii and iv). Amongst these were some very small timbers, (24i), on the north side of the gully, and one or two large upright timbers (in (24ii)). To the south of (20c) was a large dump of clay, layer (16), and between this and the timbers of (24iv) was the gravel layer (32). On the north bank of the streamlet, the equivalent of layer (16) was layer (31) (not shown in Fig. 2, because of the modern disturbance in the eastern section). In this layer were a number of post-holes. Between the various phases of the deposition of layer (20), different interleaving deposits accumulated to the south. These layers are (26), (15), (13) and (11) — all of them of gravel. To the south of the earliest of these gravel dumps, layer (26), and cutting through it, was a ditch, (18), which also cut through (16). Just to the south of (18) was a tree-stump surrounded by a deposit of peaty humus. It had grown from the level of the natural brickearth, and was eventually covered by (15). Layer (18) in its turn, was covered by the next gravel layer, (15). Cut into (15) at the southern end of the section, was a layer of peaty deposit, (19), while lying in the top of (15) at the other end of the section was a tiled surface. Immediately above it was another gravel layer, (13a), similar to (15) and (26). This included the gravel lenses (14) and (13b). Above (13a) were the already mentioned layers of silt (9) and (7), and the gravel deposit (11). All these three layers were cut into by a ditch (12) which fanned out as it approached the western section.

First noticed in layer (3), but fully excavated in layer (5) was a barrel (10) (not in Fig. 2), made of 16 wooden staves. No hoops or a bottom to it were found, though the area beneath the staves contained decayed wood. The diameter was 0.40m. A few nails came from the interior, and there was some iron-staining in the decayed wood beneath the staves, though there was no other indication of how it was held together. Layer (6) from inside the barrel was very similar to layer (4). Layer (4) was a dump of brown garden soil stretching the whole length of the trench. Layer (2) was of a very similar composition, while (3) was a mixed layer of brick chips, brown earth and charcoal. Layers (8) and (1) were modern disturbances.

AREA B

In Area B, Trenches 3, 5, 7, 9, 10, 11 and 12 all produced quantities of grey silt. Trenches 12 and 16 also produced deposits of gravel.

INTERPRETATION

Roman stream revetments, dumping and footbridge.

The most important aspect of the excavations at Angel Court, after establishing the existence and position of a branch of the Walbrook, was the elucidation of the phases of the flooding, revetting and dumping throughout the Roman period. Six layers of stream silt ((7), (9), (20a b and c) and (28)) (see Fig. 2) and five layers of dumping, one of clay and four of gravel ((16), (26), (15), (13a) and (11)) and two phases of timber revetments were excavated. The pottery from these provides a chronology for the phases of silting in the stream, probably due to a rise in the water-table, or in the Thames, and the attempts which were made to contain the stream and consolidate the banks.

The suggested sequence of events is as follows —

PHASE I

This consisted of the streamlet in its first stage, layer 28, and dated to the 1st or early 2nd centuries AD (p. 50). Due to the rise in the water-table, or because the stream suddenly had to carry more water for some reason, it overflowed and laid down the first deposit of stream silt, layer (20c). This date of the 1st or early 2nd century AD marks, then, the beginning of the rise in the stream level. To counter this rise, the first revetment (24iv), was apparently installed with layer (16) dumped behind it, to hold it in position. A gravel track, layer (26), was then laid on top.

The revetment (24iv) was made up of stakes and planks, and the only recorded lengths of the stakes were 1.40m and 1.20m. Obviously, if layer (16) is a dump, any dates deduced from its contents can only give a *terminus post quem* for layers (20c) and (26) and not a date for the first phase of the canalization. Material from layer (16) gives a date of early/middle 2nd century AD (p. 50), while the dates for layers (20c) and (26) are similar (p. 51 and 50). All three contexts are, therefore, roughly contemporary. Presumably as soon as the flooding became a danger, layer (16) was laid down and the gravel path, layer (26) immediately laid on top. Firm paths of gravel in this swampy area would always have been a necessity.

Layer (16) also contained a large quantity of painted wall-plaster, and some burnt clay, presumably waste material from a building destroyed by fire, perhaps the fire that devastated London in the reign of Hadrian, dated to AD 125-130²⁸. This would agree with the dating evidence from the pottery (p. 50). On the northern bank, a similar dump to layer (16) was recorded, layer (31) (not shown in Fig. 2 because of the modern disturbance in the eastern section). Layer (32) must have been dumped at the same time, though there is no dating evidence. The puzzlingly small feature (24i) most probably fits into the first phase, if this small plank and its equally small stakes are regarded as a step down to one of the early stream channels — either (28) or (20c). The small planks in (24ii) could also be seen as a second step (for the large timbers, see Phase II). The post-holes in (24ii) may also belong to this stage, on account of their size (24i) and (most of) (24ii) would never have been adequate for water retaining and unnecessary since the northern side of the stream was steeper than the southern at this point. Steps like those used in terraced gardens would seem to be the closest parallel.

PHASE II

This phase shows the continuing rise in the water level represented by the silt, layer (20b), which covered (32) and was encroaching on layer (26); the timber group (24iii); the gravel layer (15); and possible evidence for a footbridge. Between Phases I and II was (18), a ditch in the middle of the trench, whose fill is dated to the Antonine period (see p. 50). The position of the Angel Court tributary of the Walbrook is so close that the ditch must have run into it and it may confidently be suggested that in antiquity this whole area was probably covered with similar small drainage channels.

Why the revetting in this second phase appears in the middle of the stream, is not clear. Perhaps the strength of the stream was underestimated and an attempt was made to contain it within the previous banks, unsuccessfully, since the dumping of gravel had to continue to the south of the revetments — layer (15). In the top of this layer was found a roughly tiled surface, which was most probably placed there to strengthen the edge of the stream. The dates for the two layers (20b) and (15) are late 2nd — early 3rd centuries AD (p. 51). In at least two of the revetments, there were a number of large vertical timbers (marked ‘s’ in Fig. 2), which are inexplicably large if regarded as merely parts of the revetments. It is, however, possible that they formed vertical supports for a timber footbridge. This would at least explain why in (24ii) there are two large timbers and practically nothing else.

PHASE III

This consists of layers (20a) and (13a) and the lenses within (13a), (13b) and (14). The same process of silting up is in evidence again here. The stream silts were deposited over layer (15). These in their turn were covered by the gravel deposit, (13), again presumably

designed to constrain the stream silts. These two layers are dated to the middle/late 3rd centuries AD (p. 51). They show the last attempt to keep the stream within its original course, and the way in which the timbers of the foregoing phase were covered with silt.

PHASE IV

While this layer does present some interpretative problems, the section clearly shows two deposits of stream silt, layers (9) and (7) stretching the entire length of the trench, and between them a gravel deposit, layer (II), perhaps a pathway, cutting into the top of layer (9). Layer (7) is cut by the medieval ditch (12). Layers (9) and (11) are dated to at least the late 4th century AD on coin evidence (p. 57), and the pottery from layer (7) gives a similar date (p. 51). There is one sherd of possible Saxon pottery from layer (7) (p. 80). This, taken with the extremely small area excavated (10 x 2m) must throw some doubt on the late Roman dating for layer (7).

The problem arises from explaining the presence of such large expanses of water-borne silt (layers 9 and 7) in a stream which was never much more than 2m wide. There are two theories, both of them unsatisfactory in certain respects. It is possible to argue that these large layers could only have been deposited there if the stream had been stopped or diverted above Angel Court. In the medieval period a stream (called the Moorditch) was certainly in existence in this general position in the 14th century, but since there were no silt deposits in the post-Roman layers on site it had presumably shifted from its original course. Instead, artificially dumped levelling layers might be expected and on site a large number of cattle horns (p. 90) was, in fact, found in layer 9. The second theory, which has held the field in the past²⁹, is that these layers of silt were deposited because the stream flowed less swiftly and thus did not carry its silt load in suspension to the Thames, but shedded it much higher upstream. This could only have happened if the profile of the stream had changed from a swift, down-cutting torrent, to a lazy trickle winding its way through a marsh (a sequence suggested by Grimes at Bucklersbury House³⁰) — and medieval documentary sources stress the wet and generally swampy nature of this area of the City. This change of profile could only come about if either the stream had reached its maturity or if the level of the water table had risen dramatically. It is known that there was a rise in the level of the Thames³¹ in the Roman period which would not only have caused the general water-table to rise with it, but would also have had a specific effect on the streams which ran into it. But it is uncertain that so small a rise in the river level would have had such considerable consequences so far upstream of the tributaries.

It is possible to suggest that farther downstream there was some impediment to the flow of water, causing it to pond up so that sediment in suspension was deposited to form silt, as seen in layers (7) and (9). A water mill with a pond behind it is a possibility since mill stones from water mills are known from the Walbrook valley, particularly from the Bucklersbury House site³². But there is no direct support on site for this interpretation which could hardly explain the known deposition of silt all over the Walbrook valley. The sitings of water-borne silts when plotted on a map, as by Merrifield³³, are so widespread that they can only be explained by a natural cause such as a rise in the water table, but despite their number only Professor Grimes' work at Bucklersbury House, apart from the present site, has recorded the successive depositions of the silt layers. However, at Bucklersbury House, further downstream than Angel Court, and thus closer to the original rise in the level of the Thames, it is known that the stream did flood continuously and that the banks were constantly being

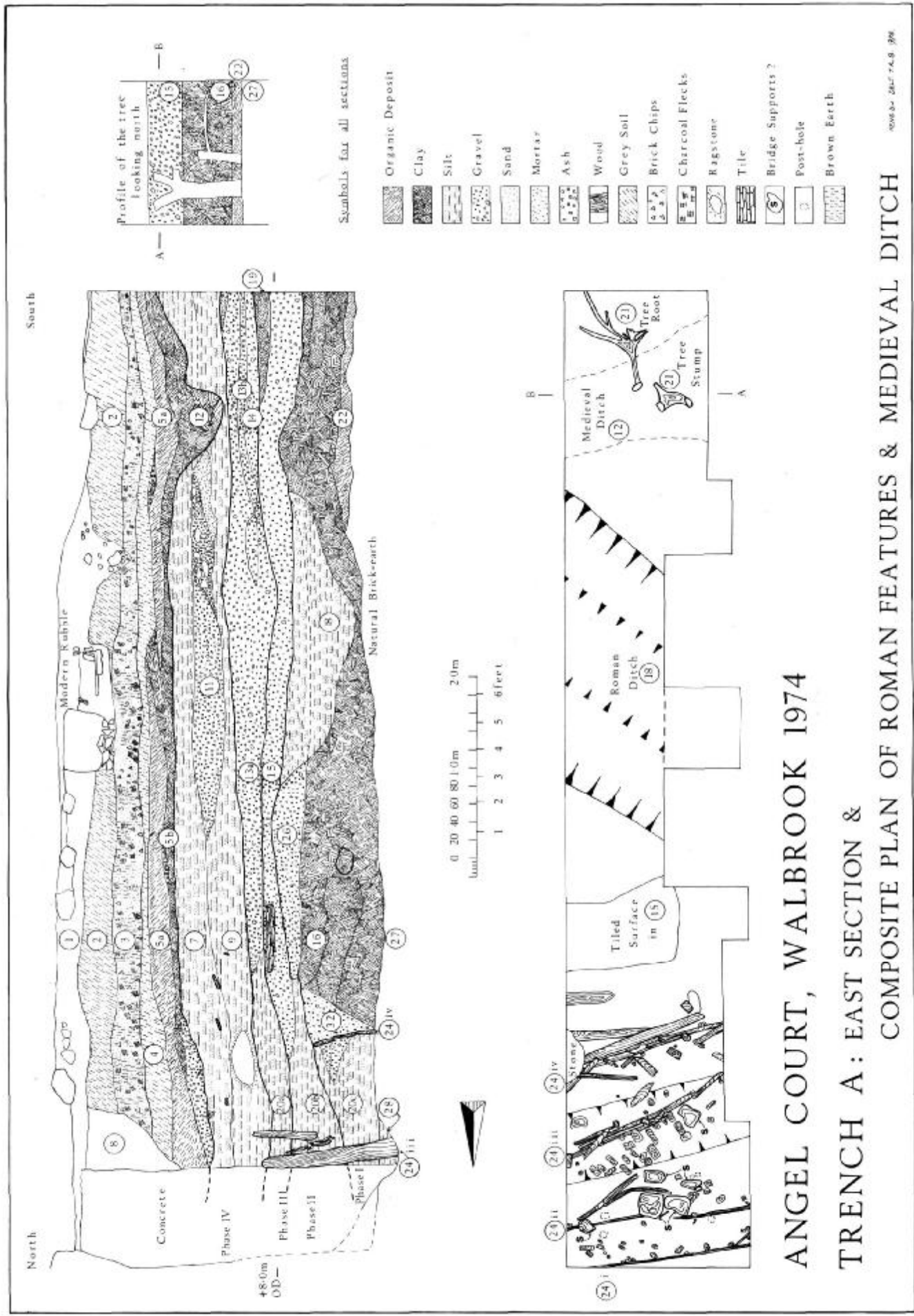


Fig. 2. Angel Court: Trench A section and plan

revetted and rebuilt³⁴. It was doubtless due to the rise of the water table that it was necessary to rebuild the floor of the Mithraeum nine times, and thus to raise it by over 1m, within a century and a half³⁵. This compares with a water level rise at Angel Court, farther upstream, of considerably less than 1m. A further piece of evidence to support this interpretation comes from the Roman City Wall, to the north of Angel Court where it is recorded³⁶ that a new culvert was cut through the wall 5ft above the level of the original channel. Neither of these cuttings is dated, but the conclusion that to the north of the Angel Court the water table was rising in the later Roman period is hard to escape.

In conclusion it seems most likely that despite the difficulty of explaining the large quantities of silt from so small a watercourse, they must be viewed as flood plain deposits caused by a stream continuously rising and cutting new beds for itself through previously deposited silts. The gravel dump (layer 11) was obviously an attempt at containing the stream in the manner previously used, but within a few years the whole area was flooded again, for the pottery from all three layers has been dated to the late 4th century. It should, however, be noted that the topography of the Walbrook stream, particularly in the late Roman period, is still largely unknown, and awaits further fieldwork.

Area B, where the builder's excavations were observed also clearly lay well within the flood-plain of the Walbrook, as silt and gravels were seen — the latter particularly in the south-west corner of the area. This agrees with Merrifield's suggested course for the stream³⁷. In the observation at B17 dark grey clay, mixed with wood and tiles was recorded. Presumably this is another area of bank-side dumping, and recalls other similar deposits, e.g., layers (16) and (26) in Trench A (Fig. 2)³⁸.

MEDIEVAL LAYERS

Most medieval deposits appear to have been removed at some later date, so that in section layer (7), which is probably late Roman in date, comes directly beneath layers (5) and (12), which are dated by pottery to the late 12th or early 13th centuries (p. 86). Layer 5, like the earlier Roman deposit, layer (9), contained a large quantity of horn-cores. As in the previous case, this must represent the debris from a slaughterer or horn-carver. Goat horn-cores were present as well as those of cattle (p. 95). The deposition of silt also stops sometime within this period, since there was none above layer (7). This is presumably due to the diversion of the stream elsewhere³⁹. Layer (12) was clearly a ditch, and is most probably another drainage channel. It widened out as it approached the west section (Fig. 2), which may indicate its imminent juncture with a larger channel, or indeed with the main stream of the Walbrook. Until it was systematically drained in the 16th century, the whole area was criss-crossed with channels and trenches to drain the marsh. It is not clear why the ditch should be filled with clay, but this may only be a confusion in the recording terminology. The barrel excavated from layer (5) was made up of 16 wooden staves, and the pottery inside was dated to the first half of the 14th century AD (p. 86). This fill was described at the time of excavation as being similar to layer (4) which is now known to be contemporary. There is no clue to the origins or reasons for the dumping of either layers (3) or (4), but (3) has a very similar date to that already given for layers (4) and (5) (p. 86) though it must be emphasised that the dates here are often spread over a century or more. Layer (2) was thought to be the same layer as was noticed elsewhere over the area of the Angel Court redevelopment, such as D (2) and the top layer in Trench F.

ii) — Trenches C-H (Figs. 1, 3 and 4).

INTRODUCTION

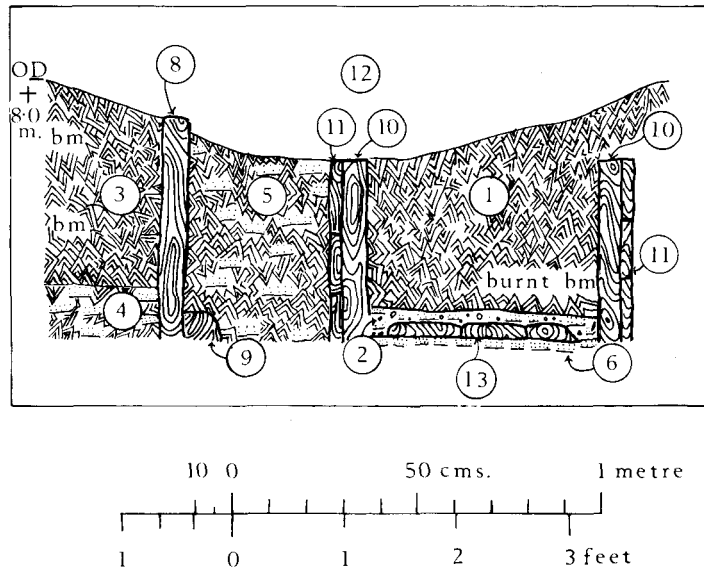
At the same time as controlled work was in progress at Trench A, observations were also made at the other, mechanically excavated, trenches C-H on other parts of the Angel Court site. Where it was possible, section drawings were made. In the description that follows, the only entries included are for layers or structures which are not represented in section drawings.

DESCRIPTION

- C — On top of the natural gravel was recorded a Roman deposit, 1.0m thick, of mixed gravel and clay. In this was a revetment-like structure of wood — horizontal planks running east-west, with periodic vertical timbers on the north side of them. Unstratified Roman finds were collected. Above these Roman layers was a deposit of dark soil into which a chalk and mortar wall had been built. This was presumed to be medieval.
- D — An almost complete amphora was found in a section propped up against a horizontal and a vertical timber. Additional information to the section includes —
- 3 — tile, charcoal and mortar flecks.
 - 7 — a hard gravel surface.
 - 13 — grey clay and gravel.
 - 14 — mortary rubble and gravel.
 - 16 — fawn brick-earth.
 - 17 — packed gravel surface — very similar to layer (7).
 - 23 — hard fawn brick-earth with gravel and charcoal flecks.
 - 24 — orange/fawn brick-earth.
 - 25 — black occupation deposit.
 - 26 — dark brown peaty deposit.
 - 31 — black occupation deposit.
- E — In the eastern section a barrel-pit was recorded, above which was a chalk wall of presumably medieval date. In construction it was similar to the wall observed in Trench C. It ran in a north-south direction. Immediately above this wall was a deposit of modern rubble.
- F — Beneath the top layer (black soil and modern building material) was a layer of reddish brown brick-earth. This overlay a floor surface of *opus signinum*, approximately 0.15m thick. The layer beneath this floor was a deposit of gravel mixed with mortar, and was 0.25m thick. This lay above typical Walbrook silts. Set into the top of this layer was a group of large squared timbers of unknown length.
- G and H — Various layers of building material, with wall-plaster particularly prominent, lay above layers of gravel.

INTERPRETATION

Unlike Trench A and Area B, Trenches C-H produced some evidence of habitation, especially in Trenches D, E and F. The timber structure seen in Trench C was clearly a drainage channel⁴⁰. Running the length of the section of Trench D for almost 17m were floor and occupation deposits of various kinds, some of them recorded as “clay”, though they were most probably brick-earth. At the east end were a group of timbers and some ragstone, which may have been the supports for a wall, with floor surfaces running on either side. Layer (13), which appears stratigraphically above the timber group, was presumably the last floor level. Layers (3), (20) and (21), which were again most probably brick-earth rather than clay, represented the destruction of these sizeable structures by fire, with traces of tile, mortar and charcoal. Layer (2) contained medieval pottery. As there was no controlled excavation in this trench, there is no reliable dating evidence.



ANGEL COURT, WALBROOK 1974 TRENCH E: SOUTH SECTION

MENS. M9 DELT. T.R.B. 1975.

Fig. 4. Angel Court: Trench E section

Trench F also showed signs of habitation, and a similar sequence to Trench D just to the south (Fig 1). One layer corresponds to layer (3) in Trench D, the destruction layer. This may also correspond to the layers which are mentioned in Trench E, layers (1) and (3). Again, as in Trench D, this destruction layer lies above the floor levels in Trench F, as one would expect, while D (12) (the gravel base for the floor) lines up with a similar layer in Trench F. The silt deposits and timbers in Trench F did not apparently continue in Trench D. Again there is a lack of dating material for the whole trench.

Trench E clearly showed a timber drainage gully of the Roman period, similar to the one observed in Trench C⁴¹. If, as seems likely, a tributary of the Walbrook ran through Area B, this gully would certainly have run directly into it. It may well have been a gutter for the large building shown in the section of Trench D. The planks in the bottom of the channel may either have been collapsed walls, similar to the ones still *in situ*, or may perhaps have been the remains of a timbered floor to the gully. Timbers (8) and (9) were most probably stakes for a building, the destruction debris from which may be layers (3) and (1). Between this layer in F and E (1) and (3) there is 1m difference in height above OD. This disparity is best explained by the likelihood of the ground sloping away towards the stream in the south-west corner of Area B.

The building debris mentioned in Trenches G and H may be the same as the ‘‘D3, E3 and 1, and the 2nd layer of F’’ layer mentioned above.

In Trenches C-H, evidence of houses was observed. As previously stated, there was no dating evidence, so that the only guide is by comparison with other, similar, deposits from the Walbrook valley. Even here the evidence is far from conclusive, but it does seem that private domestic occupation on a large scale, as suggested by Merrifield⁴², rather than the commercial and possibly votive activity that characterised the earlier period⁴³ — was more prevalent in the late 2nd and early 3rd centuries. One might, therefore, very tentatively suggest that the floors and occupation deposits noticed in Trenches D and F, and the drainage channels in Trenches E and C belong to this period.

IV DISCUSSION

The excavations at Angel Court established the course of a feeder of the main Walbrook stream, and showed, as did the only other known section across any part of the Walbrook⁴⁴, that the stream was in existence for most of the Roman period. It confirmed that it was necessary torevet the banks of the stream, even though this was only a tributary, and also that the system of revetted and banked channels, which must have been a prominent feature of this area in the Roman period, eventually fell into neglect and decay, when the stream finally flooded. The revetting was undertaken more than once because of flooding and the consequent quantity of silt deposited. The excavations also produced a chronology for the silting up of the stream-bed, but whether this silting was due to the rise in the water-level of the Thames, causing the streams which ran into it to flow less rapidly, and thus deposit much of their water-borne silt, or whether it was caused by the deposition of refuse in the stream itself is still not completely clear. It seems likely that both factors contributed to this effect.

The observations in Trenches C-H produced some evidence for structures of a very substantial size (the 17m long section of Trench D picked up Roman floors along much of its length) and by comparison with other evidence from the Walbrook valley these floors at Angel Court have tentatively been dated to the early 3rd century. Thus the picture of the valley, as suggested by Merrifield⁴⁵ would appear to hold true, namely that in this later period the central area of the Roman city, despite its drainage problems, was an area of considerable building.

The work carried out by Professor Grimes at Bucklersbury House⁴⁶, showed for the first time the true width of the stream and its sequence, continually recutting its bed in its accumulated silts, while the banks were simultaneously and artificially raised. This sequence was confirmed at Angel Court, though on a much smaller scale. The phasing of the build-up of silt in some parts of the Walbrook complex is now known, though the difficult question of what happened to the stream in the post-Roman period still remains. Merrifield's deductions from the numismatic evidence from the lower Walbrook⁴⁷ is only partly confirmed at Angel Court. Here, although the coins from the stream-bed (only five of them) stop around AD 150 (p. 57), as was the case further downstream⁴⁸, the pottery from the stream-bed does continue until the middle or late 3rd century AD (see p. 52). The disparity between these dates is surprising, but this may be due to the excavation of layer (20) as one archaeological deposit. However, both layers (20b and 20c) are later than the date suggested either by the coins from these layers (p. 57) or those from Bucklersbury House⁴⁹. Thus, although the processes of flooding, dumping and revetting are the same at both sites, the dating sequence appears to be different, and the stream at Angel Court was still canalized at a time when further downstream the main course of the Walbrook had already broken its banks.

Although the excavation at Angel Court answered some questions, it also posed several more. Perhaps the most important of these is to explain the great quantities of silt which accumulated in the later Roman period on the stream bank (p. 20) and how these deposits are connected, both in date and origin with those recorded at Bucklersbury House. Further fieldwork on sites on, or near the Walbrook will be of great value to help our understanding of this complex of streams, its growth and decay, and also the relationship between the stream and the Thames (p. 20). The Walbrook must take a prominent position in any discussion on the growth of Roman London, and although our knowledge is increasing, there still remains much that is uncertain.

NOTES

1. R. Merrifield *The Roman City of London* (London 1965), map in end paper.
2. W. F. Grimes *The Excavation of Roman and Medieval London* (London 1968) 92-8.
3. R. Merrifield 'Coins of the Bed of the Walbrook and their Significance' *Antiq. J.* 42 (1962) 38-52.
4. Corporation of London Record Office, Hustings Roll 39 (118).
5. *Ibid.* 62(119).
6. *Ibid.* 68(24).
7. *Victoria County History (V.C.H.)* (London) i. 77-8.
8. R. Merrifield *The Roman City of London* (London 1965) gazetteer Nos. 133-45, 158-9.
9. *Ibid.* Nos. 139, 142, 158-9.
10. *Ibid.* W30, p. 86-9; *V.C.H.*, i. 77-8.
11. H. A. Harben *A dictionary of London* (London 1918) 421, 423.
12. Hustings Roll 124 (72).
13. *Cf. ibid.*; Parish Book of St. Stephen Coleman Street (Guildhall Library Ms 4456) p. 156.
14. *The Assize of nuisance 1301-1431* ed. H. M. Chew (London Record Society vol. 10) (London 1973) No. 570.
15. Hustings Roll 141 (20).
16. *Ibid.* 17 (47, 50).
17. *Ibid.* 54 (83).
18. *Ibid.* 55 (88).
19. *Ibid.* 82 (15).
20. *Ibid.* 141 (20).
21. *Ibid.* 219 (19).
22. *Ibid.*
23. *Ibid.* 221 (27). Other Hustings deeds relating to this small enclave of property are: 56 (47-8); 69 (56).
24. Grocers' Company, Register of . . . lands, rents and tenements (Guildhall Library Ms 11616) f. 14.
25. *Letters and papers of Henry VIII*, xvii (i). 527-8 (no. 16).
26. For the comic but chastening experience of John Stow's father see *Survey of London*, ed. C. L. Kingsford (Oxford 1908) (reprinted 1971) i. 179.
27. Parish Book of St. Stephen's p. 35.
28. Merrifield *op. cit.* (in note 1) 46 and Fig. 10. If the Angel Court dating is correct, it would fit well with Dunning's distribution map of burnt samian from the Hadrianic period.
29. *Ibid.* 93.
30. *Ibid.* 87.
31. *Ibid.* and G. Willcox "Problems and Possible Conclusions . . . the Thames in the London Region" *Trans. London Middlesex Archaeol. Soc.* 26 (1975) 285 ff.
32. E.g. Museum of London Accession Nos. 20637; 20639.
33. Merrifield *op. cit.* (in Note 1) map and gazetteer.
34. Grimes *op. cit.* (in Note 2) 93.
35. Merrifield *op. cit.* (in Note 1) 62-63 and Grimes *op. cit.* (in Note 2) 98 ff.
36. *Royal Commission for Historical Monuments London III Roman* (1928) 87-89. See also Merrifield *op. cit.* (in Note 1) 89 and Gazetteer No. W30.
37. Merrifield *op. cit.* (in Note 1) map.
38. *Ibid.* 94.
39. *Ibid.* 85. Unlike the stream at Angel Court, the main stream does appear to have survived into the Middle Ages.
40. Cf. W. F. Grimes "Excavations in the City of London" in *Recent Archaeological Excavations in Britain* ed. R. L. S. Bruce-Mitford (1956) 122. Also see Grimes *op. cit.* (in Note 2) 96 and Pl. 31.
41. *Ibid.*
42. Merrifield *op. cit.* (in Note 1) 47, 48 and 94.
43. *Ibid.* 47 and 93.
44. Grimes *op. cit.* (in Note 2) Fig. 23 a and b.
45. Merrifield *op. cit.* (in Note 1) 47, 48 and 94.
46. Grimes *op. cit.* (in Note 2) 92-117.
47. Merrifield *op. cit.* (in Note 3).
48. *Ibid.*
49. *Ibid.*

ACKNOWLEDGEMENTS

The author would like to thank Jamie Muir for his valuable suggestions during the preparation of the report, and Ralph Merrifield, who provided photographs for study from his own collection. Finally, a word of thanks to those members of the Departments of Urban Archaeology and Roman and Medieval Antiquities in the Museum of London, who gave freely of their time and good advice and to Diana Twells of the D.U.A. who typed the manuscript.

V THE FINDS

BY MICHAEL RHODES

With contributions by Hugh Chapman, Juliet Clutton-Brock and Phillip Armitage, Brian Hartley and Brenda Dickinson, Frank Jenkins, Joan Liversidge, Ralph Merrifield, Clive Orton and John Thornton, and notes supplied by Leo Biek, Geoff Dannell, Francis Dimes, John Evans, J. S. Gask, D. B. Harden, Mark Hassall, M. R. Hull, David Sherlock, the late John Waterer, A. C. Wheeler and D. F. Williams.

In common with other sites near the course of the Walbrook stream, the Angel Court excavations produced an abundance of Roman finds. They were examined as dating evidence, as indications of how the site was used and for their intrinsic interest. The preservation of most objects was extremely good and both wood and leather items, including a total of 33 leather shoes, were found on the lower, waterlogged deposits of Trench A and in the builders' trenches of Area B.

The dating rests almost entirely upon the pottery and coins. An examination of these clearly indicated that most groups from the observation of builders' trenches (*i.e.*, Area B and Trenches C to H) are heavily contaminated (and, thus, not useable for dating). It was noted, however, that comparatively few finds are of 1st century date indicating little use of the area until the 2nd century. Some of these groups contain only Roman material and account of this has been taken in the interpretation of the site.

Whilst the controlled excavation of Trench A produced mainly well-stratified groups, many of the Roman finds are not closely datable owing to a high proportion of residual material in the Roman strata. For this reason where an object has come from a layer dated, for example, *c.* AD 140-160, the phrase "not later than *c.* AD 160" has been used to summarize the dating evidence. The medieval layers in this trench produced far less residual material and the objects contained within them are assumed to have been discarded or lost at roughly the same date as their deposition.

Most finds from Trench A have been studied. The principal exceptions are the many small fragments of Roman brick, tile and building stone, together with some small quantities of oyster shells from Layers 3, 4 and 9. Only those finds of intrinsic interest have been examined from the other Areas.

Unfortunately a changing pattern of site-use cannot be inferred from the finds. Fragments of wall plaster in the presence of burnt clay (see Liversidge pp. 74-79) indicate there were substantial buildings in the area before *c.* AD 120-160 and many small, personal objects of female use (*e.g.*, Nos. 426, 427, 430, 435) may also indicate domestic utilisation of the area. The ceramic figurines (Nos. 403 and 404), the face-mask jars (Nos. 95, 113, 117, 382-3) and triple ring vase (No. 384) possibly all have a religious significance, but their presence by no means shows the area had a specifically religious function since such objects could equally have been used in, for example, a household shrine. The military presence in London is illustrated by the iron socketed ballista (No. 447) and a scabbard slide (No. 479). In addition four other objects (Nos. 481, 487, 488 and 527) might conceivably be from military tents. Roman industry is represented by copper scrap (Nos. 432 and 434), unfinished iron objects (Nos. 439 and 440, possibly also No. 450 and some of the Type 2 nails) and a large quantity of horn cores from Layer 9 (see Clutton-Brock and Armitage, pp. 90-93). Medieval horn cores, also indicative of horn-working, were found in Layer 5 (see p. 95) and Layer 2 produced four notable 14th-15th century crucibles (Nos. 601-4). The other medieval finds are in no way remarkable.

After an explanation of the methods used to study the pottery, the reports are grouped in three main sections dealing with the Roman, Saxon and Medieval periods. The bone reports are added as appendices.

Each individually-described object and pot-form is given a Catalogue Number and these are also used for the illustrations. A Museum of London group-accession number, prefixed by the letters E.R. is given with the Layer of Context Number of each group of finds. Accession Numbers of individual finds are given in brackets. These are in two parts, the first half being the E.R. number of the group to which each belongs. Where finds are catalogued by layer, a probable date for the deposit is given in italics at the top of the group.

(All the finds, with the exception of the animal remains (see p. 88) are now in the Museum of London).

ROMAN

INTRODUCTION TO THE POTTERY REPORTS

BY CLIVE ORTON

Apart from the samian, which has been treated separately, the pottery has been studied, described and illustrated according to a code of practice explained below. For ease of reference, the report is, however, split into the major historic periods, as are the other finds.

CONVENTIONS

Fabric description is based on visual and tactile examination of surfaces and fresh breaks, both at 'life-size' and 20x (area) magnification. A magnet is used to identify inclusions of iron ore and dilute hydrochloric acid to identify limestone, shell, etc. (see below). The following characteristics are recorded: colour, hardness, feel, visual texture, inclusions, surface (treatment, slip and glaze, if any).

(i) *colour*: Munsell colour names are used. The colour of the core is always given, followed by the colour of the margin(s) (if different from the core) and the surface(s) (if different from the margins). Mixed colours are indicated by a solidus (/) — e.g., 'red/brown', while partial colours (e.g., a core that fades out in places) are enclosed in brackets — e.g., '(grey) core, red margins' means that the grey core fades out in places, leaving an entirely red section.

(ii) *hardness*: terms used are:

- soft: can be scratched with a fingernail,
- hard: cannot be scratched with a fingernail,
- very hard: cannot be scratched with a knife,
- fairly hard: fabrics on the hard-soft border,

and refer to the section — the surfaces are described separately if necessary.

(iii) *feel*: basic terms used are:

- harsh: feels abrasive to the finger,
- rough: irregularities can be felt,
- smooth: irregularities cannot be felt,

two other terms which can be used are soapy and powdery. All refer to a surface in its basic state (e.g., without burnishing, which is described separately).

(iv) *visual texture*: terms used to describe a freshly broken section are:

- smooth: flat or slightly curved; no visible irregularities
- finely irregular: small, closely-spaced irregularities
- irregular: larger, more widely-spaced irregularities
- hackly: large and generally angular irregularities
- laminated: 'stepped' effect.

Descriptions are as seen by the unaided eye: for smooth fabrics, it is useful to add the texture as seen at 20x magnification (e.g., 'smooth; irregular under lens').

(iv) *inclusions*: identification is based on Peacock's algorithm (Peacock, 1975). Colour is also given when necessary — Munsell colour names are used, plus the terms clear (i.e., transparent, no intrinsic colour) and colourless (transparent or translucent, taking up colour of clay matrix to some extent).

Frequency of inclusions is indicated on a three point scale — abundant, moderate or sparse.

Size of inclusions: the terms used are based on the U.S.D.A. standard sizes for sand grains (Limbrely, 1975, 260) and are as follows:

very fine: up to 0.1mm

fine: 0.1 to 0.25mm

medium: 0.25 to 0.5mm

coarse: 0.5 to 1.0mm

very coarse: larger than 1.0mm

Coarser inclusions are given to the nearest mm. The predominant size range is given: ranges in which lesser proportions are present are shown in brackets.

Sorting: indicates the homogeneity (in size) of the inclusions. Well-sorted grains are all about the same size, ill-assorted grains are not.

Rounding: terms used are:

angular: convex shape, sharp corners

sub-angular: convex shape, rounded-off corners

rounded: convex shape, no corners

irregular: convex/concave shape

flat: two-dimensional shape.

(vi) *surface treatment*: terms used are:

wiped, smoothed, burnished, knife-trimmed, fingered, turning marks.

(vii) *glaze*: the extent, colour and finish are described.

Terms used for extent are: all-over, areas, zones (i.e., areas with horizontal upper and lower edges), patches, streaks, runs, dribbles, spots.

Colour: the *apparent* colour is given (i.e., as actually seen), except that obviously clear glazes are described as clear. Colourants in the glaze, and effects of inclusions in the clay, are described where possible.

Finish as seen at 20x is preferred to an unaided description. Terms in use are: lustrous, glossy, dull, sparse, pitted, crazed, smoothed, thick, thin: others may be needed.

(viii) *slip*: the convention is used that large zones of slip are a fabric characteristic but details are dealt with as decoration. Terms used are:

(extent): zone (and location on vessel); see decoration.

(finish): continuous, sparse, smooth, lumpy, thick, thin, micaceous, iron-rich.

Each recognised fabric is given a fabric code, which is used for sorting and cataloguing sherds. Reference specimens are kept in the Fabric Type Series and reference definitions in the Fabric Description Index (Rhodes, 1977). The pottery is recorded in Pottery Summary Sheets, on which it is listed by context, fabric code and vessel form. Quantities are recorded in terms of number of sherds, rim- and base-equivalents (Orton, 1975), number of vessels (implicitly, and as far as it is possible to do so) and (but not for this site) weight. Internal and external parallels for vessel form and decoration type are also given, while type examples of both fabric and form are indicated. Drawings of type examples are kept in a Pattern Book. The record can be sorted to provide statistical and other information as required. The basic but unpublished record thus consists of (i) Fabric Descriptions; drawings of forms and decoration (common to all sites) and (ii) Pottery Summary Sheets (unique to each site).

Following the recommendations of the Ancient Monuments Board Committee for Rescue Archaeology (1975), this record is seen as the *Level 3 Report*. The *Level 4 Report* (published here) contains (i) a description of the methods employed (see above), (ii) generalised descriptions of fabric groups, which can correspond to other known wares or homogeneous groupings of fabrics of unknown source, known collectively as Common Names. It is these groupings, and not the individual fabrics, which form the basis of the Level 4 Report, (iii) specific descriptions of particularly interesting fabrics, fabric groups, (iv) pottery illustrations and table relating them to the fabric descriptions ((ii) above), (v) discussion of dating and sources of pottery, and other points of interest. In general, there are no individual descriptions of illustrated sherds, since illustrations can easily be linked to the general descriptions, which contain at least as much information about individual sherds as conventional pottery descriptions. Descriptions of individual sherds are, however, available on request, as is a more detailed discussion of the methods employed and their problems.

Pottery was recovered from this site under a variety of conditions. The level of detail of the record is intended to match the likely reliability of the pottery as evidence. Even in the most carefully excavated contexts, the problem of residuality remains. In this report, if a group of pottery from a context is published, then it is *all* published (except for Roman pottery from medieval contexts) and questions of residuality discussed. It is impossible at this stage to come to conclusions about the life-spans of fabrics or forms.

ROMAN POTTERY (EXCLUDING SAMIAN)

BY CLIVE ORTON

The main groups of Roman pottery are from Trench A, Layers 16 (E.R. 1587), 18 (E.R. 1588-90), 20 (E.R. 1592), 9 (E.R. 1582) and 7 (E.R. 1581). There are smaller amounts from Trench A, Layers 28 (E.R. 1596), 22 (E.R. 1593), 32 (E.R. 1597), 26 (E.R. 1595), 15 (E.R. 1586), 19 (E.R. 1591), 13 (E.R. 1585) and 11 (E.R. 1583). Only the former groups are large enough for a statistical treatment, and are referred to as the Statistical Sequence. The problem of Layer 20, which is really three layers but was excavated as one, is discussed below. To cause the least confusion, the place of Layer 20 in the sequence is that of its *highest* constituent layer.

Sherds of particular interest from the other trenches are described and discussed after the discussion of the pottery from Trench A.

GENERAL DESCRIPTIONS OF MAIN FABRIC RANGES

The bulk (nearly 80%) of the pottery belongs to relatively few main classes: the rest belong to a wide range of fabrics. The main ranges are:

AMPHORAE

Three basic divisions are recognised (i) 'pink' fabrics: hard; smooth fracture: pink or reddish yellow section; moderate inclusions of fine white mica, sparse fine to very fine quartz and iron ore; smooth surfaces; thin-walled; turning marks on interior (ii) 'brown' and 'grey' fabrics in wide range of colour, nature and frequency and size of inclusions (which may include quartz, limestone iron ore, black and white mica and, less frequently, feldspar, pink 'volcanic' and crystalline inclusions), (iii) 'red' fabrics, with a similar variety of inclusions, often slipped. Of these, (ii) and (iii) are distinguished from (i) by the iron rich (and often lime-rich) nature of the clay itself. The colour of (i) and (ii) is often altered by contact with the soil; (iii) does not seem to be so vulnerable. Where forms are identifiable, sherds of (ii) belong to globular forms (e.g. Dressel 20) and are probably S. Spanish (e.g., No. 147), while those of (iii) seem to have more cylindrical shapes and may be Italian (e.g., No. 1). (See Callender 1965, 45-6).

BLACK-BURNISHED WARE, TYPE 1 (BB1)

The definition follows Farrar's (1973, 84). Hard black or dark grey fabric, occasionally with brown margins; hackly fractures and 'granular' appearance. Abundant coarse white and colourless quartz, moderate coarse clear quartz, sparse very fine black iron ore and sometimes sparse limestone or red iron ore inclusions. No true turning marks, but fingering impressions and wipe-marks, indicating that the vessels are handmade. Surfaces are generally black; burnished with short strokes, giving a 'faceted' appearance. The burnishing covers the exterior of cooking-pots (except for a reserved zone below the shoulder) and interior of rim, down to junction with shoulder; interiors and rims of bowls and dishes. There is scribed decoration — lattices on the reserved zone of cooking-pots (but overlapping the burnishing), intersecting arcs ('arcades') on the exteriors of bowls and dishes, and loops on the underside of dishes. A minority have a patchy slip.

The most common vessel forms are cooking-pots (40%) (Nos. 64-6, 151-7, 172-3, 175-6, of which No. 64 has a beaded rim), flanged bowls (25%) (Nos. 68, 159-64, 333-5), and dishes with simple rims (20%) (Nos. 69, 167-70, 336). Other forms represented are handled jars (or jar-like beakers) (Nos. 158, 332), bowls and dishes with incipient flanges (Nos. 67, 165-6). *Note:* the following terms are used to describe lattice decoration:

acute (lines nearer to vertical than to horizontal)

obtuse (lines nearer to horizontal than vertical)

oblique (lines in one direction nearer to horizontal, others nearer to vertical)

right (lines at equal angles to vertical and horizontal).

The source of BB1 has been discussed by Farrar (1973, 86-97), where he argues for a primary production centre in Dorset.

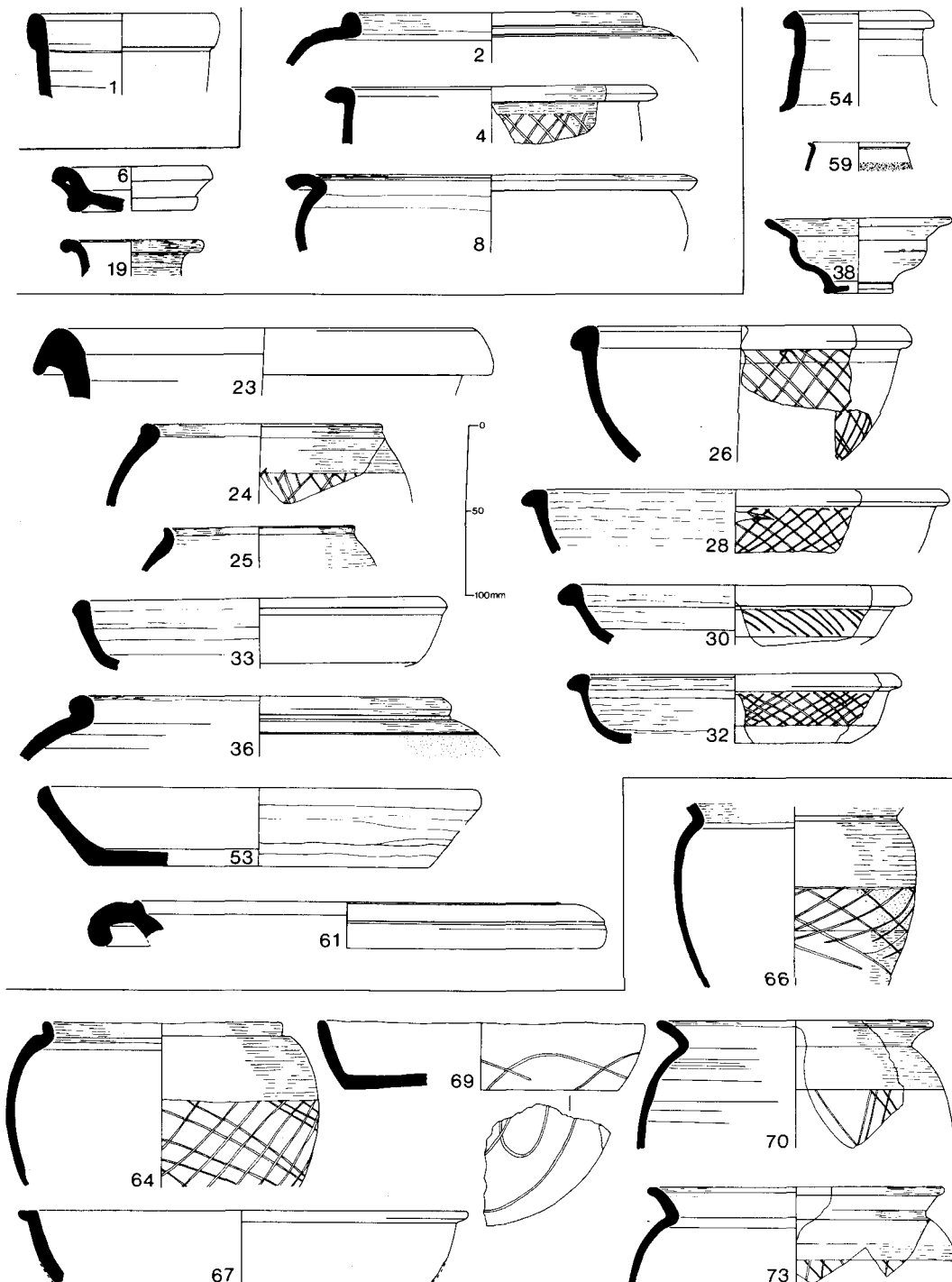


Fig. 5. Angel Court: Roman pottery Nos. 1 — 73 (1/4)

BLACK-BURNISHED WARE, TYPE 2 (BB2)

There are problems with this definition, as the term can be used to describe both a general stylistic/decorative tradition and a specific ware. An attempt is made here to define it in the narrow sense, again following Farrar (1973, 84). Even so, some vessels may not fall strictly into the BB2 category, while others in BB2 style will be found elsewhere (e.g. under Alice Holt/Farnham). The fabric is similar to BB1 but the quartz inclusions are finer (up to medium size), while the black iron ore can be coarser (up to fine size). Core colour is grey or dark grey rather than black, and the margins are often 'brown' (i.e., hue 5YR-10YR, value 5 or less, chroma 3 or more). Turning marks are apparent, particularly on the interior of cooking-pots, and all vessels are wheel-thrown. Burnishing is more even, often of a 'silky' quality, and is found on the whole exterior of cooking pots (except for central reserved zone), but extends only a short way (c. 5mm) over rim on to interior. Slip, generally black, is more common than on BB1. Scribed lattice decoration is found on bowls and dishes as well as cooking-pots, but the arcade decoration is not found.

The most common vessel forms are bowls and/or dishes with moulded rims (70%) (Nos. 4, 26-32, 82-84, 88-90) and cooking pots (25%) (Nos. 24-25, 70, 73-75, 77). There is also one dish with a plain rim (No. 33).

Farrar argues (1973, 97-102) for a decentralised production in the Thames Estuary/Colchester area. Possible kiln sites suggested by him include Cooling, Chalk, Joyden's Wood and Greenhithe to the south of the Estuary, and Mucking and Colchester to the north.

ALICE HOLT/FARNHAM WARES

These fabrics are hard with an irregular or finely irregular fracture, sometimes tending to laminar. The usual colouring is grey or light grey with darker grey surfaces, but dark grey margins are fairly common and brownish margins can occur. Surfaces can be 'silvery' — this is probably a result of the waterlogged conditions in which the sherds were found. A minority have a uniform grey fabric. The characteristic inclusions are abundant clear and colourless quartz, up to fine size (with a minority of medium-sized grains in some bowls and dishes), sparse very fine rounded black iron ore and sparse very fine white mica (up to moderate frequency in some examples). There is a tendency for the quartz grains to fall out of the fracture, leaving a pitted appearance. A minority of sherds have rather less abundant fine quartz, usually associated with a light grey core and darker margins. They are here called Alice Holt 2. Slip — usually grey but sometimes white or black — is fairly common but in a minority. Burnishing is very common, and can lead to a slip-like effect on the surface. The term slip is restricted to cases where there are clear indications of a thin layer of finer clay on the surface. All versions are wheel-thrown.

A wide range of forms is represented: cooking pots (40%) (Nos. 72, 76, 78, 174, 207-8, 218, 223, 225, 227, 346-7), flanged bowls (20%) (Nos. 181-2, 184, 211, 216-7, 219, 221, 338, 345, 349-50), bowls/dishes with incipient flange (15%) (Nos. 185-9, 353), flagons (15%) (No. 204), bowls/dishes with moulded rim (5%) (Nos. 85/178, 215, 226), jars (5%) (197, 210, 224, 348, 351) and one simple dish (No. 194). Those in the minority fabric (see above) are Nos. 210-1, 223-4, 226, 345, 351, 353.

Types of decoration represented include: scribed-lattice (cf. No. 70), scribed arcade (e.g., No. 181), scribing on interior of bowls (No. 182), incised wavy lines (Nos. 208, 210), horizontal grooving (Nos. 215, 219), scribed horizontal and wavy lines (No. 225 — not illustrated).

These fabrics have been paralleled in general terms with those produced in the Alice Holt/Farnham complex (see Wade and Lowther, 1949; Clark, 1950; Bennett, *et. al.*, 1963 and Day and Dormer, 1971), but attributions to individual kilns have not been attempted.

HIGHGATE AND SIMILAR WARES

These fabrics are hard with a fairly smooth fracture, appearing irregular or finely irregular at 20x. The usual colour is dark grey throughout, but the range is from grey to very dark grey; brown cores also occur, sometimes partially — they therefore probably indicate differences in firing conditions. The inclusions are abundant very fine colourless quartz, often ranging up to fine size, sparse fine white mica and very fine black iron ore. Burnishing somewhere on the vessel is almost universal, and slip, usually dark grey, is also very common. About half of the slipped sherds have a metallic appearance, sometimes called 'graphite-surfaced', but more likely to be a product of the waterlogged conditions. All fabrics are wheel-thrown.

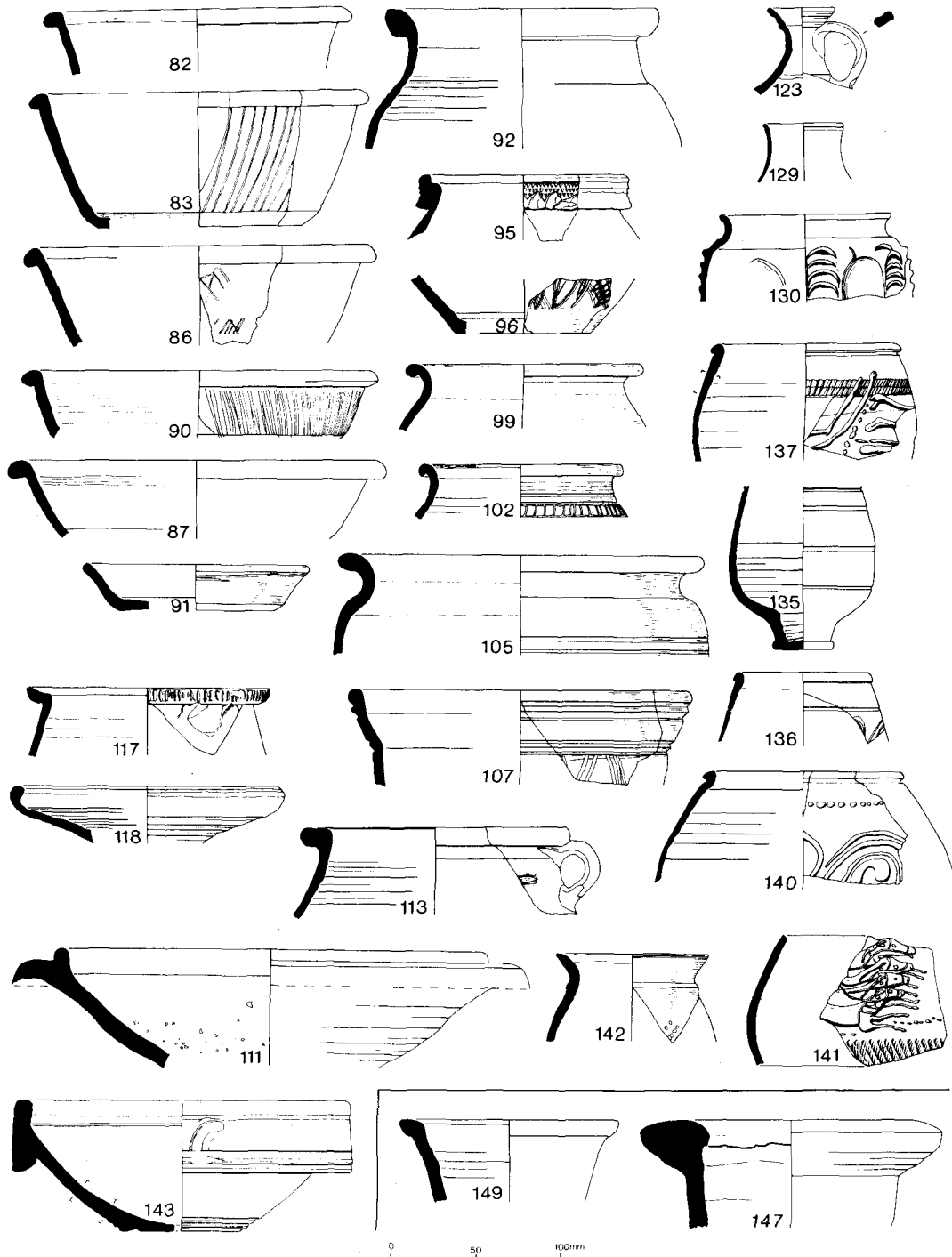


Fig 6. Angel Court: Roman pottery Nos. 82-149 (1/4)

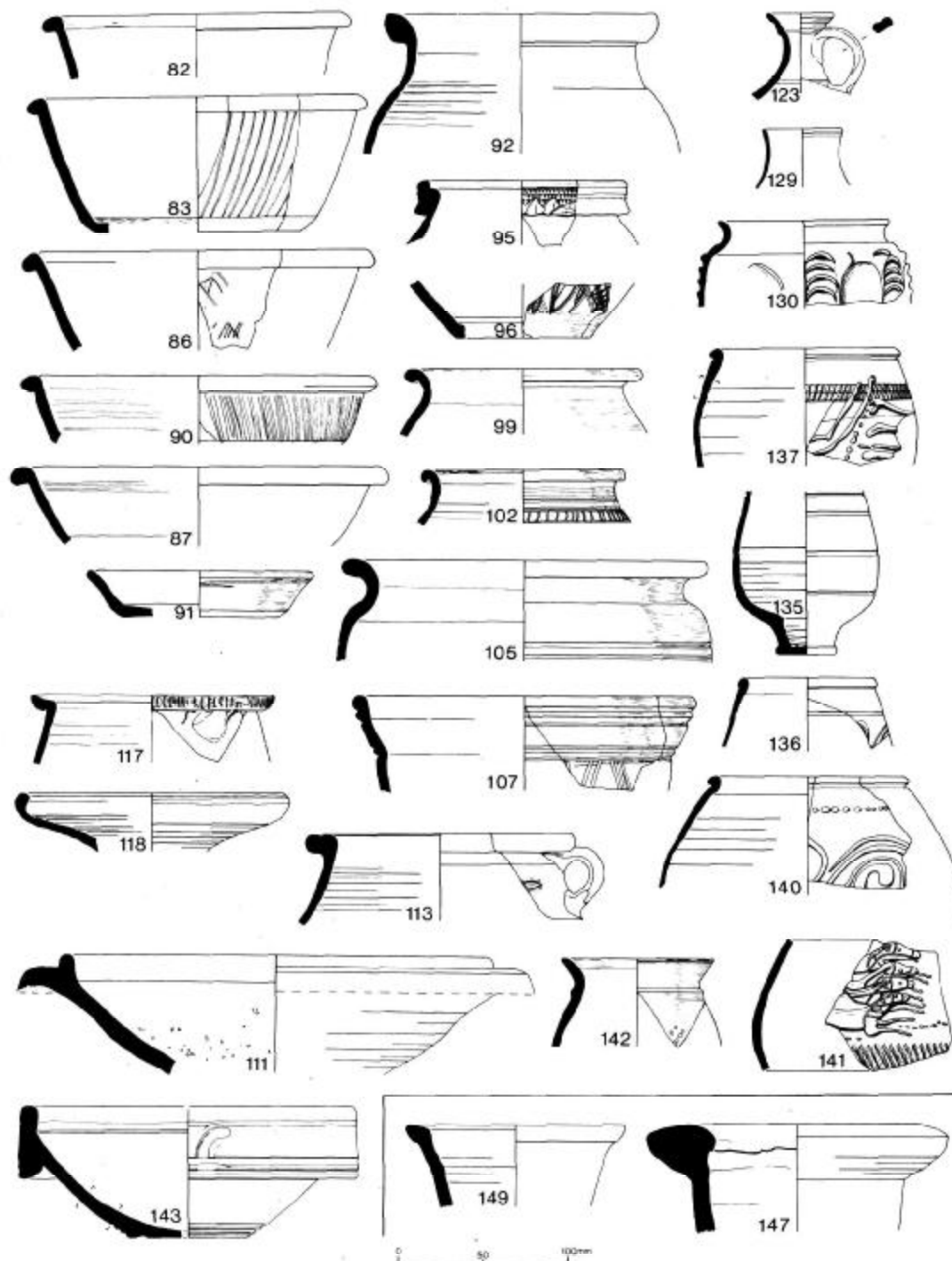


Fig 6. Angel Court: Roman pottery Nos. 82-149 (¼)

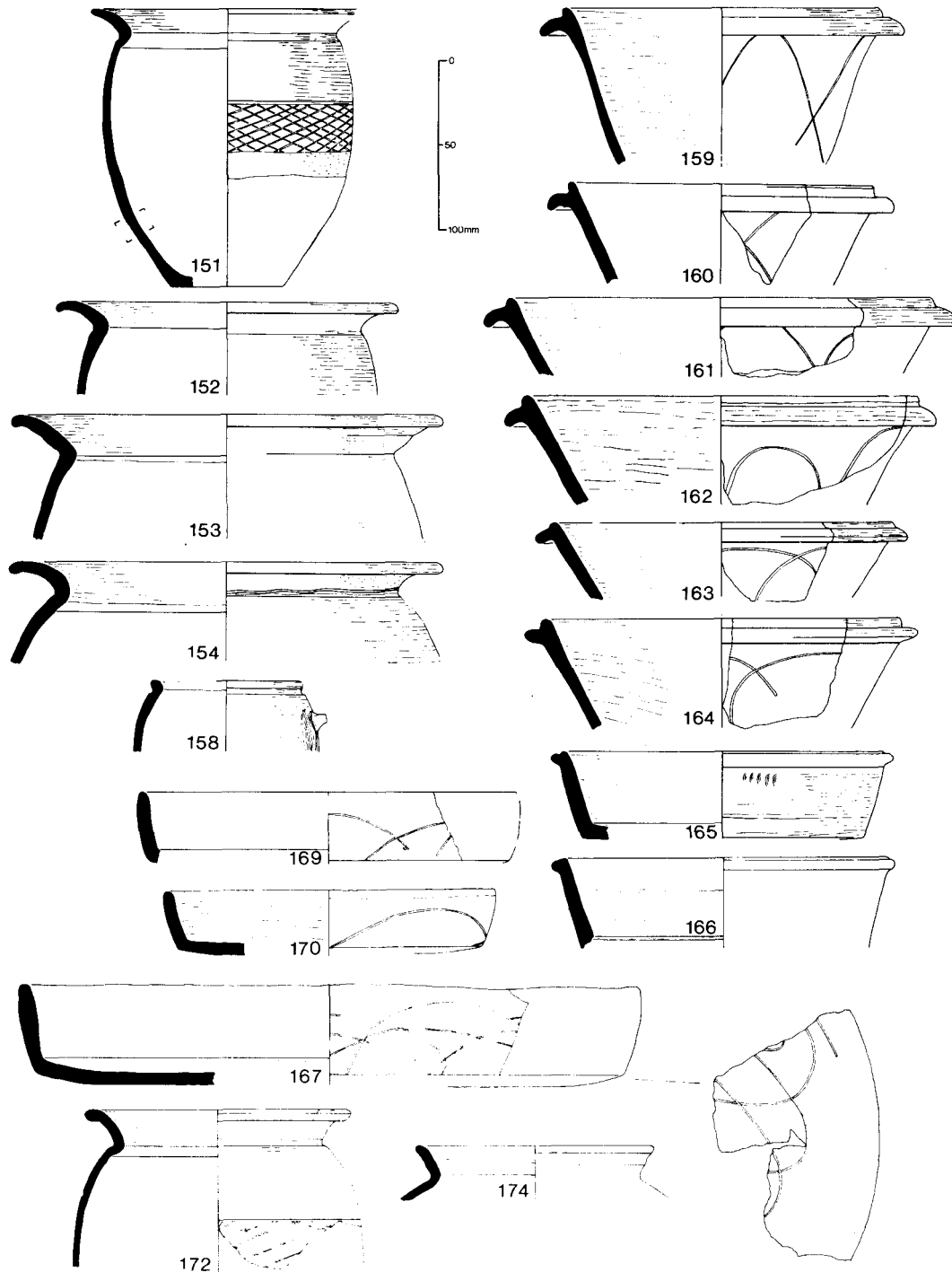


Fig. 7. Angel Court: Roman pottery Nos. 151 — 174 (¼)

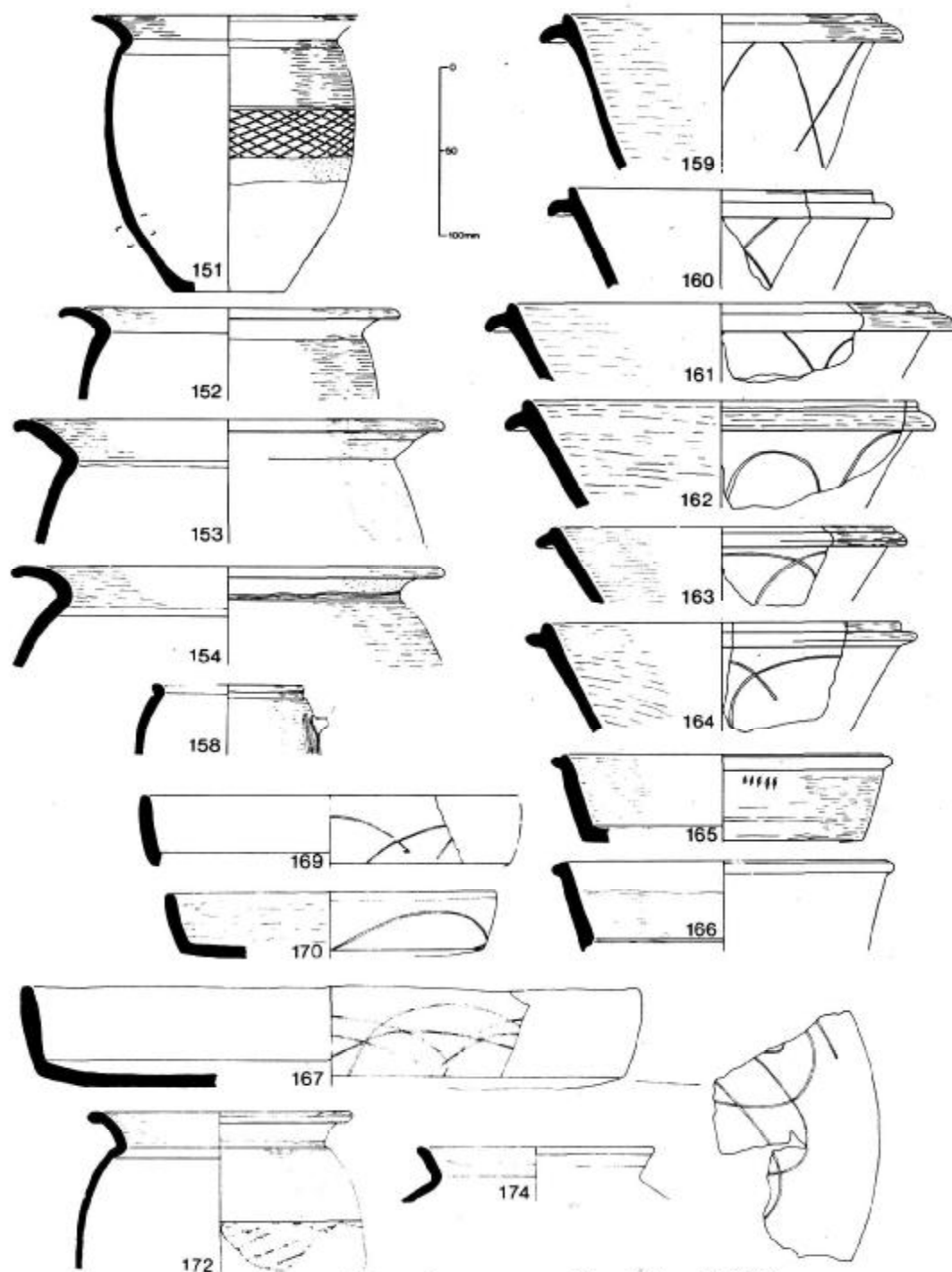


Fig. 7. Angel Court: Roman pottery Nos. 151 — 174 (¼)

Only three vessel forms are common in these fabrics — jars (40%) (Nos. 42-3, 49, 102-3, 203), jar-like beakers (20%) (Nos. 39-41, 104), and bowls (25%) (Nos. 8, 38). The other (unburnished) sherds seem to be from lids (Nos. 44 and possibly 45).

The most common type of decoration is panels of dots *en barbotine* (not in any illustrated sherds — cf. No. 20), sometimes in association with cordons.

These fabrics appear similar to the products of phases III and IV at Highgate (Brown and Sheldon, 1974) and the forms are generally similar. However, sherds from Southwark which are all visually 'Highgate' have been divided by McKenna (*pers. comm.*) into distinct groups on the basis of microscopic characteristics. Because of this and the possible itinerant lifestyle of the 'Highgate' potters, it is safer to talk of a 'Highgate tradition' (SLAEC, 1978).

OTHER GREY SANDY FABRICS

Since the sources of these fabrics have not been identified, they have been divided arbitrarily into coarse, medium, fine and very fine sandy fabric groups.

(a) *coarse*

A wide range of fabrics, mostly sandy with sparse black iron ore and white mica, but some have moderate iron ore or mica (see also 'miscellaneous inclusions'). Some are wheel-thrown and some hand-made.

(b) *medium*

There is one distinctive range of fabrics, which resemble BB2 (q.v.), and which is here given the temporary name Roman Grey Medium Sandy 1. They differ from BB2 in representing forms not generally found in BB2 — jars, including beaded-rim (Nos. 5, 92-7, 195), lids (Nos. 7, 35), bowls/dishes (Nos. 34, 98, 146) and a lamp (No. 6, see Coarse-ware Ceramic Lamps). The possibility that they represent the earlier products of the kilns that later produced BB2 is an interesting line of thought.

No pattern or grouping is obviously apparent in the other fabrics.

A wide range of forms is represented: jars (Nos. 36, 99-100, 196, 199-200, 344), cooking-pots (Nos. 71, 79-81, 101, 177, 198), flanged bowls (Nos. 179-80, 339-40, 343), bowls with moulded rims (Nos. 86-7), dishes with incipient flange (Nos. 190, 202, 342) and dishes with simple rims (Nos. 91, 191, 193).

(c) *fine and very fine*

A range of grey fine- and very fine-sandy fabrics, some similar to Highgate and some to the finer Alice Holt/Farnham fabrics and all wheel-thrown.

Small quantities of a wide range of forms are represented: flagons (Nos. 212, 228), beakers (Nos. 205-6), jars (Nos. 105, 209, 213-4, 225), cooking-pot (No. 106), bowl (No. 222), dish (No. 220), lids (Nos. 46-7).

Note: as these 'other' categories do not form homogeneous fabric groups, no percentage figures for each form have been given.

PORTCHESTER 'D' WARE

These fabrics are hard but rather friable, with an irregular fracture. There are three main colour variants: (i) red to yellowish red section, with grey core in thicker parts, (ii) reddish yellow, sometimes with light or very pale brown margins, (iii) light grey core, very pale brown margins, core or margins fading out in places. All have abundant fine to coarse inclusions — mostly clear, colourless or reddish quartz — with sparse medium red iron ore, very fine black iron ore, and white mica. Surfaces are hard, rough and feel 'sandy', but (i) has a very pale brown slip covering the inclusions on both surfaces. All versions are wheel-thrown.

The 'standard' vessel form is a cooking-pot with everted (often undercut) rim (Nos. 108, 229-33, 354-5): the only other form represented here is the flanged bowl (No. 234). The only type of decoration is an extensive zone of horizontal rilling (e.g., No. 229).

This ware was called Porchester 'D' by Fulford (1975a, 299). The most likely sources are the Overwey kilns (Clark, 1950), but the attribution is not yet certain.

BROCKLEY HILL AND SIMILAR WARES

These fabrics too are hard but rather friable with a finely irregular fracture. At 20x magnification the irregularities appear lens shaped, aligned in the direction of turning of the vessel. The colour is generally a rather 'muddy' — very pale brown and/or light grey, but reddish yellow cores or margins

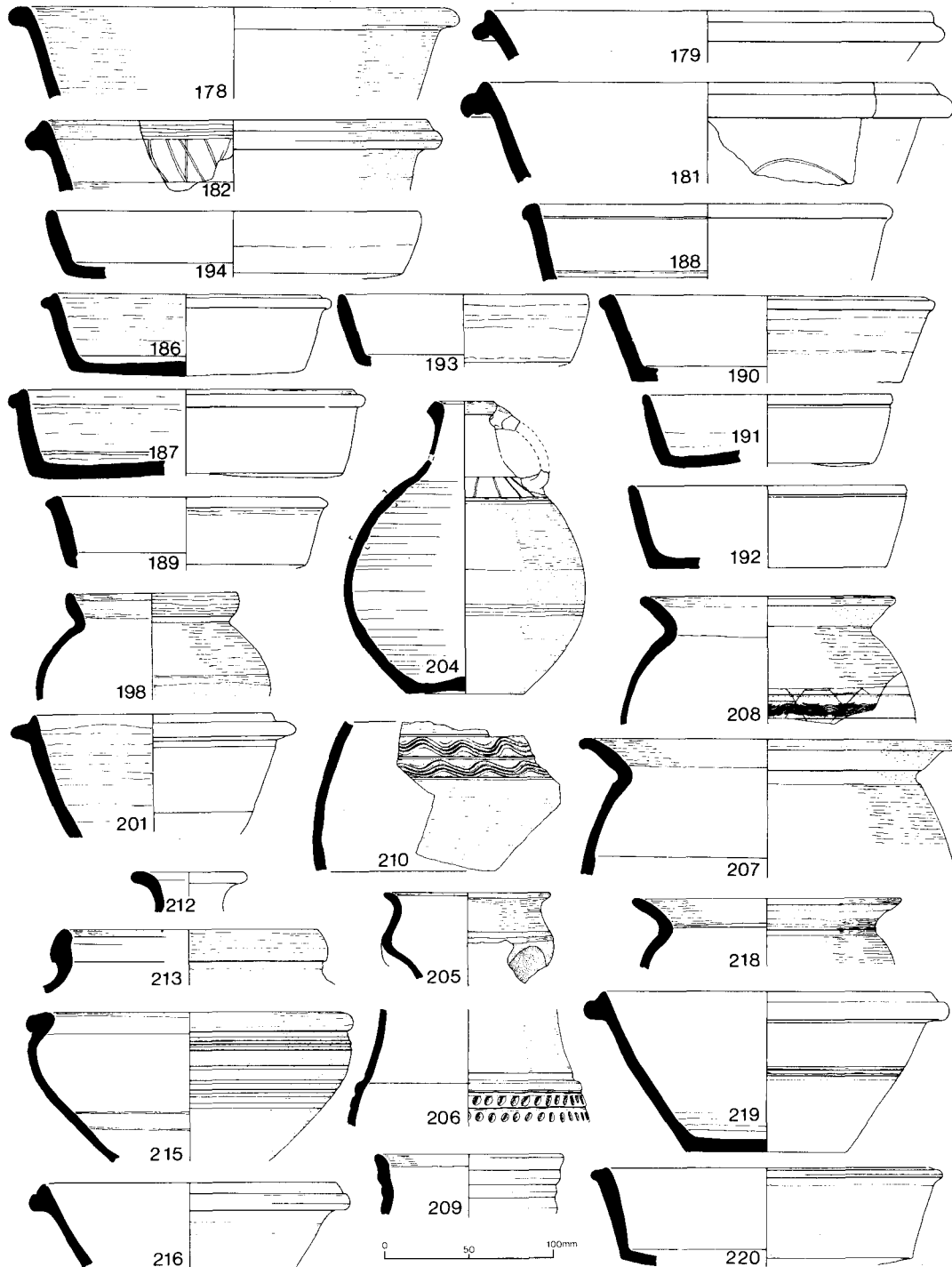


Fig. 8. Angel Court: Roman pottery Nos. 178 — 220 (¼)

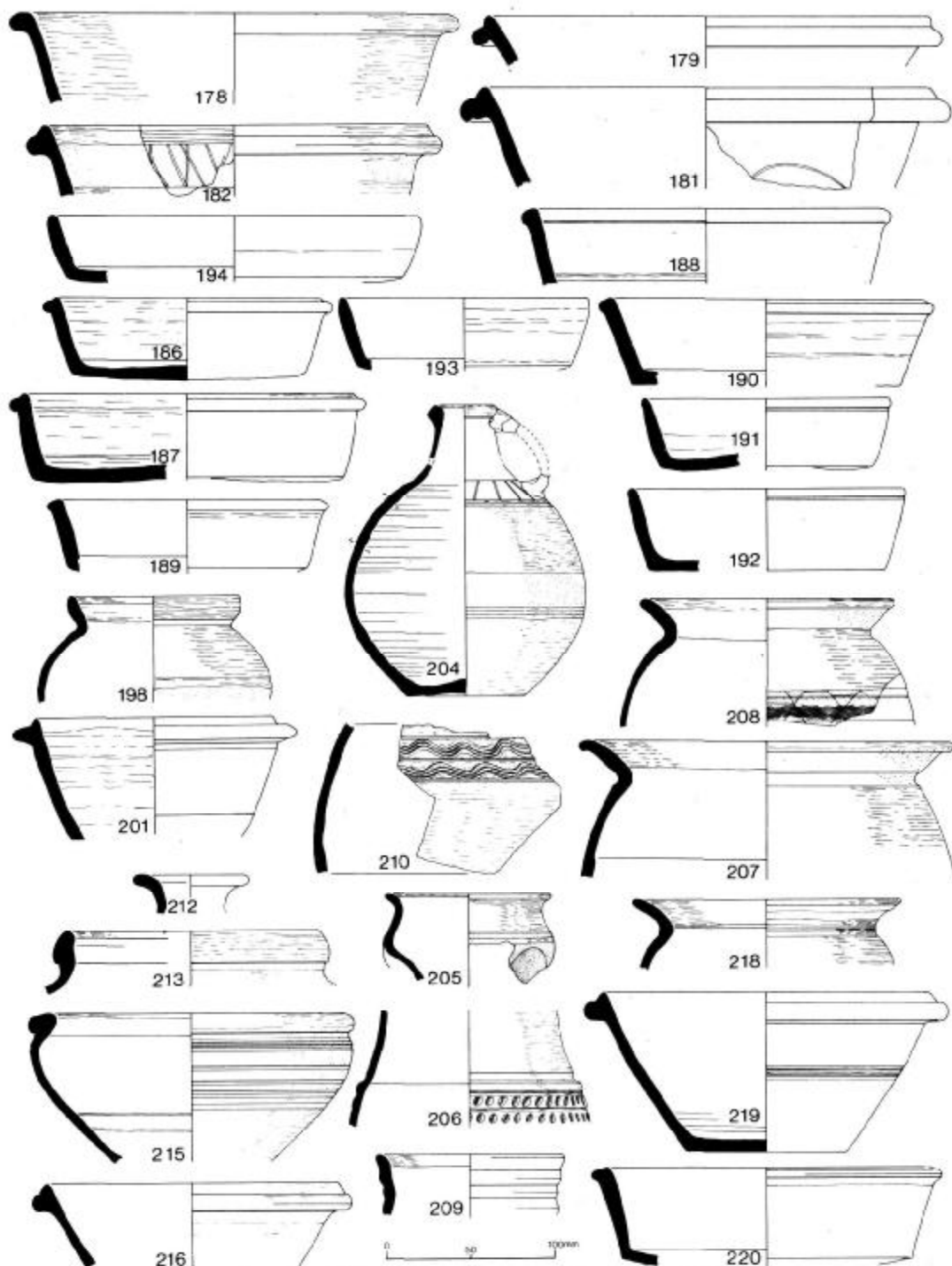


Fig. 8. Angel Court: Roman pottery Nos. 178 — 220 (¼)

occur, and even red cores on occasions. The surfaces are basically the same colour, but patches of grey, brown or yellow occur frequently — probably firing effects rather than a slip or colour-wash. Inclusions are abundant fine to medium colourless and white quartz, moderate clear quartz, sparse coarse red iron ore and occasional very fine black iron ore and white mica. The mortaria tend to have rather coarser (i.e., medium to coarse) quartz, and a small minority are slightly finer. Surfaces are hard and rough, sometimes with evidence of trimming, smoothing or slight burnishing on the exterior. All are wheel-thrown.

The most common vessels form is the flagon (70%) (Nos. 9-10, 54-5, 109-10, 237); others are mortaria (15%) (Nos. 14, 51, 111), reeded-rim bowl (Nos. 11-13) and simple dish (No. 53). The trituration grits in the mortaria are of white, red or black flint. This fabric and the basic forms of flagon, mortarium and reeded-rim bowl can all be paralleled at Brockley Hill (Castle and Warbis, 1974, Richardson, 1948, and others), but other kilns in the area, e.g., Radlett, Brickett Wood, (Verulamium Museum, 1976), cannot be completely ruled out.

OXFORD WHITE WARE

A hard fabric with finely irregular fracture and a slightly rough feel. The colour is generally very pale brown to light grey, sometimes with reddish yellow surface patches; a minority have reddish yellow or light red core. Inclusions are moderate very fine colourless quartz (with occasional fine and medium grains), sparse medium red iron ore (and possibly grog), very fine black iron ore and white mica.

All the vessels represented appear to be mortaria (Nos. 239-41, 356-7). The trituration grits consist of colourless, red and grey rounded quartzite. All forms are of the angular-flanged type produced at the Churchill Hospital kilns north of Oxford (Young, 1973, 109).

MUCHHADHAM WARE

A rather varied range of fabrics, which are nevertheless very similar visually, especially when examined microscopically (20x). All are hard with a finely irregular fracture and slightly rough feel (except where burnished). There are four broad groupings:

(i) with abundant very fine colourless quartz (some fine grains), moderate white quartz and (rounded) black iron ore, sparse white mica and occasionally red grog inclusions. Generally red throughout, sometimes with grey core or interior margin. Probably slipped and certainly burnished (it can be difficult to distinguish between slip and the effect of burnishing) on the exterior of closed vessels and both surfaces of open vessels. Burnishing is usually horizontal, except on the flagon necks where it is vertical.

The forms represented are flagon (No. 243), jars (Nos. 244-5, 359) and bowl (No. 246). Decoration, other than burnishing, consists of incised arcades (No. 243) and bosses (No. 247).

(ii) similar to (i), but with less (= sparse) black iron ore. Surfaces can be reddish yellow rather than red, and occasionally greyish. The forms represented are bowls (Nos. 248-9).

(iii) similar to (i), plus sparse coarse red iron ore inclusions. The burnishing is generally less even, and the colouring is generally red/grey. The only recognisable forms are angular-shouldered flagons (Nos. 115-6).

(iv) generally similar, but more micaceous, fabrics. Black iron ore varies from sparse to moderate. Few forms are recognisable: dish (No. 118) and lid are represented.

OTHER BROWN SANDY FABRICS

A varied range of fabrics, mostly represented by only one or two sherds. Texture ranges from coarse, through medium, to fine and very fine. Some may be oxidised variants of usually reduced (grey) fabrics.

Forms represented are: flagons (Nos. 112, 250), face-mask jars (Nos. 113, 117) and other jars (Nos. 235-6, 251), cooking-pot (No. 63), flanged bowl (No. 360), bowl (No. 361), lid (No. 56) and triple ring vase (No. 252). One of the jars — No. 251 — is of ‘‘Romano-Saxon’’ type.

SHELLY FABRICS

The majority of the shelly sherds belong to a clearly defined category (here called ‘‘Late Roman Shelly Ware’’): soft fabric with irregular fracture and soapy feel; black core, brown margins and black, grey, brownish or pale red surfaces (frequently mixed). As well as abundant shelly inclusions — mostly smaller than 1mm, but some up to 5mm in length — there is sparse medium black iron ore and very fine white mica. Surfaces are smooth and show signs of turning; some also have fine rilling. The surface

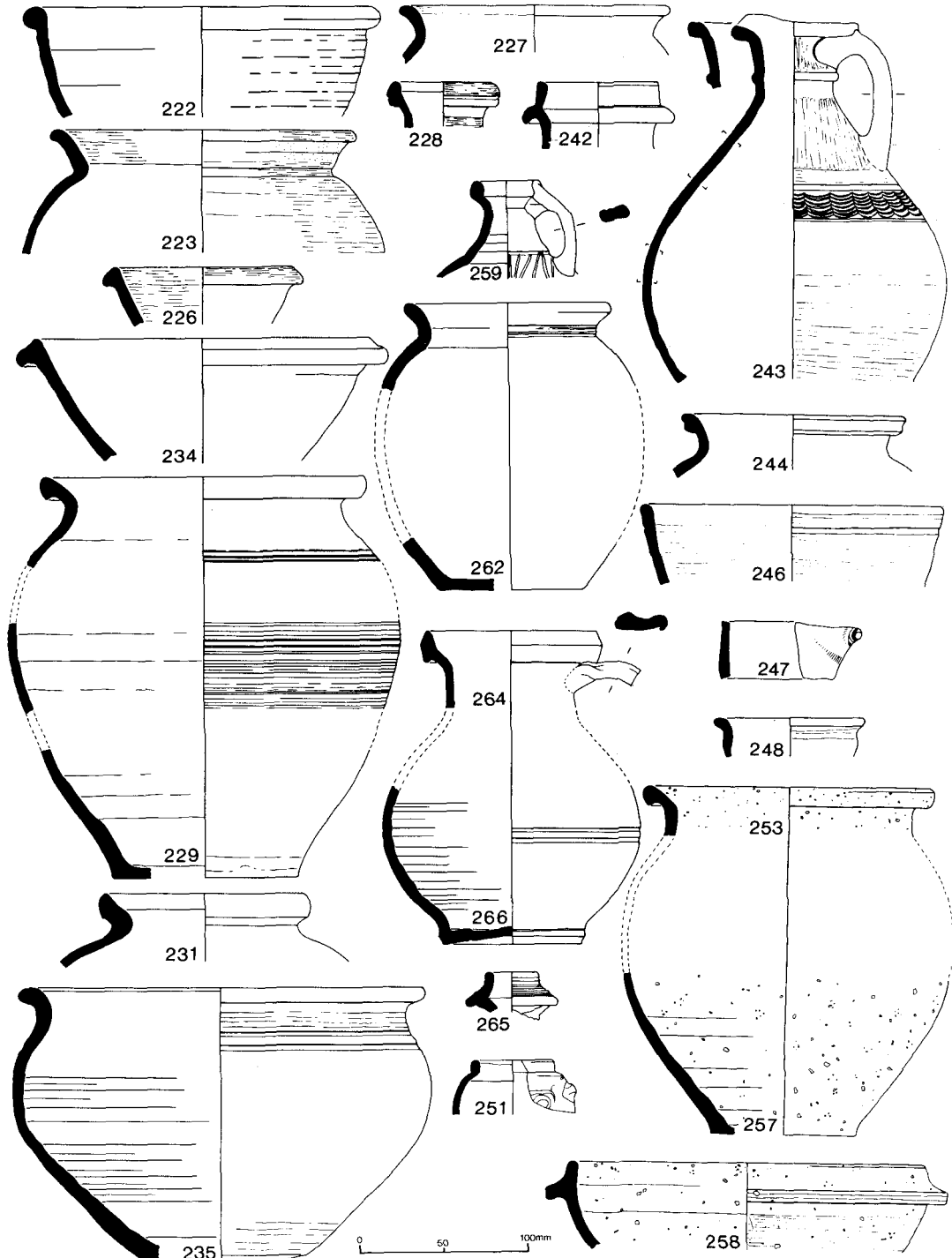


Fig. 9. Angel Court: Roman pottery Nos. 222 — 266 (¼)

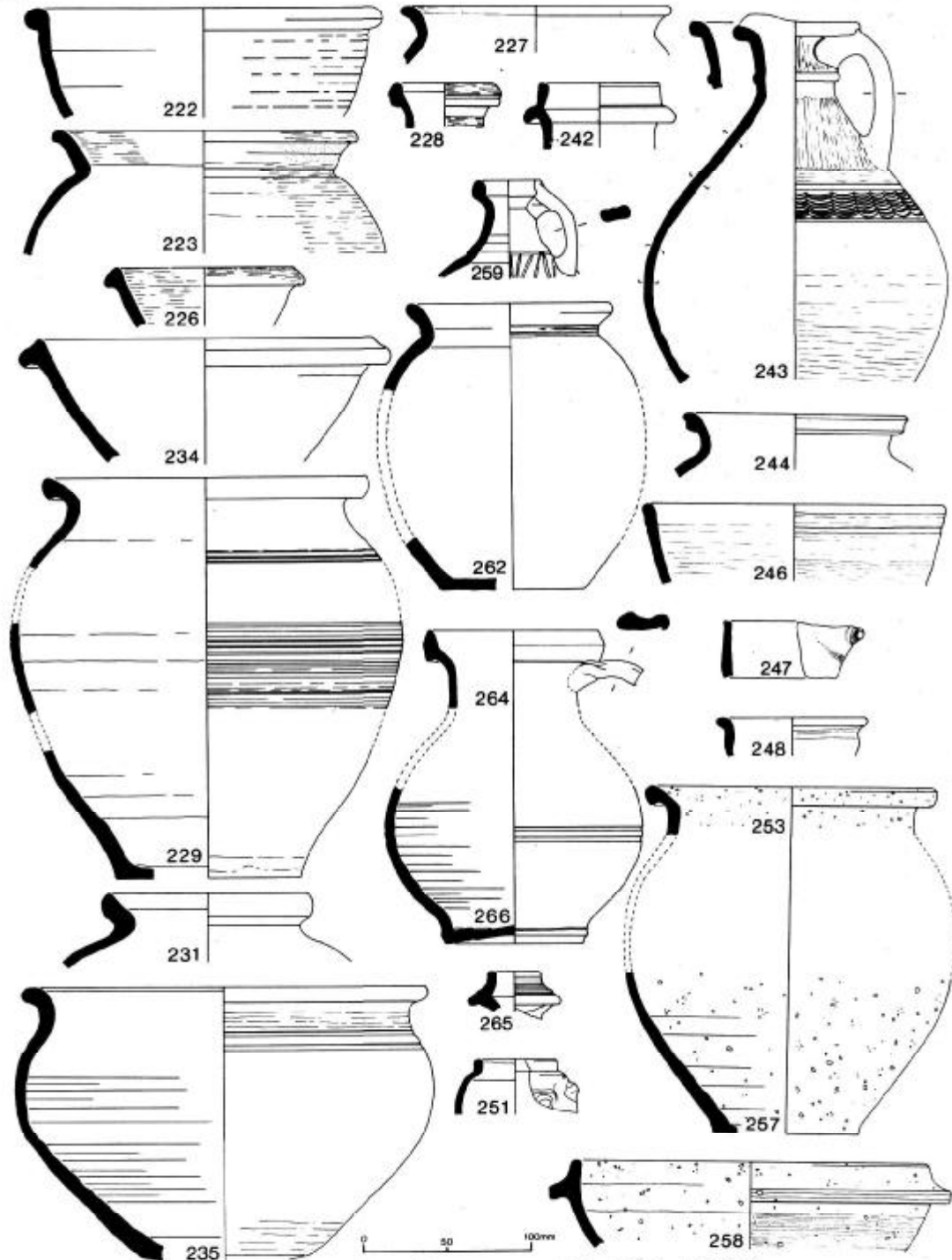


Fig. 9. Angel Court: Roman pottery Nos. 222 — 266 (¼)

colour may be due to slip in some cases. Jar forms predominate (Nos. 253-7, 363-4), but bowls (No. 258) are also found. These fabrics have recently been discussed by Sanders (1973). There are also a few sherds in shelly/sandy fabrics.

FABRICS WITH 'MISCELLANEOUS' INCLUSIONS

These are fabrics with moderate or abundant tempering of inclusions other than the usual "sand" (i.e., quartz *plus* lesser amounts of fine black iron ore and white mica). Micaceous colour-coated fabrics are not listed here.

The most common 'miscellaneous' inclusion here is grog, which occurs moderately in conjunction with sand — there are no heavily grogged fabrics. The only recognisable forms are cooking-pots (Nos. 262, 352) and a flanged bowl (No. 201).

Black and/or red iron ore inclusions are also common within this category, usually in association with sand but occasionally with organic inclusions (see below). Fabrics with black iron ore exceed those with red iron ore. Forms in the former include cooking-pots (Nos. 260, 365) and bowl (No. 366), while flagons (Nos. 264-6) are represented in the latter.

Less common are fabrics with organic inclusions, limestone or flint. Forms in these fabrics are bowl (No. 367), flagon (No. 259), and none recognised with flint.

Two unusual fabrics are (i) organic, grog, iron ore, fossil limestone and sandy inclusions, black slipped and burnished exterior (possibly Patchgrove ware). (ii) rim sherd of Mayen ware, type 1. Probably from very large jar or deep bowl (No. 368). Very hard, stoneware-like fabric with hackly fracture, but smooth between the inclusions. 'Lumpy' feel. Light grey (2.5Y7/2) throughout. Common well-sorted grey and white quartzite (*c.* 0.5mm) and coarse (up to 3mm) pink/grey volcanic inclusions; also sparse medium black and red iron ore. Horizontal and obtuse grooving on exterior. For reference to fabric see Fulford and Bird (1975, 171), but there is no parallel there or at Trier (J. Bird, personal communication). Possibly similar to Alzei type 25 (Unversagt, 1916, 31-6), but not very close.

MICA-DUSTED FABRICS

These come in a wide range of "sandy" fabrics. Most common are very fine-sandy fabrics, including a beaker (No. 122), a ring-neck flagon (No. 123) and an unusual basket-like handle, set transversely above a bowl rim (No. 124). Fine-sandy fabrics include sherds of an indented beaker (No. 120) and a bag-shaped beaker (No. 121), while dishes (Nos. 15, 57) are represented in medium-sandy fabrics. Coarse-sandy fabrics are rare.

WHITE-SLIPPED FABRICS

A small quantity of 'brown' sandy fabrics, coarse, medium, fine or very fine. The only recognisable forms are a dish (No. 58) in medium-sandy fabric, and beaker (No. 125), flagon (No. 126) and reeded-rim bowl (No. 127) — all in very fine-sandy fabrics.

OXFORDSHIRE RED COLOUR-COATED WARE

The 'standard' fabric is hard with a smooth fracture, finely irregular under the lens. Section colour ranges from red to yellowish red, the core often being slightly redder than the margins. A minority have grey or light grey cores. The visible inclusions are moderate fine white mica and sparse very coarse limestone (chalk?) and red iron ore, but the texture suggests the presence of abundant sub-visible inclusions. Open vessels and necked bowls have a micaceous red colour-coat on both surfaces, which feel smooth. Other (closed) vessels have colour-coat (reddish brown in a minority of cases) only on the exterior and over the rim; the rest of the interior surface is the same colour as the margin and feels slightly rough. All versions are wheel-thrown. These fabrics are particularly vulnerable to discolouration from the soil. Burning can result in a pink slip, as well as more obvious effects.

Over 80% of the vessels are bowls or dishes of various forms — imitation Dr. 36s (Nos. 273-7, 369) and Dr. 38s (Nos. 278-9, 370-2) (30%), necked bowls (Nos. 280-5, 373) (15%), wall-sided (Nos. 286-96) and full-bellied bowls (Nos. 374-7) (20%), flanged bowl (No. 297) (5%) and dishes with simple rims ("dog dishes") (Nos. 298-9) (5%). Other forms are flagons (Nos. 242, 268, 358) (10%), jars (Nos. 270-1) (5%) and mortaria (Nos. 300-1) (5%). The main types of decoration found on bowls here are various types of stamps, usually associated with cordons (Nos. 281-4, 287-8, 291-2, 296). There is also white slip decoration (e.g. Nos. 276, 286, 295), rouletting on bowls (No. 373), and applied decoration on beakers (No. 269).

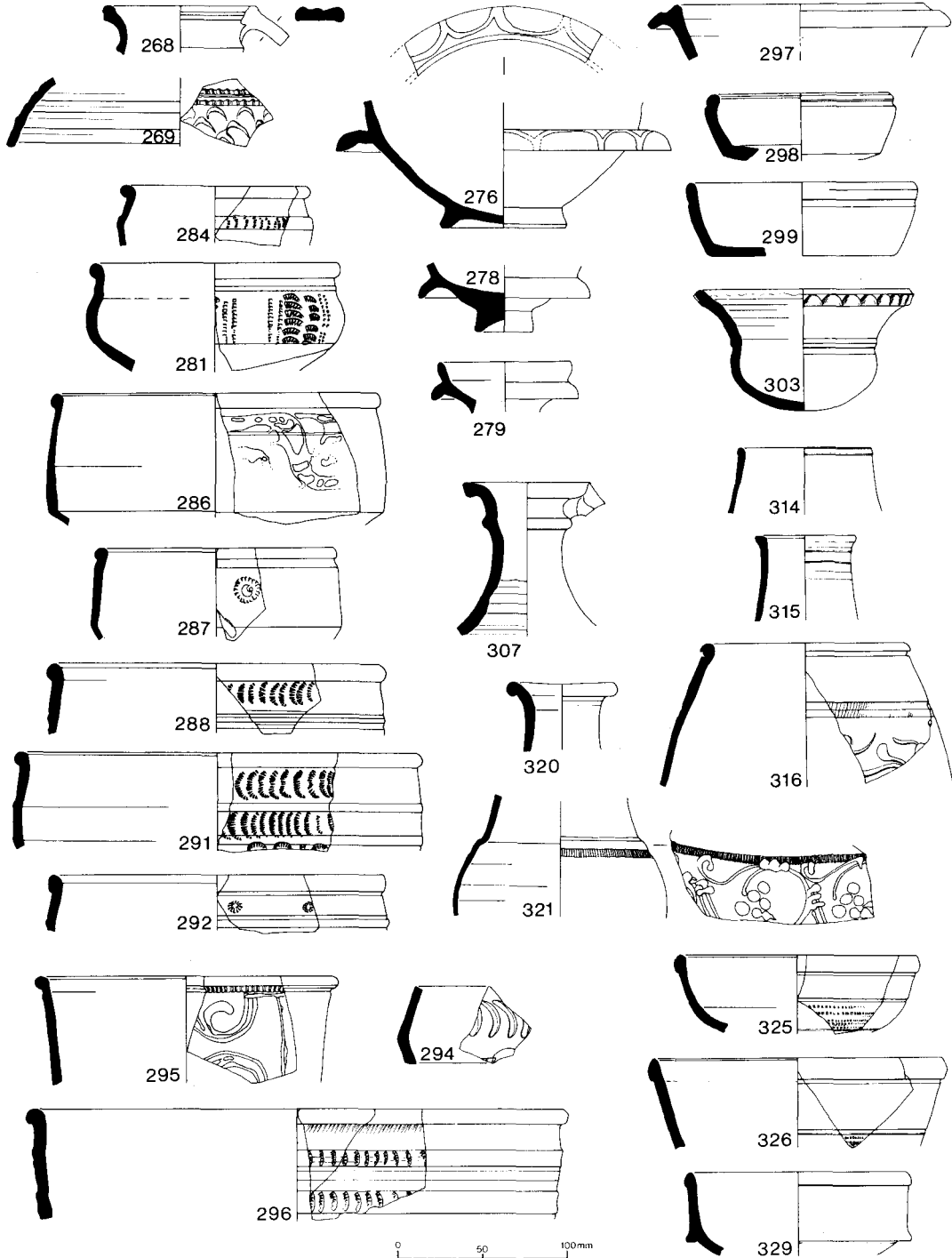


Fig. 10. Angel Court: Roman pottery Nos. 268 — 329 (¼)

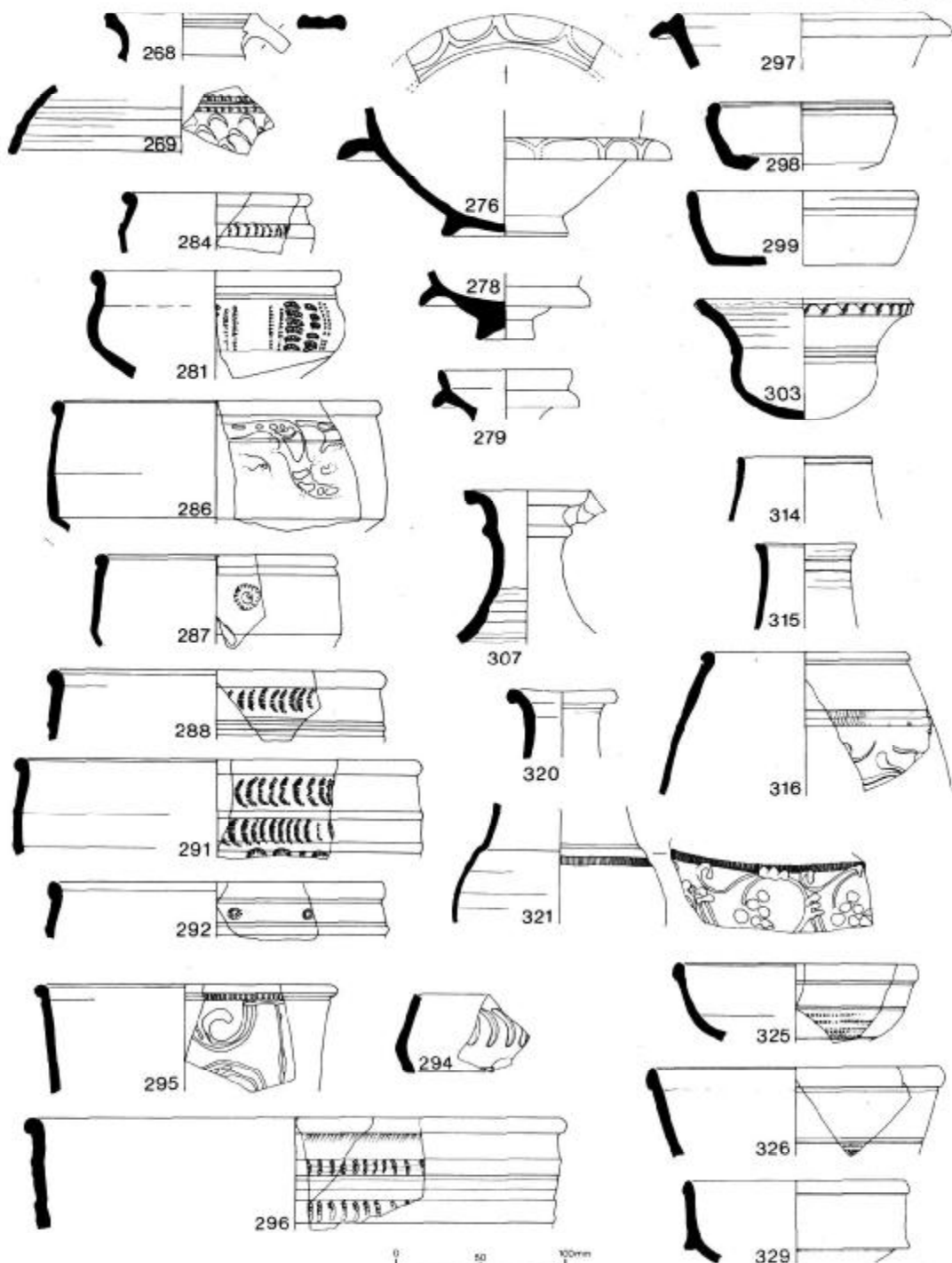


Fig. 10. Angel Court: Roman pottery Nos. 268 — 329 (¼)

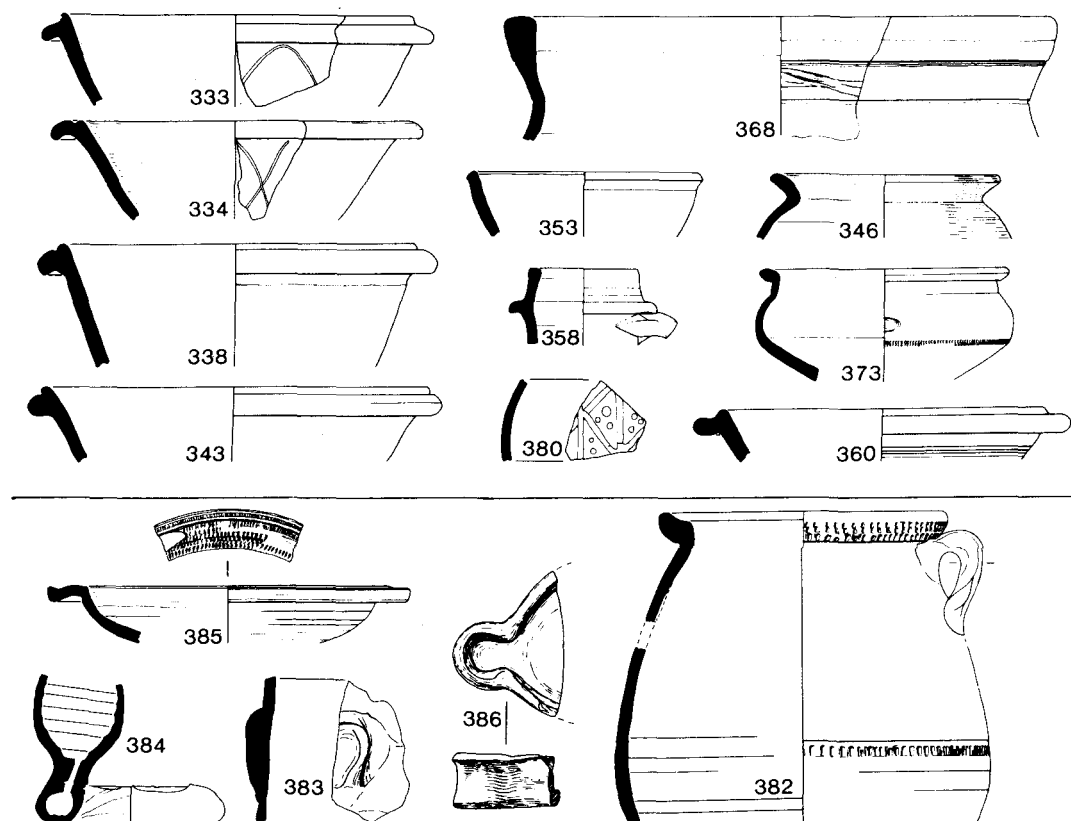


Fig. 11. Angel Court: Roman pottery Nos. 333 — 386 (¼)

A related fabric is Oxfordshire White Colour-coated Ware, which differ only in having a thin white slip. Forms represented are flagon (No. 302), tazza (No. 303) and mortarium (No. 304).

NENE VALLEY AND COLCHESTER COLOUR-COATED WARES

It was found difficult to distinguish between these two sources. There were three fabric colours — 'white', 'yellow' and 'red', of which the first two are probably Nene Valley and the last Colchester, but some overlap is likely.

(i) 'white' and 'yellow': hard, smooth fabrics, with a fracture appearing irregular at 20x. Section colour is white, or reddish yellow (some with light grey patches). The majority have moderate colourless quartz inclusions, mostly very fine but some fine or even medium, with sparse very fine white mica and medium or finer red and black iron ore. There are also small irregular voids in the fabric. A few sherds have additional sparse fine red quartz or more frequent colourless quartz. The slip, which covers both surfaces, is generally dark or very dark brown or grey, or rather lighter (reddish brown to brown) on the 'yellow' fabrics. It sometimes lightens to reddish yellow near the base, and appears to have been applied by dipping inverted vessels in the slip (Hartley, 1960, 18-19). It contains visible particles of black iron ore, and varies in finish from *matt* to slightly *'metallic'*.

The great majority (about 95%) of the sherds are from closed vessels — flagons (25%) (Nos. 307, 379), beakers (70%) (Nos. 130-2, 134-8, 140, 312-5) and jars (Nos. 318-9) — minority forms are "Castor box" and lid (Nos. 133, 139) Dr. 38 (No. 310) and flanged bowl (No. 309). Similar forms were found at Water Newton C and Sibson B kilns (see Hartley, 1960).

(ii) 'red': these fall into two groups, both similar in texture to the above. The first contains moderate very fine black iron ore, and is red in colour with dark reddish brown slip on both surfaces. Forms represented are barbotine beaker (No. 141) and flagon (No. 320). The second differs from the

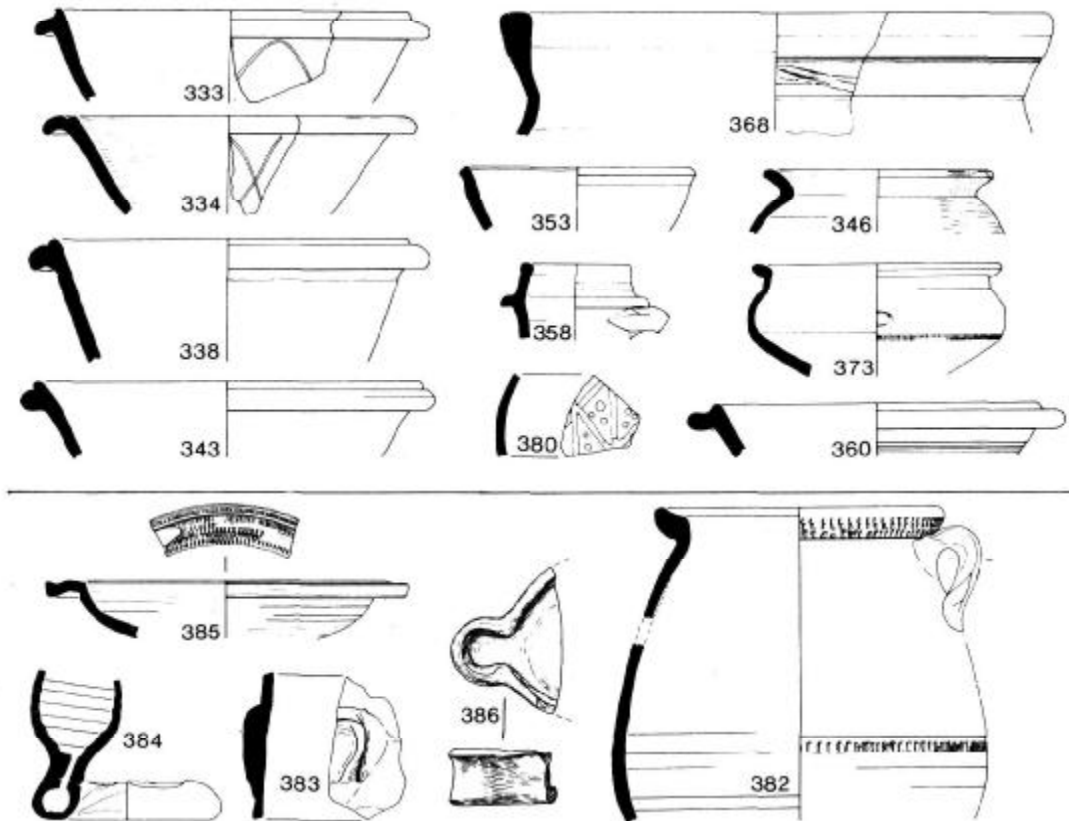


Fig. 11. Angel Court: Roman pottery Nos. 333 - 386 (1/4)

A related fabric is Oxfordshire White Colour-coated Ware, which differ only in having a thin white slip. Forms represented are flagon (No. 302), tazza (No. 303) and mortarium (No. 304).

NENE VALLEY AND COLCHESTER COLOUR-COATED WARES

It was found difficult to distinguish between these two sources. There were three fabric colours — 'white', 'yellow' and 'red', of which the first two are probably Nene Valley and the last Colchester, but some overlap is likely.

(i) 'white' and 'yellow': hard, smooth fabrics, with a fracture appearing irregular at 20x. Section colour is white, or reddish yellow (some with light grey patches). The majority have moderate colourless quartz inclusions, mostly very fine but some fine or even medium, with sparse very fine white mica and medium or finer red and black iron ore. There are also small irregular voids in the fabric. A few sherds have additional sparse fine red quartz or more frequent colourless quartz. The slip, which covers both surfaces, is generally dark or very dark brown or grey, or rather lighter (reddish brown to brown) on the 'yellow' fabrics. It sometimes lightens to reddish yellow near the base, and appears to have been applied by dipping inverted vessels in the slip (Hartley, 1960, 18-19). It contains visible particles of black iron ore, and varies in finish from matt to slightly 'metallic'.

The great majority (about 95%) of the sherds are from closed vessels — flagons (25%) (Nos. 307, 379), beakers (70%) (Nos. 130-2, 134-8, 140, 312-5) and jars (Nos. 318-9) — minority forms are 'Castor box' and lid (Nos. 133, 139) Dr. 38 (No. 310) and flanged bowl (No. 309). Similar forms were found at Water Newton C and Sibson B kilns (see Hartley, 1960).

(ii) 'red': these fall into two groups, both similar in texture to the above. The first contains moderate very fine black iron ore, and is red in colour with dark reddish brown slip on both surfaces. Forms represented are barbotine beaker (No. 141) and flagon (No. 320). The second differs from the

'white/yellow' group only in colour, which is light red with reddish brown to nearly black slip. The only forms represented are beakers (Nos. 321-2).

Various forms of barbotine dominate the decoration: both natural scenes (e.g., Nos. 137, 141) and scrolls (e.g., Nos. 136, 140) are represented. Another type of applied decoration is scales applied to folder beaker (No. 130). Other types represented are horizontal grooving (No. 135) and painted decoration (No. 321). Rouletting is common, usually in association with other types of decoration (as on No. 321).

OTHER COLOUR-COATED FABRICS

Included in this group are (i) body sherd of beaker (No. 17). Hard smooth reddish yellow fabric with sparse very fine white mica, black iron ore and red inclusions. Weak red external and red/dark reddish brown internal slip. Rusticated decoration. Central Gaulish colour-coat, possibly 'black samian'.

(ii) rim sherd of beaker (No. 60). Hard smooth reddish yellow fabric with sparse very fine limestone, white mica and red iron ore inclusions. Red external and dark reddish brown slip. Imported colour-coat, unknown source.

(iii) rim sherd of beaker (No. 59). Hard smooth white fabric with sparse very fine colourless quartz and white mica inclusions. Very dark brown slip and rough-cast decoration. Late 1st/early 2nd century, imported.

(iv) Oxfordshire parchment ware. Eight sherds including the base of a standard bowl (No. 378).

(v) various micaceous colour-coats, generally similar to, but not, Oxfordshire colour-coats. Recognisable forms are a jar (No. 305) and Dr. 38 (No. 306).

(vi) decorated body sherd (No. 380). Hard smooth fabric with abundant very fine quartz and moderate fine white mica and black iron ore inclusions. Light/dark grey core, yellowish red margins, very pale brown surfaces with worn grey slip (?). Decorated in white slip. Possibly New Forest.

'FINE' FABRICS

These are fabrics with sparse or no visible inclusions. Most are mortaria — from Colchester (Nos. 143-4), Hartshill-Mancetter (No. 323), Nene Valley (No. 362) and two unidentified (Nos. 21, 61). There are also sherds of eggshell ware (No. 16), the rim of a London ware flagon (No. 19) (see Marsh and Tyers, 1976, Nos. 136-8), fine grey fabric in shapes similar to those found at Highgate (Nos. 20, 142), and a fine reddish yellow/white fabric (No. 22).

'RHENISH' COLOUR-COATED WARE

A hard very smooth fabric with smooth fracture. Probably has red core, grey margins with light red patches, though on some the core fades out and on others the patches. No visible inclusions. Glossy black slip with rouletting and/or white painted decoration. Only small sherds present, probably from beakers. Similar fabrics were made in the Rhineland and at Lezoux (Brewster, 1972). These appear to belong to the former.

ARGONNE WARE

A hard fabric with smooth fracture showing very finely irregular at 20x. The section is red. Inclusions are sparse very fine quartz and black and red iron ore, with sparse to moderate very fine white mica: fine irregular voids are common on some sherds. Both surfaces are slipped — generally in a shiny red but a minority are reddish-yellow. The source is Argonne in north-east Gaul (Chenet, 1941).

THE MORTARIA

This paragraph brings together information scattered throughout the preceding section, for ease of reference. The overwhelming majority of the mortaria are in Oxfordshire white ware (Nos. 239-41, 356-7): minority fabrics are Brockley Hill (Nos. 14, 51, 111), Oxfordshire colour-coats (Nos. 300-1, 304), Colchester (Nos. 143-4), Hartshill-Mancetter (No. 323) and Nene Valley (No. 362).

STATISTICAL SUMMARY

Figure 12 shows the number of sherds and vessel-equivalents (Orton 1975) in each context of the Statistical Sequence. The body of the table shows the percentage of each layer group that belongs to each main fabric group: brackets indicate unhomogeneous 'other' categories (e.g. 'other grey sandy'). The 'Nene Valley' row includes sherds which may be from Colchester (see above). Layers not shown in Figure 12 are listed below:

Trench A, Layer 28 (E.R. 1596): one amphora rim.

Trench A, Layer 22 (E.R. 1593): one sherd Highgate, one Brockley Hill.

Layer (Trench A) and ER Nos.

fabric group	16 (ER 1583)	18 (ER 1588-90)	20 (ER 1592)	9 (ER 1582)	7 (ER 1581)
Amphorae	7	7	5	7	4
BB1	1	3	10	13	5
BB2	2	16	12	14	27
Alice Holt/Farnham	—	—	6	—	—
Highgate	11	24	3	1	—
Grey Medium Sandy I	11	2	3	—	3
(other grey sandy)	6	5	10	14	10
Portchester 'D'	—	—	—	—	4
Brockley Hill	33	21	6	5	1
Hadham	—	—	5	1	3
Oxford White	—	—	—	6	4
(other brown sandy)	12	9	5	4	4
Late Roman Shelly	—	—	—	3	5
(other shelly)	—	2	—	2	2
(misc. inclusions)	—	—	2	—	—
(mica-dusted)	7	1	4	4	5
(white-slipped)	—	6	5	—	—
Oxford Red CC	—	—	—	10	16
Oxford White CC	—	—	—	19	24
Nene Valley CC	1	—	19	1	—
Colchester CC	—	—	1	7	8
Rhenish CC	—	—	1	1	—
(other CC)	1	2	1	—	—
Argonne	—	1	—	2	3
(misc. fine fabrics)	6	1	1	1	—
total	94	234	432	871	182
	3.7	4.75	19.1	42.6	4.1

Fig. 12. Quantities of Roman pottery in each layer of the Statistical Sequence, broken down (in percentage terms) into main fabric groups:

Trench A, Layer 32 (E.R. 1597): one base in fine fabric.

Trench A, Layer 26 (E.R. 1595): three sherds of amphora.

Trench A, Layer 15 (E.R. 1586): one rim Brockley Hill and one other brown sandy, one sherd with grog and iron inclusions, three white-slipped.

Trench A, Layer 19 (E.R. 1591): one sherd Highgate, one Brockley Hill.

Trench A, Layer 13 (E.R. 1585): two sherds amphora, one BB1, two BB2, three Alice Holt/Farnham, one Highgate, one Grey Medium Sandy 1, one other grey sandy, three other brown sandy, one Oxfordshire White Ware, two white-slipped.

Trench A, Layer 11 (E.R. 1583): two bases and three body sherds Oxfordshire Red Colour-coat (and possibly two rims and one body sherd), one sherd Oxfordshire White Colour-coat, one Hadham.

Figure 13 shows (i) the Figures on which illustrated sherds can be found, (ii) the fabric groups of numbered sherds (so that the fabric descriptions of illustrated sherds can easily be found), (iii) internal parallels of form (F) or decoration (D) to unillustrated sherds, and (iv) external parallels.

Fig. 13 (below). List of all numbered sherds, with Figure nos. of illustrated sherds, Layer and ER Nos., fabric group, internal and external parallels

No.	Fig.	Trench A fabric group	internal parallel	external parallel
Layer 28 (ER 1596)				
1	5	amphora	—	—
Layer 16 (ER 1587)				
2	5	grey coarse sandy	—	—
3	—	grey coarse sandy	—	—
4	5	BB2	—	—
5	—	grey medium sandy 1	—	—
6	5	grey medium sandy 1	—	Frere (1972), Fig. 142, No. 8
7	—	grey medium sandy 1	—	—
8	5	Highgate	—	—
9	—	Brockley Hill	—	Castle and Warbis (1973) No. 56
10	—	Brockley Hill	—	—
11	—	Brockley Hill	—	Castle and Warbis (1973) Nos. 50-2
12	—	Brockley Hill	—	Castle and Warbis (1973) Nos. 50-2
13	—	Brockley Hill	—	Castle and Warbis (1973) Nos. 50-2
14	—	Brockley Hill	—	Gillam (1970) No. 243
15	—	mica-dusted	—	—
16	—	misc. fine fabric	—	—
17	—	other colour-coat	—	—
18	—	Nene Valley CC?	—	—
19	5	misc. fine fabrics	—	Marsh and Tyers (1976) Nos. 136-8
20	—	misc. fine fabrics	—	—
21	—	misc. fine fabrics	—	Gillam (1970) No. 257
Layer 32 (ER 1597)				
22	—	misc. fine fabrics	—	—
Layer 18 (ER 1588-90)				
23	5	amphora	—	—
24	5	BB2	—	Frere (1972) No. 851
25	5	BB2	—	—
26	5	BB2	—	Frere (1972) No. 974
27	—	BB2	No. 26(F)	—
28	5	BB2	—	Frere (1972) No. 973
29	—	BB2	No. 28(F)	—
30	5	BB2	—	Frere (1972) No. 983
31	—	BB2	No. 30(F)	—
32	5	BB2	—	Frere (1972) No. 969
33	5	BB2	—	—
34	—	grey medium sandy 1	Nos. 26, 32(F)	—
35	—	grey medium sandy 1	—	—
36	5	grey medium sandy	—	—
37	—	Highgate	—	—
38	5	Highgate	—	—

No.	Fig.	fabric group	internal parallel	external parallel
39	—	Highgate	—	—
40	—	Highgate	Nos. 142(F), 39(D)	—
41	—	Highgate	No. 142(F)	—
42	—	Highgate	Nos. 102(F), 39(D)	—
43	—	Highgate	No. 102(F)	—
44	—	Highgate	—	—
45	—	Highgate	—	—
46	—	grey fine sandy	—	—
47	—	grey fine sandy	No. 46(F)	—
48	—	grey very fine sandy	—	—
49	—	Highgate	No. 102(F)	—
50	—	grey very fine sandy	—	—
51	—	Brockley Hill	—	Gillam (1970) No. 243
52	—	Brockley Hill	—	—
53	5	Brockley Hill	—	Frere (1972) No. 740
54	5	Brockley Hill	—	Frere Nos. 577-8
55	—	Brockley Hill	—	—
56	—	brown fine sandy	—	—
57	—	mica-dusted	—	—
58	—	white-slipped	—	—
59	5	other colour-coat	—	Cunliffe (1971) Nos. 265-6
60	—	other colour-coat	—	—
61	5	misc. fine fabric	—	Gillam (1970) No. 254
Layer 15 (ER 1586)				
62	—	Brockley Hill	—	—
63	—	brown medium sandy	No. 70(F)	—
Layer 20 (ER 1592)				
64	5	BB1	—	Gillam (1970) No. 118
65	—	BB1	No. 172(F)	—
66	5	BB1	—	—
67	5	BB1	—	—
68	—	BB1	No. 162(F)	—
69	5	BB1	—	Gillam (1970) No. 329
70	5	BB2	—	Gillam (1970) Nos. 139(F), 144(D)
71	—	grey medium sandy	No. 70(F)	—
72	—	Alice Holt/Farnham	No. 70(F)	—
73	5	BB2	—	Gillam (1970) No. 138
74	—	BB2	No. 73(F)	—
75	—	BB2	—	—
76	—	Alice Holt/Farnham	No. 218(F)	—
77	—	BB2	—	—
78	—	Alice Holt/Farnham	—	—
79	—	grey medium sandy	—	—
80	—	grey medium sandy	—	—
81	—	grey medium sandy	—	—
82	6	BB2	—	Gillam (1970) No. 226
83	6	BB2	—	Gillam (1970) No. 222
84	—	BB2	No. 83(F)	—
85	—	Alice Holt/Farnham	—	—
86	6	grey medium sandy	—	Frere (1972) No. 1082
87	6	grey medium sandy	—	—
88	—	BB2	Nos. 87(F), 4(D)	—
89	—	BB2	No. 87(F)	—
90	6	BB2	—	—
91	6	grey medium sandy	—	—
92	6	grey medium sandy 1	—	—
93	—	grey medium sandy 1	No. 213(F)	—
94	—	grey medium sandy 1	—	—
95	6	grey medium sandy 1	—	Frere (1972) No. 1152(D)
96	6	grey medium sandy 1	—	—
97	—	grey medium sandy 1	—	Philp (1973)
98	—	grey medium sandy 1	—	—
99	6	grey medium sandy	—	Brown and Sheldon (1974) No. 50

No.	Fig.	fabric group	internal parallel	external parallel
100	—	grey medium sandy	—	—
101	—	grey medium sandy	No. 262(F)	—
102	6	Highgate	—	Brown and Sheldon (1974) Nos. 49-50
103	—	Highgate	No. 42(F)	—
104	—	Highgate	No. 142(F)	—
105	6	grey fine sandy	—	—
106	—	grey fine sandy	No. 70(F)	—
107	6	grey very fine sandy	—	Frere (1972) No. 946
108	—	Portchester 'D'	No. 233(F)	—
109	—	Brockley Hill	—	—
110	—	Brockley Hill	—	—
111	6	Brockley Hill	—	—
112	—	brown medium sandy	—	—
113	6	brown medium sandy	—	—
114	—	brown medium sandy	—	—
115	—	Much Hadham	—	—
116	—	Much Hadham	No. 115(F)	—
117	6	brown very fine sandy	—	—
118	6	Much Hadham	—	—
119	—	misc. inclusions	—	—
120	—	mica-dusted	—	—
121	—	mica-dusted	No. 59(F)	—
122	—	mica-dusted	—	—
123	6	mica-dusted	—	—
124	—	mica-dusted	—	—
125	—	white-slipped	—	—
126	—	white-slipped	—	—
127	—	white-slipped	—	—
128	—	other colour-coat	—	—
129	6	other colour-coat	—	—
130	6	Nene Valley C.C.	—	Gillam (1970) No. 93
131	—	Nene Valley C.C.	No. 137(F)	—
132	—	Nene Valley C.C.	—	—
133	—	Nene Valley C.C.	—	—
134	—	Nene Valley C.C.	No. 140(F)	—
135	6	Nene Valley C.C.	—	Gillam (1970) No. 83
136	6	Nene Valley C.C.	—	—
137	6	Nene Valley C.C.	—	Gillam (1970) No. 89(F)
138	—	Nene Valley C.C.	Nos. 137, 140(D)	—
139	—	Nene Valley C.C.	—	—
140	6	Nene Valley C.C.	—	—
141	6	Colchester C.C.	—	Swan (1975), Pl. 19(D)
142	6	misc. fine fabric	—	Brown and Sheldon (1974) No. 88
143	6	misc. fine fabric	—	Cunliffe (1971) No. 294 Frere (1972) No. 1069 Gillam (1970) No. 261? Chenet (1941) No. 320
144	—	misc. fine fabric	—	—
145	—	Argonne	—	—
Layer 13 (ER 1585)				
146	—	grey medium sandy 1	—	—
Layer 9 (ER 1582)				
147	6	amphora	—	—
148	—	amphora	—	—
149	6	amphora	No. 147(F)	—
150	—	amphora	—	—
151	7	BB1	—	Gillam (1970) No. 147
152	7	BB1	—	—
153	7	BB1	—	Gillam (1970) No. 148
154	7	BB1	—	Cunliffe (1971) No. 385
155	—	BB1	No. 172(F)	—
156	—	BB1	No. 172(F)	—
157	—	BB1	No. 172(F)	—
158	7	BB1	—	Cunliffe (1971) No. 263(F) Gillam (1970) Nos. 64-5

No.	Fig.	fabric group	internal parallel	external parallel
159	7	BB1	—	Frere (1972) No. 1126
160	7	BB1	No. 159(D)	Gillam (1970) No. 229
161	7	BB1	No. 159(D)	Gillam (1970) No. 228
162	7	BB1	—	—
163	7	BB1	No. 159(D)	—
164	7	BB1	—	Frere (1972) No. 1110
165	7	BB1	—	Frere (1972) Nos. 345, 1287, Neal (1974) Nos. 282-3
166	7	BB1	—	—
167	7	BB1	—	—
168	—	BB1	No. 167(F)	—
169	7	BB1	—	Gillam (1970) No. 329
170	7	BB1	—	—
171	—	grey coarse sandy	—	—
172	7	BB1	—	Gillam (1970) Nos. 146, 148
173	—	BB1	No. 172(F)	—
174	7	Alice Holt/Farnham	—	—
175	—	BB1	No. 174(F)	—
176	—	BB1	No. 152(F)	—
177	—	grey medium sandy	—	—
178	8	Alice Holt/Farnham	—	—
179	8	grey medium sandy	—	—
180	—	grey medium sandy	—	—
181	8	Alice Holt/Farnham	—	—
182	8	Alice Holt/Farnham	—	Frere (1972) No. 1256
183	—	grey coarse sandy	No. 219(F)	—
184	—	Alice Holt/Farnham	No. 234(F)	—
185	—	Alice Holt/Farnham	No. 187(F)	—
186	8	Alice Holt/Farnham	—	—
187	8	Alice Holt/Farnham	—	—
188	8	Alice Holt/Farnham	—	—
189	8	Alice Holt/Farnham	—	—
190	8	grey medium sandy	—	—
191	8	grey medium sandy	—	Gillam (1970) No. 319, Frere (1972) Nos. 995, 1265-6
192	8	grey coarse sandy	—	—
193	8	grey medium sandy	—	—
194	8	Alice Holt/Farnham	—	—
195	—	grey medium sandy	—	—
196	—	grey medium sandy	—	—
197	—	Alice Holt/Farnham	—	—
198	8	grey medium sandy	—	—
199	—	grey medium sandy	—	—
200	—	grey medium sandy	—	—
201	8	grey medium sandy	—	—
202	—	grey medium sandy	No. 190(F)	—
203	—	Highgate	—	—
204	8	Alice Holt/Farnham	—	—
205	8	grey fine sandy	—	Gillam (1970) No. 92
206	8	grey fine sandy	—	—
207	8	Alice Holt/Farnham	—	Gillam (1970) No. 148
208	8	Alice Holt/Farnham	—	—
209	8	grey fine sandy	—	Clark (1950) No. 105
210	8	Alice Holt/Farnham	—	—
211	—	Alice Holt/Farnham	—	—
212	8	grey fine sandy	—	—
213	8	grey fine sandy	—	—
214	—	grey fine sandy	Nos. 157(F), 332(F)	—
215	8	Alice Holt/Farnham	—	Clark (1950), No. 94
216	8	Alice Holt/Farnham	—	Cunliffe (1971) No. 343
217	—	Alice Holt/Farnham	No. 219(F)	—
218	8	Alice Holt/Farnham	—	—

No.	Fig.	fabric group	internal parallel	external parallel
219	8	Alice Holt/Farnham	—	—
220	8	grey fine sandy	—	—
221	—	Alice Holt/Farnham	—	—
222	9	grey fine sandy	—	—
223	9	Alice Holt/Farnham	—	Gillam (1970) No. 146
224	—	Alice Holt/Farnham	—	—
225	—	grey fine sandy	—	—
226	9	Alice Holt/Farnham	—	—
227	9	Alice Holt/Farnham	—	—
228	9	grey very fine sandy	—	—
229	9	Portchester 'D'	—	Clark (1950) No. 1
230	—	Portchester 'D'	No. 229(F)	—
231	9	Portchester 'D'	—	Clark (1950) No. 6
232	—	Portchester 'D'	—	—
233	—	Portchester 'D'	—	—
234	9	Portchester 'D'	—	—
235	9	brown coarse sandy	—	—
236	—	brown coarse sandy	—	—
237	—	Brockley Hill	—	—
238	—	brown medium sandy	—	—
239	—	Oxford White Ware	—	Young (1972) Nos. 15-28
240	—	Oxford White Ware	—	Young (1972) No. 29
241	—	Oxford White Ware	—	—
242	9	Oxford Red C.C.	—	—
243	9	Much Hadham	—	—
244	9	Much Hadham	—	—
245	—	Much Hadham	No. 244(F)	—
246	9	Much Hadham	—	—
247	9	Much Hadham	—	—
248	9	Much Hadham	—	—
249	—	Much Hadham	—	—
250	—	brown very fine sandy	—	—
251	9	brown very fine sandy	—	—
252	—	brown very fine sandy	—	—
253	9	Late Roman Shelly	—	Sanders (1973) No. 3
254	—	Late Roman Shelly	No. 253(F)	—
255	—	Late Roman Shelly	No. 253(F)	—
256	—	Late Roman Shelly	No. 253(F)	—
257	9	Late Roman Shelly	—	—
258	—	Late Roman Shelly	—	Sanders (1973) No. 4
259	9	misc. inclusions	—	Fulford (1975) 95, No. 20.4(F)
260	—	misc. inclusions	No. 172(D)	—
261	—	misc. inclusions	—	—
262	9	misc. inclusions	—	—
263	—	misc. inclusions	—	—
264	9	misc. inclusions	—	—
265	9	misc. inclusions	—	Fulford (1975) 51, No. 26(F)
266	9	misc. inclusions	—	—
267	—	misc. inclusions	—	—
268	10	Oxford Red C.C.	—	—
269	10	Oxford Red C.C.	—	Young (1973) No. 25(F)
270	—	Oxford Red C.C.	—	Young (1973) No. 22(F)
271	—	Oxford Red C.C.	—	—
272	—	Oxford Red C.C.	—	—
273	—	Oxford Red C.C.	—	Drag. 36
274	—	Oxford Red C.C.	—	Drag. 36
275	—	Oxford Red C.C.	—	Drag. 36, Young (1973) No. 29
276	10	Oxford Red C.C.	—	Drag. 38
277	—	Oxford Red C.C.	—	Drag. 38, Young (1973) No. 30
278	10	Oxford Red C.C.	—	Drag. 38
279	10	Oxford Red C.C.	No. 278(F)	Drag. 38
280	—	Oxford Red C.C.	—	Young (1973) No. 34
281	10	Oxford Red C.C.	—	—
282	—	Oxford Red C.C.	No. 281(F)	—

No.	Fig.	fabric group	internal parallel	external parallel
283	—	Oxford Red C.C.	—	—
284	10	Oxford Red C.C.	No. 281(F)	—
285	—	Oxford Red C.C.	—	—
286	10	Oxford Red C.C.	—	—
287	10	Oxford Red C.C.	No. 286(F)	—
288	10	Oxford Red C.C.	No. 286(F)	—
289	—	Oxford Red C.C.	No. 286(F)	—
290	—	Oxford Red C.C.	No. 286(F)	—
291	10	Oxford Red C.C.	No. 286(F)	—
292	10	Oxford Red C.C.	No. 286(F)	—
293	—	Oxford Red C.C.	No. 286(F)	—
294	10	Oxford Red C.C.	No. 286(F)	—
295	10	Oxford Red C.C.	—	—
296	10	Oxford Red C.C.	No. 295(F)	—
297	10	Oxford Red C.C.	—	Young (1973) No. 37
298	10	Oxford Red C.C.	—	Young (1973) No. 36
299	10	Oxford Red C.C.	—	Young (1973) No. 36
300	—	Oxford Red C.C.	—	Drag 45; Young (1973) No. 19
301	—	Oxford Red C.C.	—	Young (1973) No. 14
302	—	Oxford White C.C.	—	—
303	10	Oxford White C.C.	—	Young (1973) No. 12
304	—	Oxford White C.C.	—	—
305	—	other colour-coat	—	—
306	—	other colour-coat	—	Drag. 38
307	10	Nene Valley C.C.	—	—
308	—	Nene Valley C.C.	—	Hartley (1960) Fig. 4.3
309	—	Nene Valley C.C.	No. 297(F)	—
310	—	Nene Valley C.C.	—	Drag. 38
311	—	Nene Valley C.C.	—	Hartley (1960) Fig. 4.18
312	—	Nene Valley C.C.	No. 136(F)	—
313	—	Nene Valley C.C.	No. 129(F)	—
314	10	Nene Valley C.C.	—	—
315	10	Nene Valley C.C.	—	—
316	10	Colchester C.C.	—	Gillam (1970) No. 89
317	—	Colchester C.C.?	—	—
318	—	Nene Valley C.C.	—	—
319	—	Nene Valley C.C.	—	—
320	10	Colchester C.C.	—	—
321	10	Colchester C.C.	—	Hartley (1960) Fig. 4.6
322	—	Colchester C.C.	—	—
323	—	Hartshill-Mancetter Mortarium	—	—
324	—	Argonne	—	Chenet (1943) No. 335a b
325	10	Argonne	—	Chenet (1943) No. 157(D)
326	10	Argonne	No. 325	Chenet (1943) No. 320(F)
327	10	Argonne	—	Chenet (1943) No. 140(D), No. 320(F)
328	10	Argonne	—	Chenet (1943) No. 2(F)
329	10	Argonne	—	Chenet (1943) No. 321c
330	—	Argonne	—	Chenet (1943) No. 326b
331	—	Argonne	—	Chenet (1943) No. 328b
Layer 7 (ER 1581)				
332	—	BB1	No. 158(F)	—
333	11	BB1	—	—
334	11	BB1	—	—
335	—	BB1	No. 181(F)	—
336	—	BB1	No. 169(F)	—
337	—	grey coarse sandy	—	—
338	11	Alice Holt/Farnham	—	—
339	—	grey medium sandy	No. 338(F)	—
340	—	grey medium sandy	—	—
341	—	Alice Holt/Farnham	No. 188(F)	—
342	—	grey medium sandy	No. 186(F)	—
343	11	grey medium sandy	—	—
344	—	grey medium sandy	—	—

No.	Fig.	fabric group	internal parallel	external parallel
345	—	Alice Holt/Farnham	No. 216(F)	—
346	11	Alice Holt/Farnham	—	—
347	—	Alice Holt/Farnham	—	—
348	—	Alice Holt/Farnham	No. 209(F)	—
349	—	Alice Holt/Farnham	No. 219(F)	—
350	—	Alice Holt/Farnham	No. 216(F)	—
351	—	Alice Holt/Farnham	—	—
352	—	misc. inclusions	No. 229(F)	—
353	11	Alice Holt/Farnham	—	—
354	—	Portchester 'D'	—	—
355	—	Portchester 'D'	—	—
356	—	Oxford White Ware	No. 239(F)	Young (1972), Type A
357	—	Oxford White Ware	No. 240(F)	Young (1972), large Type A
358	11	Oxford Red C.C.	—	—
359	—	Much Hadham	No. 244(F)	—
360	11	brown very fine sandy	—	—
361	—	brown very fine sandy	—	—
362	—	misc. fine fabrics	—	—
363	—	Late Roman Shelly	No. 256(F)	—
364	—	Late Roman Shelly	No. 253(F)	—
365	—	misc. inclusions	No. 218(F)	—
366	—	misc. inclusions	No. 215(F)	—
367	—	misc. inclusions	—	—
368	11	misc. inclusions	—	Unversagt (1916) No. 25?
369	—	Oxford Red C.C.	—	Drag. 36
370	—	Oxford Red C.C.	—	Drag. 38; Young (1973) No. 30
371	—	Oxford Red C.C.	—	Drag. 38; Young (1973) No. 30
372	—	Oxford Red C.C.	—	Drag. 38
373	11	Oxford Red C.C.	—	—
374	—	Oxford Red C.C.	—	—
375	—	Oxford Red C.C.	No. 374(F)	—
376	—	Oxford Red C.C.	No. 374(F)	—
377	—	Oxford Red C.C.	No. 374(F)	—
378	—	other colour-coat	—	Young (1973) No. 21
379	—	Nene Valley C.C.	—	—
380	11	other colour-coat	—	Fulford (1975) 81, No. 73(D)
381	—	Argonne	—	Chenet (1943) No. 328a-b.

DISCUSSION OF TRENCH A

The amphora rim from Layer 28 (No. 1) cannot be closely dated, but is most likely to be of 1st century date. The two sherds from Layer 22 would fit best into the first half of the 2nd century (see Layer 16 below).

The earliest group of any size comes from Layer 16 (but see discussion on Layer 20, below). The samian is of Trajanic and Hadrianic date, while the mortaria (Nos. 14, 21) are 2nd century types — Gillam (1970) Nos. 243, 247. Phase III at Highgate (see No. 8) has been provisionally dated to *c.* AD 100-140 (Brown and Sheldon, 1974, 228-30) and the BB2 bowls (e.g. No. 4) with moulded rim and scribed decoration are thought to start *c.* AD 120 in the London area (SLAEC 1978) and *c.* AD 130 at Verulamium (Frere, 1972, Nos. 706-23). Reeded-rim bowls (e.g. Nos. 11-13) are dated *c.* AD 80-130 in Gillam and *c.* AD 75-160 at Verulamium (Frere, Nos. 332-43, 503-15, 669-82, 926-41), where the hooked flange seems relatively late, *c.* AD 130-150. This dating would not be unusual for the ring-neck flagon (e.g. Nos. 9, 10) (Castle and Warbis, 1973, 100). Overall, a date in the second quarter of the 2nd century seems most likely for Layer 16.

Layer 32 contains no closely datable pottery, and Layer 26 only three sherds of Dressel 20 amphora (1st-2nd century) and one sherd of Trajanic samian. The latter comes between Layers 16 and 18 (q.v.) in the sequence.

The next 'large' group is from Layer 18. The samian here is probably Antonine. The BB2 types (Nos. 24-33) can be matched as a group with forms from deposits dating to *c.* AD 155/160 at Verulamium (Frere, 1972, Nos. 851, 969-74, 983) although there are similarities with others (*ibid.*, Nos. 715-21) from deposits of *c.* AD 130-150. They can also be paralleled at Fishbourne (Cunliffe,

1971, types 218-9), with dating *c.* AD 130-200. The Brockley Hill sherds (e.g. Nos. 53, 54) can be paralleled to sherds from mid-2nd century deposits at Verulamium (Frere, Nos. 577-8, 740). The lack of Nene Valley colour-coats, thought to start *c.* AD 150 (Swan, 1975, 16) is probably significant. A date of *c.* AD 140-160 seems most likely.

Next in the sequence, Layer 15 contains only Hadrianic samian. One coarse ware rim (No. 63) has a late 2nd to mid-3rd century parallel in Gillam (1970). Bearing in mind the evidence from Layer 20 (see below), a date in the first half of the 3rd century is most likely, but a late 2nd century date cannot be ruled out.

Layer 20 is a problem, as it is really three layers — 20A, B and C — from which the finds have been mixed. The latest pottery, including No. 66 (Farrar (1973, 77)) consider the obtuse lattice to date to *c.* AD 250+, No. 68 (flanged bowls seem to start *c.* AD 270/80 in this region (Frere, Nos. 1101-3)) and No. 135 (parallels in Gillam are dated to *c.* AD 250+ and *c.* AD 260+), taken together with the relative rarity of flanged bowls (1% of the pottery, compared with 10% in A9), suggests a late 3rd century date for the latest of these layers, Layer 20A.

Any of the other pottery could be residual in Layer 20A, but it is likely that some is from Layer 20B or C. On this assumption, one could assign Layer 20C to the first half of the 2nd century but later than Layer 16, *c.* AD 125-150, from Nos. 102-4 (Highgate phase III) and the mica-dusted sherds, Nos. 120-4; and Layer 20B to the late 2nd or first half of the 3rd century, from Nos. 70-4 (parallels dated to *c.* AD 180-250 in Gillam), Nos. 82-9 (late 2nd century parallels in Gillam, individual parallels of *c.* AD 175-275 in Frere), and the samian, *c.* AD 180-200.

The pottery from Layer 19 would all (one sherd of samian and two of coarse ware) fit into the first half of the 2nd century, but stratigraphically it must be later than Layer 15, probably early 3rd century.

The gravel deposit Layer 13 seems to be close to Layer 20A in date, with no flanged bowls or Alice Holt fabrics. The single sherd of Oxfordshire White Ware may be later than Layer 20A, but mortaria in this fabric were in production by the middle of the 3rd century (Young, 1973, 109).

The most precise dating for Layer 9 is provided by eight coins, the latest of which is dated to AD 364+. In general, the pottery has a late 3rd to 4th century date, but there are relatively few positively late 4th century forms — possible examples are No. 215 (*c.* AD 350+ at Verulamium) and No. 265 (*c.* AD 370-410+ at Verulamium) (see Frere for both). Other parallels given in Fig. 13 to Verulamium (Frere, 1972), Fishbourne (Cunliffe, 1971) and Gillam (1970) are of rather earlier date, e.g., *c.* AD 290-370 for cooking-pots Nos. 105, 107-8, 177, while the flanged bowls are best paralleled *as a group* by vessels of *c.* AD 310-315 at Verulamium (Frere Nos. 1162-74). The incipient-flanged bowls and dishes (Nos. 165-6, 185-90) can be matched from a wide range of context dates, e.g., *c.* AD 85-105 (Frere No. 345), *c.* AD 320-350 (Neal (1974) Nos. 282-3) and *c.* AD 375+ (Frere No. 1287).

Among the Oxfordshire Colour-coats, none conflicts with the coin dating, the rosette-stamped vessels (Nos. 287, 292) in particular being produced from the middle decades of the 4th century onwards (C. J. Young, *pers. comm.*).

There is also a proportion of 3rd century pottery — e.g., No. 158 and some of the Nene Valley colour-coats — Nos. 308, 316, for example.

Overall, it would be possible to see Layer 9 as a gradual accumulation following Layers 20A and B (late 3rd century) and terminating *c.* AD 370, with a small proportion of earlier material. Alternatively, the material may have accumulated elsewhere and have been dumped here all at once. The difficulty of detecting individual layers in such deposits (cf. Layer 20) allows the possibility of more than one such dumping in the late 3rd, or 4th century.

The pottery from Layers 11 and 7 is very similar to that from Layer 9, but more broken (see Fig. 12) and more worn. A late characteristic is the "oval" flange of No. 333 — late 4th century at Verulamium (Frere Nos. 1248-55).

The discussion of Layers 9 and 7 is complicated by the presence of a possible Saxon sherd (No. 550 — q.v.) and two medieval sherds in Layer 7, and one medieval sherd in Layer 9. The medieval pottery, which appears to be of 13th century or later date, is later than that in Layer 5=12 (the lowest medieval layer) and is therefore likely to be intrusive (otherwise Layers 9 to A5=12 contain almost entirely very residual pottery). The possible Saxon sherd is more problematic. Taken at face value, it could mean that Layer 7 is, in fact, a silt deposit of middle or late Saxon date containing over 99% residual Roman pottery. Similar groups of pottery — with a very small Saxon or early medieval proportion and a very

high Roman proportion (presumed residual) occur in the City and Southwark, and are always difficult to interpret. Alternatively, the Saxon ground surface could have been at (or above, if erosion has occurred) the top of Layer 7, and the sherd deposited there, later working down into Layer 7 (e.g., through worm action). Neither explanation carries overwhelming force.

SUMMARY OF DATING FOR TRENCH A

Layer 28 (E.R. 1596): 1st — early 2nd century

Layer 22 (ER 1593): first half of 2nd century

Layer 16 (ER 1587): } *c.* AD 125-50

Layer 32 (ER 1597): }

Layer 20C (part of ER 1592): 2nd century, later than Layer 16

Layer 26 (ER 1595): no independent date, but between Layers 16 and 18

Layer 18 (ER 1588-90): *c.* AD 140-60

Layer 20B (part of ER 1592): late 2nd to mid-3rd century

Layer 15 (ER 1586): probably *c.* AD 200-50, possibly late 2nd century

Layer 20A (part of ER 1592): late 3rd century

Layer 19 (ER 1591): no independent date, but between Layers 15 and 13

Layer 13 (ER 1585) late 3rd century

Layer 9 (ER 1582): *c.* AD 370; possibly accumulation from late 3rd century onwards

Layer 11 (ER 1583): no independent date, but between Layers 9 and 7

Layer 7 (ER 1581): *either c.* AD 370-410 or mid/late Saxon.

Despite the problems of residuality, there are very clear trends apparent in the proportions of pottery from different production centres present in each context of the Statistical Sequence. The data are shown in Fig. 12 (q.v.). The vessel-equivalent figures are believed to give the most reliable estimate of proportions, because of the "small sample" nature of the site. They have the added advantage of reducing the apparent effect of residuality (because the residual sherds are usually smaller). In reading this table, it should be noted that the proportions of colour-coated fabrics may be understated, because a serious shortage of rims compared to bases suggests differential retrieval. These rims are more fragile than the bases, break into smaller pieces and may be more easily missed in excavation. Because the quantities involved are relatively small, the percentages shown should be treated with caution. Clear contrasts are apparent, for example, between basically 2nd century fabrics (e.g., Highgate, Brockley Hill, Grey Medium Sandy 1, which have high percentages in Layers 16 and 18, low in Layer 9 and 7) and mainly 4th century types (e.g., Alice Holt/Farnham, Portchester 'D', Oxfordshire colour-coats, which have low percentage in Layers 16 and 18, and high percentages in Layers 9 and 7). An interesting point is the concentration of "miscellaneous inclusions" (e.g., grog, iron ore, limestone) in the 4th century contexts.

It would be possible to prepare similar figures on, for example, vessel form, from the data on the Pottery Summary Sheets.

ROMAN POTTERY FROM THE OTHER TRENCHES

(Fig. 11, Nos. 382-386)

Roman pottery was recovered from the other trenches (B-F, particularly B), but under conditions which make it virtually useless. Most is best thought of as unstratified, and even in Trench D, where a stratigraphic sequence was observed, little information could be gleaned. The pottery from Trench D (only) was recorded on pottery summary sheets, although the top Roman layer of this sequence, Layer 3, contained pottery of 1st to 4th century date.

However, some of this pottery is of intrinsic interest and is described below.

382 Probable face-mask jar: collared rim and small strap handle. One rim/handle sherd and three body sherds, probably from the same vessel. Brockley Hill fabric with patchy reddish yellow exterior. Rouletting on rim, and single row of crude rouletting on body. From Trench E, Layers 1 and 7 (illustrated).

383 Face-mask jar: body sherd. Hard, irregular fracture.

Red section, core grey in thicker parts, yellowish red surfaces. Moderate clear and colourless quartz, up to coarse size, and very fine black iron ore and other, fine, black inclusions (basic igneous?), also moderate very fine mica. Turning marks on interior with some smoothing; applied ear on exterior, with much fingering. From Trench B, Context 12 (illustrated).

Note on face-mask jars

Five probable face-mask jars (Nos. 95, 113, 117, 382-3) are represented at Angel Court. Two (Nos. 113, 383) certainly have face-masks, while the other three have characteristics (rouletting on exterior of rim, small strap handle) which appear together on known face-masks jars (examples in the Museum of London collection) and not, so far as is known, on other forms. No. 95 is similar in shape (but not fabric) to Museum acc. no. 12395.

Although only a very small proportion of the total pottery from this site, these vessels, together with the triple ring vase No. 384, hint at a votive element in the silt deposits of Trench A, Layer 20 and Trench B, Context 12. The votive nature of some of the Walbrook finds has already been noted (Merrifield, 1965, 93).

- 384 Triple ring vase: hollow ring, with one vase and scars for two more, and smaller scar between two vases. A firing scar on the side of the vase suggests the presence of a small tazza-like attachment here (as, for example, on No. 581 at Southwark (SLAEC, 1978)). Hard; smooth fracture, finely irregular at 20x. Ring has grey core, red exterior margin, reddish yellow/brown exterior; vase has yellowish red section, reddish yellow exterior. Abundant very fine quartz and black iron ore and moderate mica. Turning marks on interior of vase. From Trench B, unstratified.
- 385 Dish with up-turned flanged rim, in London ware. Three rim sherds. Very hard; smooth fracture. Light grey core, yellowish red/reddish brown margins, black heavily burnished slipped surfaces. Sparse very fine clear quartz, black iron ore and white mica, also fine crack-like voids parallel to surfaces. Six or seven rows

of rouletting on upper surface of rim; apparently overlaid by burnishing. Possibly from nearby kilns (see Marsh and Tyers [1976] Nos. 141-6). From Trench B Layer 3 (illustrated).

Coarse-ware ceramic lamps

6. Ceramic lamp: open type, no evidence for spout. Roman Grey Medium Sandy 1 fabric (q.v.). Exterior trimmed and smoothed, with traces of wear on foot-ring. Interior rough, with sooting at rim. Shape, size (and probably fabric) as Frere (1972), Fig. 142, No. 8, which is from a mid-2nd century deposit. From Trench A, Layer 16 (illustrated).
386. Ceramic lamp: spout of open type in hard very pale brown fabric. Abundant fine inclusions — clear, colourless and white quartz — with 'tail' of medium-sized grains. Also moderate medium red iron ore, sparse fine black iron ore and very fine white mica. Surfaces smoothed but not burnished. Heavily burnt and sooted, especially at rim. Shape (and probably fabric) as Frere (1972), Fig. 142, No. 6. Both burnt and unburnt examples have been found in the City (see Wheeler [1930] 69): burnt examples were considered to be lamps, and the unburnt lamp-stands. Wheeler showed a similar example from Aldersgate Street (*ibid.*, Pl. XXIX, No. 7) and listed others from St. Martin's-le-Grand, Moorgate Street, Fenchurch Street and Minories. The Verulamium lamp is from a mid-2nd century deposit: the other examples quoted are not from dated deposits. From Trench B, Context 7 (illustrated).
- For other ceramic vessels apparently used as lamps see Nos. 278-9 (Dr. 38 forms in Oxfordshire Red Colour-coat).

SAMIAN

FROM NOTES BY G. B. DANNELL

Only those stratified groups which provide part of the prime dating evidence are included here. A list of the numbers of vessels represented of each form and source and date range has been prepared as has a catalogue by context group of all the samian not listed below. Copies of these are available on application to the Museum of London Department of Urban Archaeology.

The abbreviations CG, EG, SG and M de V stand for Central Gaul, East Gaul, South Gaul and Les Martres de Veyre (Central Gaul). The numbers given indicate the number of vessels represented.

(Fig. 14, Nos. 387-391)

Trench A, Layer 28, ER 1596. Hadrianic

Drag 33, CG, one, Hadrianic

Trench A, Layer 16, ER 1587. Hadrianic

Drag 18, SG, one, Flavian

Drag 18, M de V, two, Trajanic

Drag 18R, SG, one, Flavian

Drag 27, SG, four, Flavian

Drag 29, SG, one, Flavian (?)

Drag 30, SG, one, c. AD 65-80. Germanus style

Drag 33, CG, one, Trajanic/Hadrianic

Drag 33, SG, one, Vespasianic

Drag 33, M de V, one, Trajanic

Drag 36, SG, one, Flavian

Drag 36, M de V, one, Trajanic

Drag 37, SG, two, Flavian

387. Drag 37, CG, one, IOENALIS style, c.f. Stanfield & Simpson (1958, Pl. 35, 412 and 413). c. AD 100-120 (illustrated).

Curle 11, SG, one, Flavian

Ritt 8, SG, one, Nero/Vespasian

Chip, M de V, one, Trajanic

Trench A, Layer 26, ER 1595. AD 125-160

Drag 27, SG, one, Flavian

Drag 27, M de V, one, Trajanic

Trench A, Layer 18B, ER 1590. AD 145-160

Drag 18, SG, one, Flavian (burnt)

Drag 18/31, CG, one, Hadrianic/Antonine

Drag 27, CG, one, Antonine

Drag 46, SG, one, Late 1st to early 2nd century

Trench A, Layer 18A, ER 1589. AD 145-160

Drag 18, SG, one, 1st century

Drag 18R, SG, one, 1st century

Drag 18/31, CG, six, Hadrianic/Antonine

Drag 18/31, EG, one, Hadrianic/Antonine

Drag 18/31, SG, one, 1st century

Drag 27, CG, five, Antonine

Drag 27, SG, one, 1st century

Drag 31, CG, one, Antonine

Drag 31R, CG, one, Late Antonine

Drag 35, SG, one, 1st century

Drag 37, CG, one, Hadrianic

388. (1589/238) Drag 37, CG, one, IOENALIS style, c.f. Stanfield and Simpson (1958, Pl. 35, 412 and 413). c. AD 100-120 (illustrated).

Drag 37, M de V, one, Trajanic

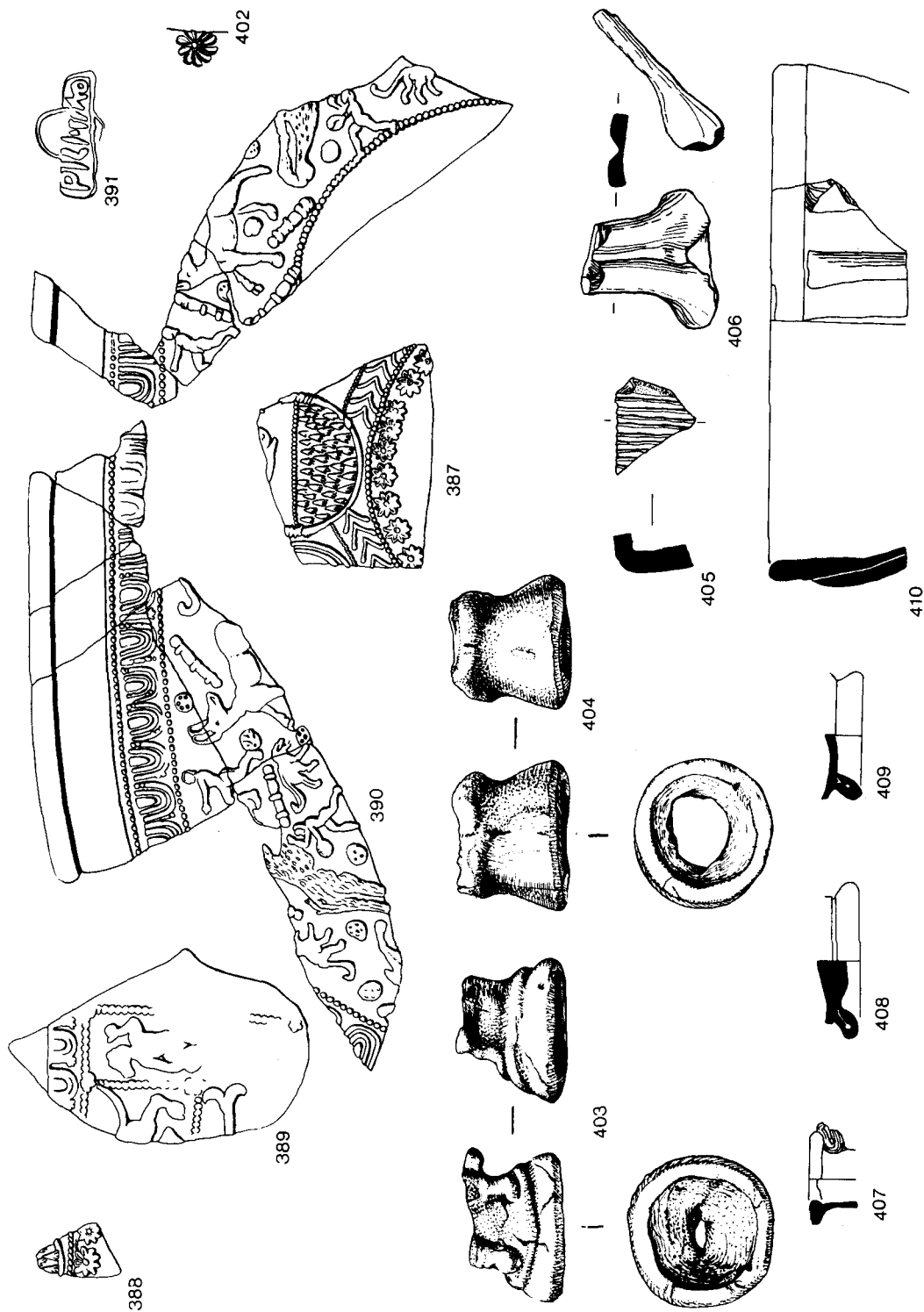


Fig. 14. Angel Court: Decorated samian Nos. 387 — 390 (1/2); samian stamps Nos. 391 — 402 (1/1); Roman ceramic figurines Nos. 403 — 404 (1/2); Roman glass Nos. 405 — 410 (1/2)

- Trench A, Layer 18, ER 1588. AD 145-160*
 Drag 18, SG, one, Flavian/Trajanic
 Drag 18/31R, M de V, one, Trajanic
 Drag 33, SG, one, Flavian
 Drag 37, SG, one, Flavian
 chip, M de V, one, Trajanic
- Trench A, Layer 15, ER 1586. AD 150-250*
 Drag 27, CG, one, Hadrianic
- Trench A, Layer 20, ER 1592. AD 120-250*
 Drag 18/31, CG, two, Hadrianic/Antonine
 Drag 30, CG, one, Antonine
 Drag 31, CG, three, Late Antonine
 Drag 31, SG (Montans), one, Antonine
 Drag 31R, CG, one, Late Antonine
 Drag 31R, EG, one, Late Antonine
 Drag 31R without rouletting, EG, one, Late Antonine
 Drag 32, EG, one, Late Antonine
 Drag 33, CG, three, Antonine
 Drag 33, CG, one, Antonine
 Drag 33, CG, one, Late Antonine
 Drag 36, CG, one, Antonine
389. (1592/242) Drag 37, CG (Lezoux), much abraded and partially covered by an indigo-coloured organic deposit. The ovolo is that given for DOCILIS cf. Stanfield and Simpson (1958, Fig. 24, 1) but the style is closer to the early work of SACER (*ibid.*, Pl. 84). *c.* AD 120-145 (illustrated).
 Drag 37, CG, one, Antonine
 Drag 37, CG, one, Late Antonine, DOECCVS style.
390. (1592/227), Drag 37, EG (La Madelaine), one, ALBILLVS style cf. Folzer (1913, Fig. 25) for the details. Most importantly the ovolo (detail 123) does have a tongue. It lies right. It ends in a rosette or a group of dots and is very faint. *c.* AD 125-150 (illustrated).
 Drag 38, EG, two Late Antonine
 Drag 43, CG, one, Late Antonine
 Drag 45, CG, one, Late Antonine
391. (1592/251) Drag 46, EG, one, stamped PRI·IMō. Brenda Dickinson comments: *Premo 2a*, an East Gaulish potter, presumably working at one of the Argonne factories, since another of his stamps is from Reims. All the known examples of die 2a are from London, one on form 80. *c.* AD 150-200 (illustrated)
 Drag 72, CG, one, Antonine
 Drag 72, EG, one, Antonine
 Drag 81, CG, one, Late Antonine

SAMIAN STAMPS

BY B. R. HARTLEY AND BRENDA DICKENSON

- 392 (1601/250) Augustinus 7a, AVGVSTINVS, on form 31. Waiblingen-Bernstein and Rheinzabern (not attested at a pottery, but other stamps of the potter known there). The stamp, not recorded in dated contexts, was used on a variant of Ludowici form Tb. Since he began work at Waiblingen and one of his stamps occurs at Newstead, he is not likely to have worked in the 3rd century, but as he also made a form 32 a range *c.* AD 160-200 is possible. From Area B, Context 3.
- 393 (1598/270) Caletus 2a, CAL·ETIM, on form 33, who is known from a mould to be a Lezoux potter, but die 2a only appears on forms 31, 31R and 33. It turns up at Rainbridge, Catterick and Malton and there are many examples from Pudding Pan Rock, *c.* AD 160-200. From Area B, unstratified.
- 394 (1598/273) Celsianus 1a, CELJSAII·OF, on form 33. Known from Lezoux, as well as from Rainbridge, Binchester and Catterick. It is used on forms 31R, 79 and 80, *c.* AD 160-190. From Area B, unstratified.
- 395 (1610/247) Cerialis; 2a, CERJIALIS[FC, on form 15/17 or 18. An uncommon potter, whose stamps have generally been taken to be South Gaulish. However, several of the stamps recorded from London are burnt (perhaps in the Second Fire?) and he may have been one of the early potters of Les Martres-de-Veyre. Another stamp occurs at Watercrook. Late 1st or early 2nd century. From Area B, Context 12.
- 396 (1608/246) Dagodubnus ii 1a, DAGODV̄NVSF on form 33. The potter, who specialised in this form, worked at Rheinzabern in the late 2nd or 3rd century. From Area B, Context 10.
- 397 (1598/272) Flavius Germanus 9k, OF FGJER on form 18. He must have worked at La Graufesenque, but the only evidence is from C.I.L. There are stamps from Banassac, but 9k is presumably from La Grauf. It occurs at Brecon, Carmarthen and Nijmegen (Ulpia). His other stamps are quite popular at places like Butzbach, Cannstatt and the Saalburg, and there is no hint that he worked in the pre-Flavian period, 6. AD 70-100. From Area B, unstratified.
- 398 (1610/249) Lucundus ii 3a, OFJIVCVNDI on form 29 with no surviving decoration. Stamp attested at a pottery in La Graufesenque. Used mainly on form 29, the stamp occurs at Nijmegen (VN), Rottweil and probably at York. *c.* AD 65-85. From Area B, Context 12.
- 399 (1582/248) Matina 3e, MATINA on Curle 15, known at Rheinzabern. There are no satisfactorily dated sites for this particular stamp, but a similar one has been recorded twice at Niederbieber and also at Benwell. A date of *c.* AD 180-220 seems likely. From Trench A, Layer 9.
- 400 (1605/278) Monti . . . 6a, OFJMONTC on form 27g, La Graufesenque (not attested at a pottery but similar stamps known here). The stamp, presumably representing a partnership of potters whose full names are not known, is recorded from Chester, the Nijmegen fortress, Ribchester, Rottweil and York and, once, on form 29. *c.* AD 65-85. From Area B, Context 7.
- 401 (1610/245) Santianus 2a, SAN[TIA]NIO on form 31. Lezoux (attested at a pottery). The stamp also occurs at Corbridge. Santianus made forms 31R, 79 and 80 and so must have been working *c.* AD 150-190. From Area B, Context 12.
- 402 (1625/274) A rosette on form 33, not otherwise known, is presumably Central Gaulish and 2nd century. From Trench E, Layer 1 (illustrated Fig. 14). See also No. 391.

CERAMIC FIGURINES

BY FRANK JENKINS

(Fig. 14, Nos. 403-404)

403 (1592/83) This is a rather badly moulded and distorted hollow plinth of a figurine of which only the feet of a human figure wearing boots, and a small piece of the hem of a garment seen as a small projection above the left foot, now survive. The clay is reddish in colour with a light grey core, and visually is typical of the fabrics of many clay statuettes made from the local clay at Trier (Augusta Treverorum) in Roman times in the potteries situated just outside the south gate of the city. The figurine was evidently made in the usual manner in a two-piece mould, front and rear, and the resultant casts were then luted together. The surface of the plinth has been roughly smoothed, presumably by the fingers in a not too successful attempt to obscure the vertical joints where the two halves were luted together before firing in the kiln. Unfortunately, as this example is too incomplete any identification of the subject it represents must be highly tentative. If the size, the style, the boots and the piece of the hem of the garment are any guide it is possible that in its complete state it was the figure of a man of stumpy, dwarf-like proportions, wearing a *cucullus* the everyday hooded cloak worn by the inhabitants of north-east Gaul. Figurines of hooded dwarfs, the so-called *genii cucullati* were a speciality of the figurine modellers of Trier where they appear to have been very popular. They were used as grave-goods and as offerings to the gods at the temples in that part of the

Mosel valley. The makers used the local red clay as also white clay imported from elsewhere, probably from around Cologne. From the little evidence we have concerning the dating of these figurines a date in the first half of the 3rd century if not the last decade of the 2nd seems possible. See Krüger (1934, 137-139, 164-173, Figs. 34-37, Pls. 15-23), Gose (1975, 51-54, Pl. 35 Nos. 10-16), Hettner (1901, Pl. 11 and 13), Loescheke (1938, Pl. 21 No. 4). Also Jenkins (1953, 86-91, Pl. 1) which discusses the distribution and significance of the figurines of the *genius cucullatus* and illustrates a complete figurine found in a grave at Jagsthausen, Württemberg as also part of another found at Reculver. From Trench A, Layer 20 (illustrated).

404 (1582/215) This is a plinth in the form of a hollow reel having a concave profile. Plinths of this type frequently occur in the long series of figurines made at Trier, but as no trace of the figure survives it is quite impossible to say what type it was. It could have been a deity, such as Venus, Fortuna or Minerva, or a bust of some anonymous personage. The fracture scar on the top of the plinth suggests that it was not another *genius cucullatus*. The fabric is so similar to the one described above, that there seems to be strong reason for thinking that the two were made in the same general region, presumably at Trier. The presence of this plinth in a much later deposit must indicate that it is a rubbish survival for the manufacture of clay figurines at Trier seems to have ceased by the mid-3rd century. Residual in Trench A, Layer 9 (illustrated).

GLASS

FROM NOTES BY DR. D. B. HARDEN

(Fig. 14, Nos. 405-410)

Many small fragments were recovered from the excavations but only those from vessels large enough to be drawn and identified are included in this report.

405 (1592/57) Part of the right-angled bend of a many-ribbed handle in colourless glass. The two ends of the handle would have joined the shoulder and the neck of a one or two-handled bottle. First half of 2nd century. From Trench A, Layer 20 (illustrated).

406 (1592/153) Bottom part of a two-ribbed, olive green handle, with part of attachment to body. This may come from a globular flask from which the handle splayed outwards at an angle, curving in again to meet the neck or rim. From Trench A, Layer 20, and therefore not later than c. AD 280 (illustrated).

407 (1582/16) Rim and top of neck of a green, one handled bottle, square in horizontal section. The handle is multi-ribbed and the rim folded upwards then inwards and pressed flat on top. Probably 2nd or 3rd century. From Trench A, Layer 9 (illustrated).

408 (1582/131) Complete folded base ring with tubular hollow in a greenish nearly colourless glass. Perhaps from a deep bowl but more probably from a bulbous flask or jug. Heavily strain-cracked. Possibly 4th century but more probably 3rd. From Trench A, Layer 9 (illustrated).

409 (1582/42) Small fragment of another similar base ring in a completely colourless glass. Date and provenance as for No. 408 (illustrated).

410 (1598/3) Fragment of rim and side of a bluish green pillar-moulded bowl with nearly vertical sides. The whole inside and the outside of the rim are wheel-polished and the remainder of the outside is fire-polished. Second half of 1st century. From Area B, unstratified (illustrated).

COINS

BY RALPH MERRIFIELD

Area A, Layer 20 Fill of Walbrook stream tributary

- 411 (1592/28) 1st century, illegible *dupondius*. Orichalc 26mm. Very worn.
 O Head l., apparently bare, not radiate.
 R Seated figure l.
 ? *Barbarous dupondius* of Claudius, CERES AVGVSTA type.
- 412 (1592/34) 1st century, illegible *dupondius*. Orichalc 26mm. Very worn.
 O Head r., Vespasian (?)
 R Standing figure l.
- 413 (1592/59) Hadrian, 1st bust, AD 117-122, *dupondius*. Orichalc 26mm. Very worn.
 O Radiate bust of Hadrian r. Inscription illegible.
 R Illegible.
- 414 (1592/32) Antonius Pius, *as*. Copper 26mm. Worn or battered.
 O Laureate bust of Antoninus Pius r., inscription illegible.
 R Standing figure l. Inscription illegible except for S.C.
- 415 (1592/31) Faustina 1, *as*, commemorative after her death in AD 141. Copper 26mm. (R.I.C. *Antoninus Pius* 1161). Rather worn and battered.
 O DIVA FA[VSTINA] Bust of Faustina r.
 R AETERNI[TAS] Pietas standing l. by altar, raising r. hand.
- Area A, Layer 9 Dumped deposit above Walbrook Stream Tributary*
- 416 (1582/87) Trajan, *sestertius*. Late bust (Hill, 1970, 11-13, type L iii) AD 107-117. Very worn.
 O Laureate bust of Trajan r., inscription illegible.
 R Standing female figure facing, holding cornucopiae in l. hand, inscription illegible.
 ? Felicitas (cf. B.M.C. III, Pl. 37, 11).
- 417 (1582/88) *Barbarous radiate*, *minim*-size, AE 10mm, late 3rd century. Little-worn.
 O Radiate head r., almost off flan.
 R Helmeted male figure standing l., holding spear in l. hand. Mars or Virtus type.
- 418 (1582/89) House of Constantine, AE 17mm, AD

330-335. Corroded.

O Bust r., inscription illegible.

R Two soldiers facing each other, each holding spear and leaning on shield; two standards between them. [GLORIA EXERCITVS] type, but inscription illegible.

- 419 (1582/27) Magnentius or Decentius, AE 19mm, AD 351-353. Corroded.

O Bare-headed bust r. Inscription illegible.

R Two Victories facing each other, holding shield inscribed [VOT/V] MVL [X] [VICTORIAE DD NN AVGET CAE.] type but inscription illegible.
 ? Mint-mark.

- 420 (1582/73) Valens, AE 17mm, AD 364-375. Corroded. Mint of Lyons.

O Bust draped r., pearl-diademed. DN V[ALENS P V AVG]

R Victory standing l., holding wreath and palm. [SECVRITAS REIPVBLICAE] type (illegible). OF — l in field. Mint-mark [L]VGP.

- 421 (1582/72) Valens, AE 17mm, AD 364-378. Corroded.

O Bust draped r., pearl-diademed. [DN VALEN]S PF [AVG]

R Emperor draped, with r. hand dragging captive r., and holding labarum in l. [GLORIA ROMANORVM] type (illegible). Mint-mark illegible.

- 422 (1582/90) House of Valentinian, AE 18mm, AD 364-378. Very corroded.

O Illegible through pitting.

R Illegible. Victory standing l. holding wreath and palm. [SECVRITAS REIPVBLICAE] type.

- 423 (1582/88) AE 14mm. Illegible.

? Late 4th century.

Unstratified

- 424 (1627/29) Commodus, *sestertius*, c. AD 183-189. Worn and battered.

O [M] C[OMM]ODVS AN[TON . . .] Laureate head of Commodus r.

R Inscription illegible. Hercules standing facing, head r. From Trench C, Layer 1.

COINS FROM THE FILL OF THE STREAM-BED (Nos. 411-415)

The normal pattern of coins from the Walbrook stream ends abruptly in the reign of Antonius Pius, with the issue of AD 155 (see Merrifield, 1962), probably because flooding of the banks made the stream inaccessible soon after that date. In this respect the coins from the bed of this small feeder of the Walbrook conform with the expected pattern, since they end with a coin of Antoninus Pius, not closely datable, and another in commemoration of his wife Faustina, issued after her death in AD 141.

It is, however, a very small sample — only five coins — of which three are of the second century. In the series of 167 coins recorded from the main stream-bed of the Walbrook at Bucklersbury House, only 55 were of the second century (34%), as against 112 (65%) of earlier date. The proportions are therefore significantly different. Moreover, both first-century coins from the stream-bed at Angel Court are worn to the extent that they cannot be identified with certainty, so that it seems unlikely that they found their way into the silt of the stream before the second century. On coin evidence alone, therefore, it might be suspected that occupation of the banks of this tributary began much later than those of the main stream of the Walbrook farther south, as might perhaps be expected, but that it was interrupted at about the same time. There are, however, remarkably few coins for a Walbrook site, so that any deductions from them can only be very tentative.

COINS FROM DUMPED DEPOSIT(S) ABOVE STREAM (Nos. 415-423)

The coins range from a very worn coin of Trajan to issues of AD 364-378, indicating that the dumping continued until after AD 364, at the earliest. Five of the eight coins found in the dumped deposit belong to the second half of the 4th century, and at least three (probably four) of them are of the period after AD 364. If the deposit is homogenous, these coins should therefore give a satisfactory *terminus post quem*.

COPPER ALLOY

BY HUGH CHAPMAN

(Fig. 15, Nos. 425-434)

425. (1592/30) Brooch, cast, with incised decoration on the bow. M. R. Hull makes the following comments: This example clearly belongs to a small group which forms my type 179 (see Hull, 1977), a rare variety of which this is only the fifth to be recorded. Brooches of this type have two parallel bows each of V-section, and an almost cylindrical head, housing a spring. The bars of the bow are hollow and the catch is transverse. This typical form occurs at Caister by Norwich (Hull, 1977, No. 6397), Westmorland (No. 6643) and Kirky Thore (No. 7598). A variant occurs at Great Chesters (No. 6645) in which the bow is a single bar, moulded on the top to appear as three parallel bars with no aperture between them. Behind the whole is made hollow, as a single bar.

This example is a somewhat similar variant in which the bow becomes single, but retains the single V shape while increasing the width. It is the first example to bear decoration. Probably late 2nd century. From Trench A, Layer 20 (illustrated).

426. (1601/2) Part of bracelet; made of a circular section iron core covered (except on the inside) by fine thin copper alloy strips. Three of the strips are decorated with fine oblique grooves. From Area B, Context 3 (illustrated).
427. (1582/22) Portion of ribbon strip bracelet with facets and grooves forming a lozenge pattern separated by transverse grooves from a second patterned zone of oblique side notches and central groove. From Trench A, Layer 9 (illustrated).
428. (1582/25) Circular finger (?) ring; much corroded.

From Trench A, Layer 9 (illustrated).

429. (1582/17) Oval penannular ring with circular section; perhaps a brooch. From Trench A, Layer 9 (illustrated).
430. (1598/161) Hair pin, shaft broken, knobbed head with transverse mouldings below. From Area B, unstratified (illustrated).
431. (1582/77) Key from rotary lock, *v.* London Museum (1930, 72). From Trench A, Layer 9 (illustrated).
432. (1610/19) Rim fragment of bowl or dish, probably straight sided. A sharp cut on the bottom edge indicates that the vessel was deliberately cut up for scrap. From Trench B, Context 12 (illustrated).
433. (1582/20) Fragment of sheet copper alloy with incised ring and dot decoration, and one large rivet(?) perforation. Perhaps part of vessel. From Trench A, Layer 9 (illustrated).
434. (1582/21) Strip of H-section bent into rough U-shape. Both ends have been cut off under heat; workshop scrap. From Trench A, Layer 9 (illustrated).

LEAD AND LEAD ALLOYS

BY HUGH CHAPMAN

(Fig. 16, Nos. 435-436)

435. (1598/163) Cylindrical box; probably pewter though not analysed. The box has been flattened and both the base and (separate) lid are missing. There is a rebate for the lid and two parallel grooves run horizontally round the body, one about two thirds below the top, the other near the bottom. An irregular lattice pattern scratched with a fine point forms a secondary decoration in the band between the bottom of the lid rebate and the middle horizontal groove. From Area B, unstratified (illustrated).

Four other cylindrical pewter boxes of comparative size and with similar decoration and one lid are known from London, Museum of London Acc. Nos. 19279 (Walbrook, Bucklersbury House), 20839 (Walbrook, Bucklersbury House). *v.* Guildhall Museum (undated, 18 No. 2), 24766 (Thames, Public Cleansing Depot), 25421 (Thames, Blackfriars) and lid 21566 (Walbrook, Bank of England). In Britain the pewter series appear to be confined to London. Two cylindrical lead vessels are known from Newstead, *v.* Curle (1911, Pl. 54 Nos. 8, 10) but they are without rebates for lids and lack any horizontal decorative banding. A closer parallel is perhaps provided by the single complete silver cylindrical box in the hoard of silver plate from Traprain Law, *v.* Curle (1922, 77 No. 115 and Pl. 22) which, though it has a convex moulding a short distance below the rim and around the foot, clearly originally had a lid. The body is decorated with four bands of horizontal grooves. Fragments of four other cylindrical vessels also come from the same hoard, *v.* Curle (1922, 62-63, Nos. 92-95 and Pl. 25), but they appear to belong to a series of drinking vessels and were not lidded boxes.

The purpose of both the pewter and silver boxes is suggested by the dome-shaped toilet casket from the late 4th century treasure from the Esquiline Hill, Rome, *v.* British Museum (1977, 45 No. 89). Inside, the casket has four silver cylindrical lidded boxes located in holes cut in a raised floor. The boxes presumably held perfumes, essences and other toilet preparations belonging to Projecta, the lady named with her husband in an inscription on the lid of the large bridal casket in the same treasure.

In addition it might also be suggested that the cylindrical boxes of metal relate to a series of lathe-turned Roman circular wooden containers with lids known in the Roman world. There are several examples from London (Acc. Nos. 24052, 24489, and lids 19021, 19022, 24051) and on

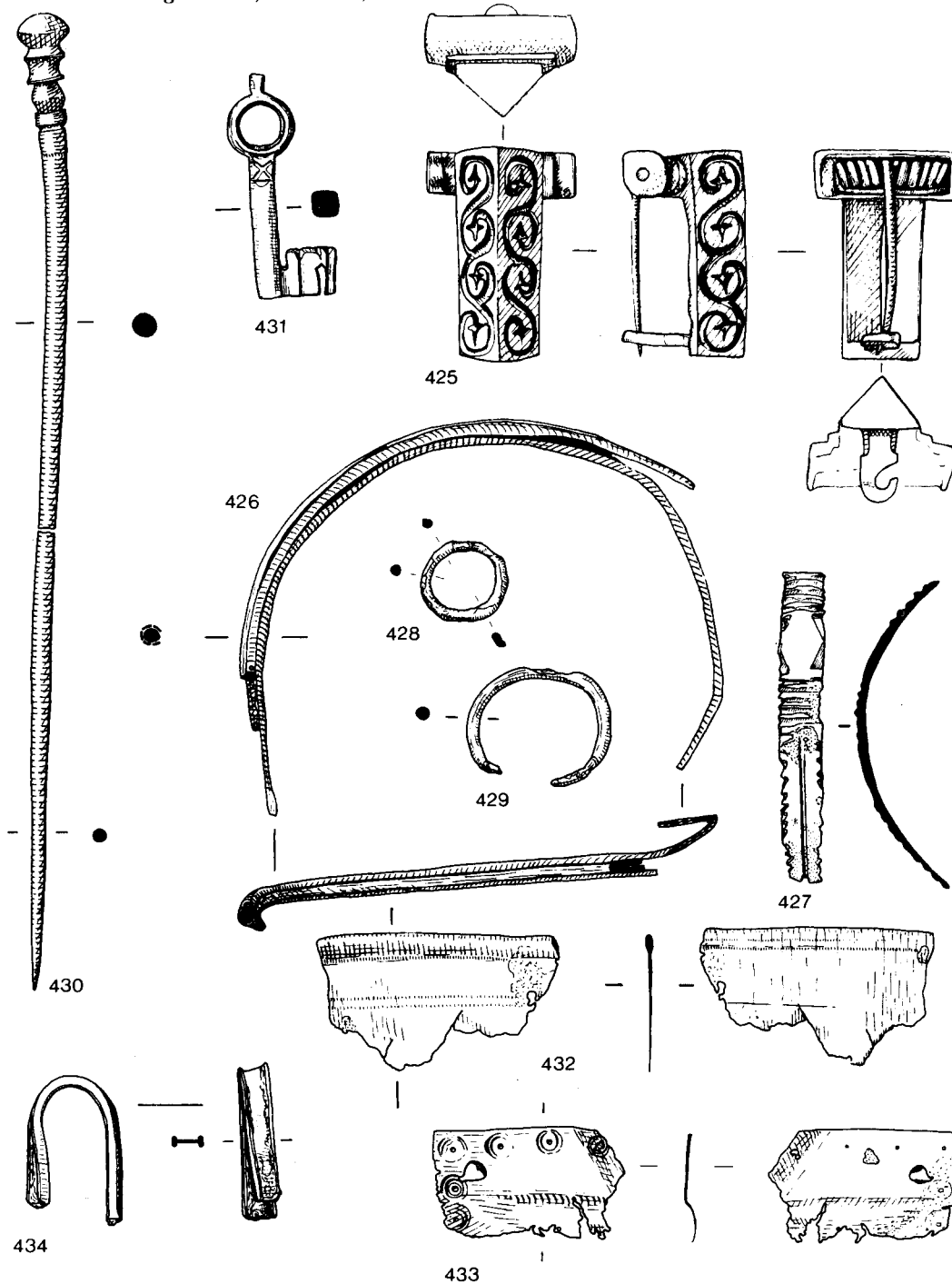


Fig. 15. Angel Court: Roman finds of copper alloy Nos. 425 — 434 (½, except Nos. 425 — 7 and 430 1/1)

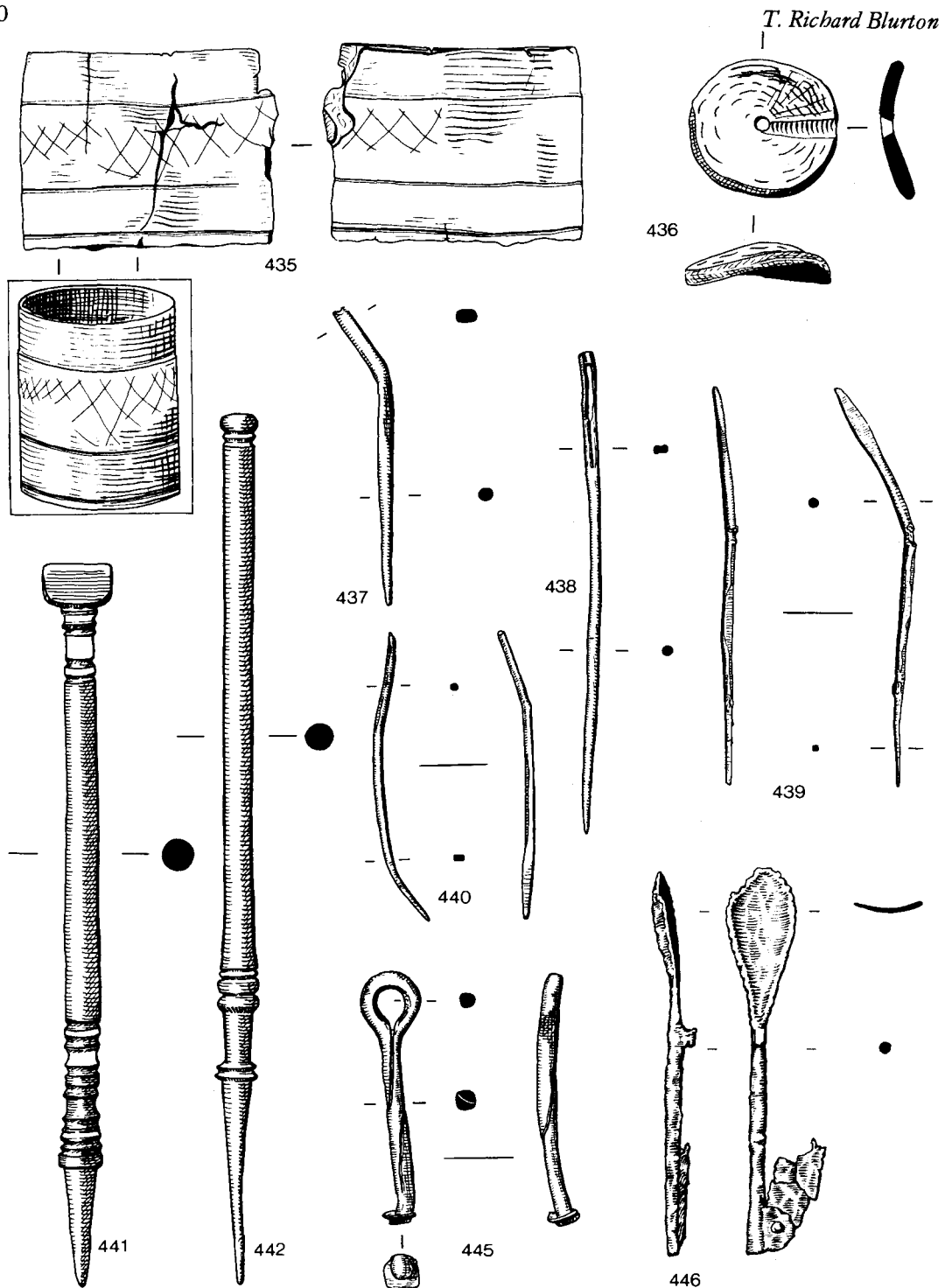


Fig. 16. Angel Court: Roman finds of lead and lead alloy Nos. 435 — 436 (½); Roman iron objects Nos. 437 — 446 (1/1, except Nos. 439 — 40, 445 — 6, ½)

examination one (24489) was found to contain a substance that proved to be lead carbonate surrounded by lead sulphide, perhaps a mixture of two cosmetic pastes.

Though the Angel Court box is unstratified the majority of the pewter pieces from Roman London come from the stream bed of the Walbrook, usually the Bucklersbury House site or other sites which can be considered Walbrook deposits, and can be dated with some confidence to before *c.* AD 155, Merrifield (1962). In addition to the cylindrical boxes the range from London includes two plates (18220, 18221) *v.* Peal (1967, 21), a patera handle (19793), two spoons (19490, 20373) *v.* Guildhall Museum (undated, 18 Nos. 3-4) and a jug (10608). The dating of the bulk of the Roman pewter from London to before *c.* AD 155 and before the suggested date of *c.* AD 250 for the start of the pewter industry in Britain, Peal (1967), Liversidge (1968, 207), suggests that it is a special group. It is perhaps significant that the forms of many of the London pieces, notably the plates and boxes, are not found in the later pewter hoards. It seems likely that London for some reason was the centre or recipient of a pewter industry active before the middle of the 2nd century AD.

- 436 (1628/191) Circular disk with central hole and raised rim on one side. The object has been bent where a groove has been struck from the central hole to the rim. Perhaps a perforated weight or a loom weight rather than a spindle whorl, see Cunliffe (1971, 144 No. 8 and Fig. 66). From Trench F, Layer 5 (illustrated).

IRON

BY HUGH CHAPMAN

(Fig. 16, Nos. 437-446)

- 437 (1592/60) Small needle, shaft bent, head broken at base of eye. From Trench A, Layer 20 and therefore not later than 3rd century (illustrated).
- 438 (1590/88) Needle; oblong eye. From Trench A, Layer 18b and therefore not later than *c.* AD 160 (illustrated).
- 439 (1592/65) Strip, pointed at one end, the other partly hammered to flat spatulate form. Perhaps an unfinished stylus or *ligula*. From Trench A, Layer 20 and therefore not later than 3rd century (illustrated).
- 440 (1592/92) As No. 439 (illustrated).
- 441 (1592/70) Stylus with five decorative bands of copper alloy. From Trench A, Layer 20 and therefore not later than 3rd century (illustrated).
- 442 (1598/67) Stylus. From Area B, unstratified (illustrated).
- 443 (1589/78) Fragment of stylus. From Trench A, Layer 18a and therefore not later than *c.* AD 160.
- 444 (1589/49) As No. 443.
- 445 (1592/64) Loop formed by a rod doubled back and ends twisted together. The two ends together form a hammered stud-end holding a small rectangular plate. Probably a swivel-link from an iron hanging lamp *v.* Price (1873, Pl. 11 No. 2) and Curle (1911, 307 and Pl. 79 Nos. 6 and 7). From Trench A, Layer 20, therefore not later than 3rd century (illustrated).
- 446 (1592/61) Spoon with folding knife blade. Mr. David Sherlock writes: "One of a small class of spoons from Roman Britain which may be called folding spoons. The type represented here does not have a handle hinged to the bowl, but a hinge for a blade at the other end. Part of the blade survives here. There is a bulge half-way along the handle which radiography has shown to be a repair where the handle broke in two. The bowls of these type have an elongated shape and a raised notch where they meet the handles. Two other examples of this type are known, one in copper alloy from London (M.o.L. Acc. No. 20086) and a second from Cow Roast Inn, Hertfordshire. For a fuller note *v.* Sherlock (1976, 250-255)." From Trench A,

Layer 20 and therefore not later than 3rd century (illustrated).

(Fig. 17, Nos. 447-456).

- 447 (1598/87) Socketed ballista or catapult bolt; common type, see e.g., Brailsford (1962, 6 Nos. B117-183 and Pl. 6). From Area B, unstratified (illustrated).
- 448 (1609/24) Twist-bit from auger with four-sided pyramid shaped butt for insertion into wooden handle or chuck; shaft twisted for boring. From Area B, Context 11 (illustrated).
- 449 (1605/41) Awl with characteristic heavy four-sided handle, see e.g., London Museum (1930, Pl. 32 Nos. 10 and 11). The junction of the base and shaft is decorated on each face with a repeated pattern of incised grooves. From Area B, Context 7 (illustrated).
- 450 (1605/50) Handle strap from wooden bucket. Perhaps not fully fashioned before being deliberately bent in two places. Two handle straps were fixed (usually rivetted or nailed) vertically opposite one another to the hoops binding the wooden body of the bucket. The ends of the carrying handle hooked through the two loops at the top, *v.* Neal (1974, 187 No. 673 and Fig. 79). From Area B, Context 7 (illustrated).
- 451 (1601/48) Rake tine; the thinner ends of the tines were hammered through a wooden rake head at regular intervals and then clouted over at the top to ensure they were fixed. The top is missing from this example. The curve of the tines pointed towards the user of the rake, *v.* Curle (1911, 283 and Pl. 61 No. 7). From Area B, Context 3 (illustrated).
- 452 (1587/74) Four-sided shaft, tapering, to a point; no proper head. From Trench A, Layer 16 and therefore not later than *c.* AD 120-40 (illustrated).
- 453 (1609/35) Fitting, one end beaten out and perforated with a circular hole. From Area B, Context 11 (illustrated).
- 454 (1592/69) Split-spike loop; a common structural fitting. From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
- 455 (1598/188) Split-spike loop. From Area B, unstratified (illustrated).
- 456 (1605/84) Rectangular plate; the four sides have been neatly bent over. An oblong (nail) hole has been roughly driven through the centre from below. Use uncertain. From Area B, Context 7 (illustrated).
- (Fig. 18, Nos. 457-464).
- 457 (1590/89) Fragment of iron sheet with rounded flange along one edge. From Trench A, Layer 18b and therefore not later than *c.* AD 145-60 (illustrated).
- 458 (1592/140, 1592/216-218) Four thin iron bars with rectangular sections, some bent; either scrap or

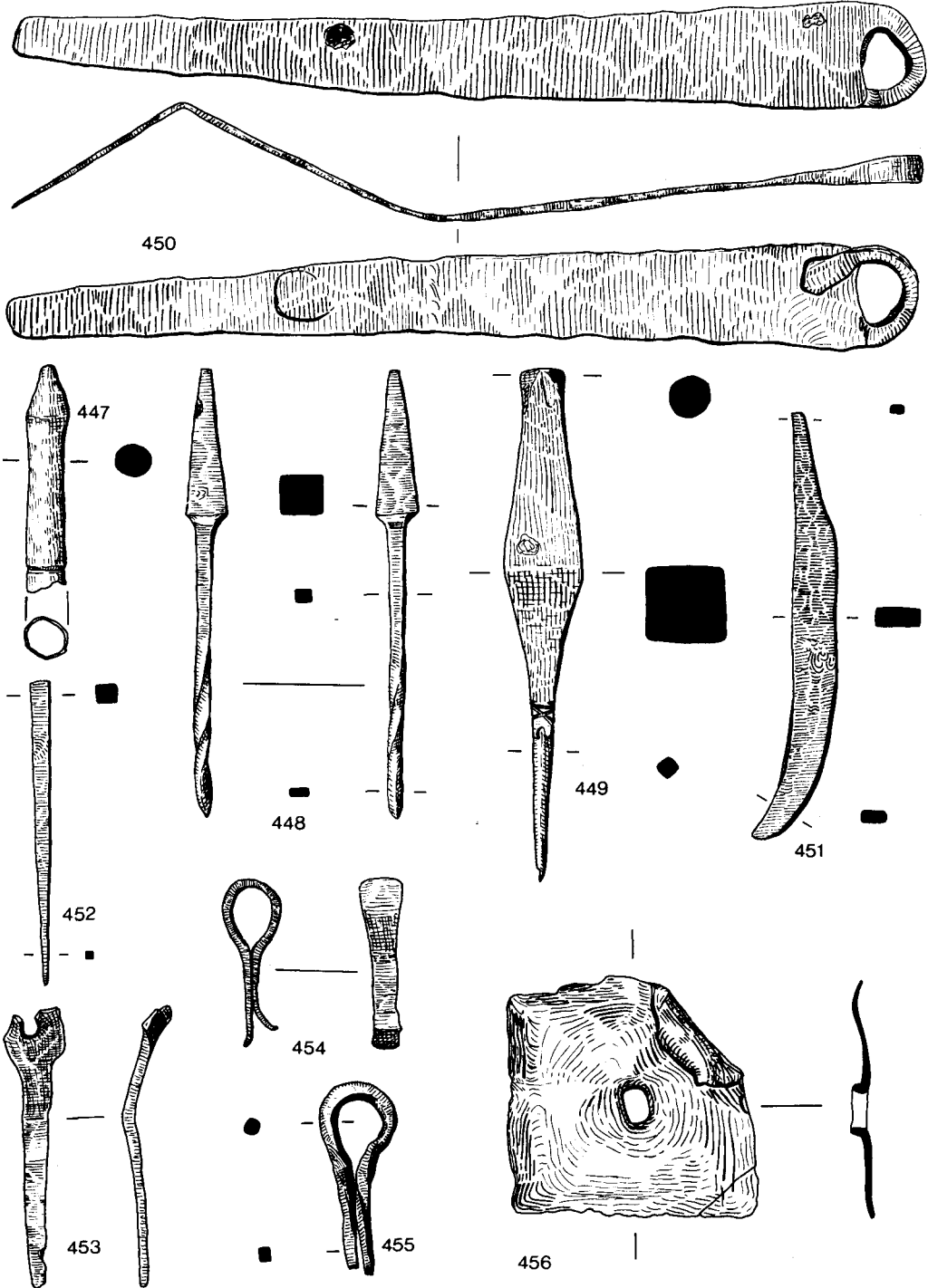


Fig. 17. Angel Court: Roman iron objects Nos. 447 — 456 (1/2)

- unfinished articles. From Trench A, Layer 20 and therefore not later than *c.* AD 280.
- 462 (1605/42) One thin iron bar, as above. From Area B, Context 7.
- 463 (1592/95) Thin bar, bent at two points and one end flattened; unfinished needle (?) From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
- 464 (1582/39) Curved strip of sheet iron, with rectangular side protrusion; purpose not clear. From Trench A, Layer 9 (illustrated).

IRON NAILS

BY MICHAEL RHODES

(Fig. 18, Nos. 465-469).

164 iron nails were recovered from the Roman deposits in Trench A. 82 of these are from Layer 20; 30 are from the infill of the ditch (Layers 18 and 18B) and 24 come from Layer 16 which represents some of the earliest activity on the site. The few examples which were recovered from the other trenches are not discussed here. The nails are, in general, fairly well preserved, particularly where they come from waterlogged, silty layers and it has been possible to sort most of them into four types which are here described. Only 18 are so badly corroded as to prevent the recognition of their original shape.

Type 1 (No. 465) Nails with square-sectioned shanks, tapering to a point and flat, oval or rounded heads.

In most examples the shanks stem from the centre of the heads, although 11 nails have shanks which appear to stem from one side. These examples have not been treated as a separate type as so many of them appear to have been damaged in antiquity.

Nails which fall into the category of *Type 1* represent by far the most common Roman variety in this country and are also the most frequently encountered type on this site with a total of 132 coming from layers 16, 20, 26, 18B, 15, 13, 7 and 9. They vary between 26 and 129mm in length, although about 80 per cent are between 42 and 76mm long. Cleere (1958, type 3) suggests that similar nails from Brading would be suitable for hanging tiles, joining smaller timbers and fixing hinges and other fittings.

It was decided to try to assess whether the Angel Court nails of this type could be further subdivided on the basis of their dimensions or whether there were any significant dimensional differences between nails from different deposits and of different dates of burial. To do this their dimensions were plotted as a scatter diagram in which each nail was represented as a point along a vertical axis showing maximum width of head and a horizontal axis showing the total length, measuring from the tops of the heads to the points. Measurements taken were accurate to the nearest mm and where this accuracy could not be achieved because the nail was damaged, the information was not recorded. Nails from different layers were represented by different symbols.

Whilst this diagram did show differences between various layer-groups of nails, it was not clear whether most of these were significant in view of the small size of most of the assemblages. It was, therefore, decided to publish here (Fig. 19) only a much simplified form of the original diagram.

Figure 19 illustrates the dimensional variations of *Type 1* nails, showing that about 65 per cent are between 43 and 73mm in total length and have heads between 11 and 15mm maximum width. It also indicates that all the nails from layer 16 (the earliest layer which produced nails being deposited about *c.* AD 120-140) fall within these limits. It would be most hazardous to infer anything from this, although it is worthy of note that at Inchtuthil, the Domitian legionary fortress where a very large hoard of iron nails was recovered, about 87 per cent of the specimens of this type fall within these dimensional limits (Angus, Brown and Cleere, 1962).

By far the widest variety of these nails come from Layer 20, but since 47 per cent of them come from this one context, very little significance may be attached to this information. About one third were perfectly straight, as if they had never been used, but most of the rest were twisted, bent or curved as if they had been extracted for re-use or reforging. A few were bent at right angles part way down the stem as if having been driven through a piece of wood their ends were flattened to improve the grip or for reasons of safety.

Type 2 (Nos. 466 and 467). Headless spikes with square sections tapering to a point. Some of these may be *Type 1* nails which somehow lost their heads in antiquity. Some may be unfinished nails — their heads not yet having been beaten into shape, although all were bent. Some have clearly been used, their ends being rounded by hammer blows, and two from Layers 18 and 20 have small heads, possibly accidentally formed as they were driven home (e.g., No. 467). 16 examples come from layers 16, 20, 18, 15 and from context 24, a timber from one of the revetments from which the spike was removed.

Measurable examples are between 50 and 180mm in length.

Type 3 (No. 468) Nails with square or round-sectioned shanks, tapering to a point, and large, circular, coned heads, which could have been formed either by casting or by forging, possibly using a countersunk punch.

2 examples come from layers 18 and 13, their shanks being 102 and 68mm long, respectively.

No parallels are known outside London, although at least 14 other examples have been recovered from the Walbrook stream, and are now in the Museum of London. These are, however, very varied in size and in the precise shape of their heads. Accession Nos. 1664, 1668, 13807, 19931, 19943 and A69 (see London Museum, 1930, 77) are considered to be closely similar and Nos. 1663, 13809, 16299, 16356, 19476, 19561, 19657, 19862 are of the same general type. The nail from layer 13 (No. 468) is the shortest example known. The longest is Accession No. 13807 which is 204mm long, and the average length is about 118mm. Whilst the decorative nature of the heads might suggest that they could have been used as door studs, their length would indicate that they were probably not used for this purpose. They could, however, have been used in carts or wagons.

Type 4 (No. 469) Long nails with square shanks which taper to a point. The head of the only certain and apparently unused example from Layer 18 (180mm long) was probably formed by beating one end of the shank flat and then over at right angles. Another nail from Layer 16 (148mm long) which might be of the same type, but could possibly be considered as a heavily-made example of Type 1, may have been badly forged as the shank appears to have split along a line of weakness whilst being driven into the wood. This apparently prevented the nail from being hit home as the head has been beaten over as if to lessen the extent of its protrusion. Such nails would have been used for fixing structural timbers.

BONE AND ANTLER

BY HUGH CHAPMAN

(Fig. 18, Nos. 470-479).

(All the bone objects were submitted to Dr. J. Clutton-Brock, British Museum (Natural History), for bone identification and her findings are included below).

- 470 (1592/56) Pin; hand cut, rough ovoid head. From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
 471 (1592/63) Pin; hand cut, knobbed head. Date and provenance as for No. 470 (illustrated).
 472 (1592/62) Pin; hand cut, head missing. Date and provenance as for No. 470 (illustrated).
 473 (1582/13) Pin; hand cut, cuboid faceted-knob head, point missing. From Trench A, Layer 9 (illustrated).
 474 (1589/81) Fragment of pin shaft. From Trench A, Layer 18a and therefore not later than *c.* AD 145-160.
 475 (1598/162) As No. 473 but from Area B, unstratified.
 476 (1614/86) As No. 473 but from Area B, Context 16.
 477 (1628/192) Fragment of needle, flattened head pierced with single oblong hole. From Trench F, Layer 5 (illustrated).
 478 (1592/66) Handle of antler; one-piece with roughly carved circular cross-section; remains of iron tang of

knife or tool in centre. From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).

- 479 (1582/23) Scabbard slide; bone, probably from metatarsal of ox. Small projecting tongues have broken off from each end. By comparison with two identical ivory examples from Syria, where one is carved in one-piece with a scabbard, the object can be identified as a suspension loop for a scabbard of a long sword. The example from Angel Court was bound in a vertical position to the outer wall of the scabbard by thongs or cords passing through the two small circular holes leaving the central oblong aperture for the wearer's belt or baldric. Other identical examples are known from Denmark (Vimose deposit), Bulgaria and in Britain from South Shields and a second example from London itself (Bank of England site, 1928-34; Mus. Acc. No. 13963). This later example is carved from ivory. The origin of these characteristic scabbard slides remains uncertain but their affinity to a series of western Asiatic and Chinese slides suggests an Asian connection, perhaps with a specific group of barbarian troops employed in the Roman army. For a fuller note *v.* Chapman (1976b). From Trench A, Layer 9 (illustrated).

WOOD

BY HUGH CHAPMAN

(The wood identifications are by George Willcox, Department of Urban Archaeology. All the writing tablets were submitted to Mark Hassell to see if any writing could be deciphered, but this proved impossible).

(Fig. 18, No. 480).

- 480 (1592/6) Fragment of writing tablet; the total height survives, and about a third of the width. The leaf, recessed to receive wax on one side only, was either the first or last page of a document. It has cracked

across the middle on the line of the binding cord; no writing visible (unspecified soft wood). From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).

(Fig. 20, Nos. 481-490).

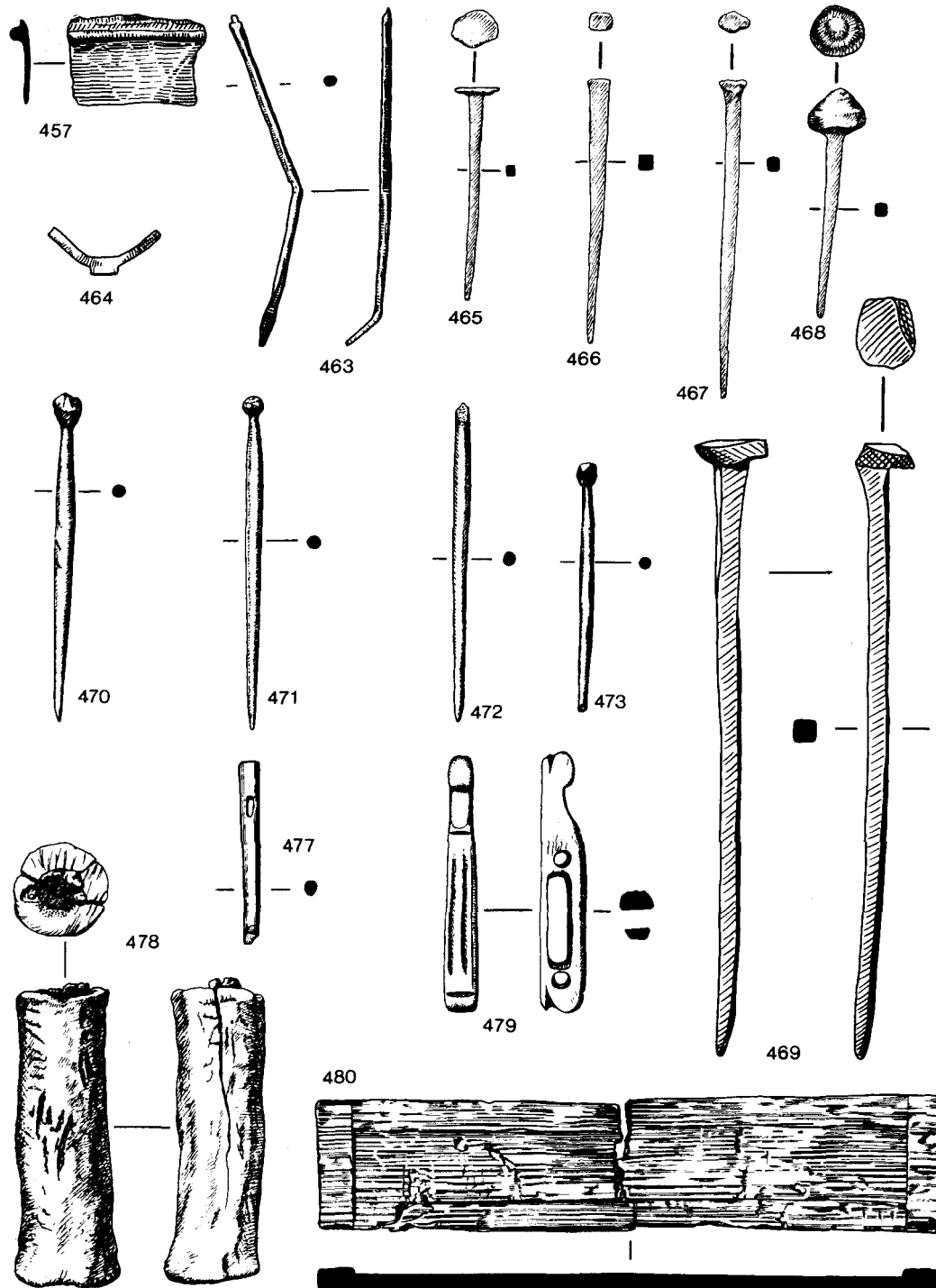


Fig. 18. Angel Court: Miscellaneous Roman finds Nos. 457 — 480 (½)

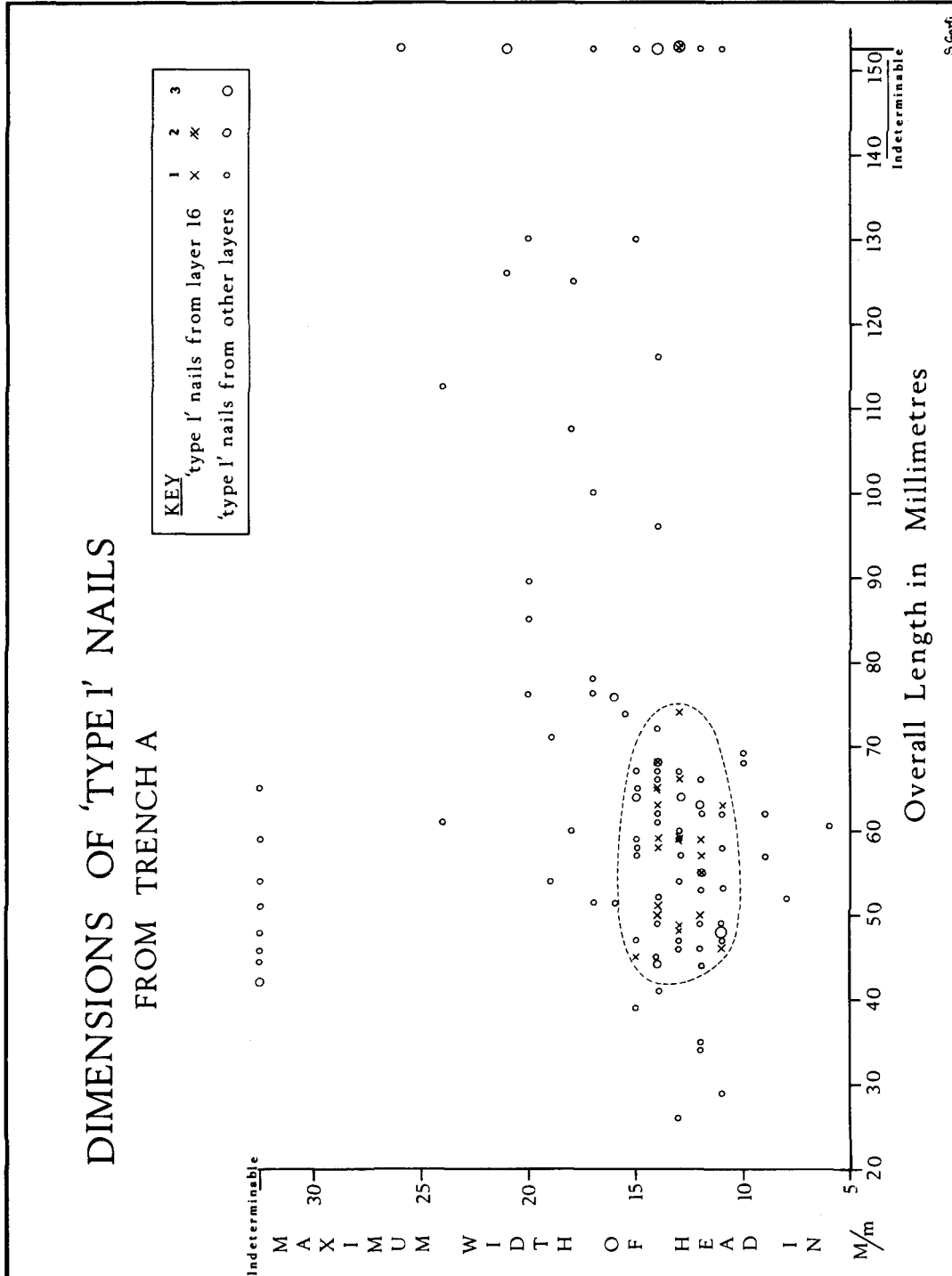


Fig. 19. Angel Court: Dimensions of Type I iron nails from Trench A

- 481 (1589/206) Fragment of writing tablet; two edges forming a corner and part of body; both sides recessed for wax and one has an incision indicating that this page had a wide horizontal groove cut across the middle. These grooves received the seal-impressions of persons called to witness the contents of the document, see Chapman (1976a, 66-68). Their names were written alongside the seal impressions and though there are traces of writing on this fragment they are unfortunately indecipherable (unspecified soft wood). From Trench A, Layer 18a and therefore not later than *c.* AD 145-160 (illustrated).
- 482 (1589/207) Fragment of writing tablet; edge and part of body, one side recessed for wax (unspecified soft wood). Date and provenance as for No. 481 (illustrated).
- 483 (1589/205) Fragment of writing tablet; edge and part of body; one side recessed for wax and with line of scratched writing (unspecified soft wood). Date and provenance as for No. 481 (illustrated).
- 484 (1590/168) Fragment of writing tablet; two edges forming a corner and part of body; both sides recessed for wax, one hinge hole (unspecified soft wood). From Trench A, Layer 18b and therefore not later than *c.* AD 145-160 (illustrated).
- 485 (1590/166) Fragment of writing tablet; two edges forming a corner and part of body; recessed on both sides; one hinge hole (unspecified soft wood). Date and provenance as for No. 484 (illustrated).
- 486 (1589/182) Fragment of writing tablet; corner; recessed on one side (unspecified soft wood). From Trench A, Layer 18a and therefore not later than *c.* AD 145-160 (illustrated).
- 487 (1592/175) Large circular spool or bobbin; lathe turned; use not clear. The absence of a central hole would preclude its use as a pulley or similar. Two similar bobbins are known from Newstead and also from Saalburg where it was suggested they were used for fastenings for tent doors, see Curle (1911, 311, Fig. 45.1). Perhaps a yo-yo, but the width of the central gap when compared with modern examples is wide. There are apparently no Roman representations of the game or examples known, but a claim has been put forward for a series of decorated ceramic spools from classical Greece to be identified as yo-yos, *v.* Gould (1975, 98 Figs. 58-59b). (wood, poplar or willow). From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
488. (1592/173) Rectangular fragment; one end broken; triangular section. Notch cut at an angle on one side. Perhaps head of tent-peg, *v.* Wild (1974), (wood, oak). Date and provenance as for No. 487 (illustrated).
489. (1590/185) Stave from small barrel or cask; with notch cut for disc base or top (unspecified soft wood). From Trench A, Layer 18b and therefore not later than *c.* AD 145-160 (illustrated).
490. (1589/169) Oblong piece of oak incised]M[on cross grain end face. The two long sides flanking the incised letter are split edges. It might be part of a wooden stamp for something like a tile (wood, oak). From Trench A, Layer 18a and therefore not later than *c.* AD 145-160 (illustrated).
- (Fig. 21, Nos. 491-492).
491. (1609/143) Bar, regularly fashioned with hexagonal section. A longitudinal straight groove or rebate has been carefully cut on each of two opposing sides. A small knob (or pivot?) protrudes from either end. The bar has been snapped, though not severed, in half

before being thrown away.

It is suggested that the piece is the vertical central bar of a window frame holding two panes of glass, one each fitting into the grooved rebate on either side and with the knobs at the two ends dowelled into either a wooden frame or a surround of different material. No wooden window frames are known from Britain, though they are mentioned as having been found at Pompeii, Mau (1907, 357). However, the dimensions (255 x 235mm) of a recently published complete pane of Roman window-glass from Garden Hill, Hartfield, *v.* Harden (1974) are sufficiently close to the length of the grooved rebate (300mm) of the Angel Court piece to make the suggestion plausible. Another complete pane of window-glass from Pompeii quoted by Harden, measured 330 x 270mm. An alternative suggestion might be that the piece is part of a panelled cupboard door or screen (unspecified soft wood). From Area B, Context 11 (illustrated).

492. (1598/197) Finial or baluster; lathe turned; one end broken, the other trimmed off with a knife. Purpose not certain, but perhaps a baluster from interior woodwork, or more likely a decorative finial from a vehicle or piece of furniture. It is too insubstantial to be the leg of anything but a child's stool or foot stool (wood not identified). From Area B, unstratified (illustrated).

LEATHER FOOTWEAR

BY J. H. THORNTON

(Fig. 21, Nos. 493-502).

Trench A, Layer 16 c. AD 120-140

493. (1587/116) Insole of nailed shoe. Right foot. Marginal indents on right side of toe-end following the ends of the toes; outside corner of seat worn or cut away. Deteriorated along outside and inside edges of forepart and waist; some delamination. Nail holes remain scattered in the forepart and set in line round the margin; there are circular depressions on the underside (flesh) where the nail heads resting on the original sole, now missing, have transmitted their pressure. The toe indents are a typical Roman feature. There is some undulation on the uppermost surface due either to the pressure of the foot in wear or to burial. Incisions on upper side may read VIII. Length: 205mm; width (across tread): 80mm (illustrated to show the grain surface of the up side).

Trench A, Layer 18b c. AD 145-160

494. (1590/114) Sole and insole of nailed shoe. Right foot. Both complete except for a few missing nails. *Sole:* the pattern is less curved than usual, the outside and inside edges being almost parallel. There were originally 37 nails: 25 round the margin, 6 in the tread, 1 in the waist and 5 in the seat; there are fewer along the inside waist than along the outside since the shoe sole is not subjected to so much wear here. About six nails are missing. On the flesh side the curved nail points are very prominent; their curvature indicates that they were turned by striking an iron last during shoemaking, see Thornton (1975). There are also a few smaller holes particularly at the toe and between the marginal nails and the actual edge suggesting that some repairs may have been carried out here to reunite upper and sole. *Insole:* roughly similar in shape to the sole but a rather more curved pattern and *c.* 10mm smaller all round. The nail holes correspond to those in the sole. The grain surface (uppermost) has developed many

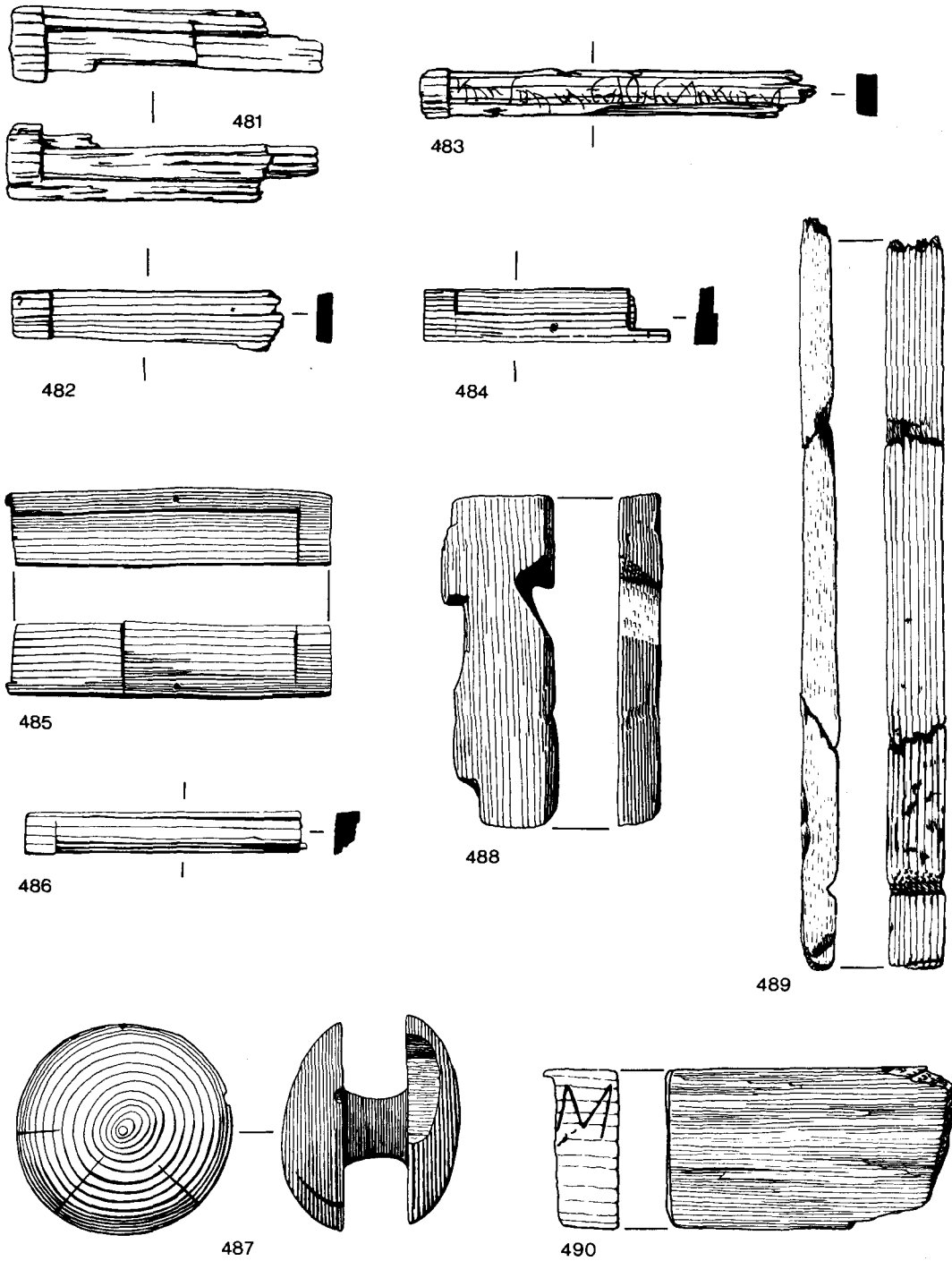


Fig. 20. Angel Court: Roman wooden objects Nos. 481 — 490 (½)

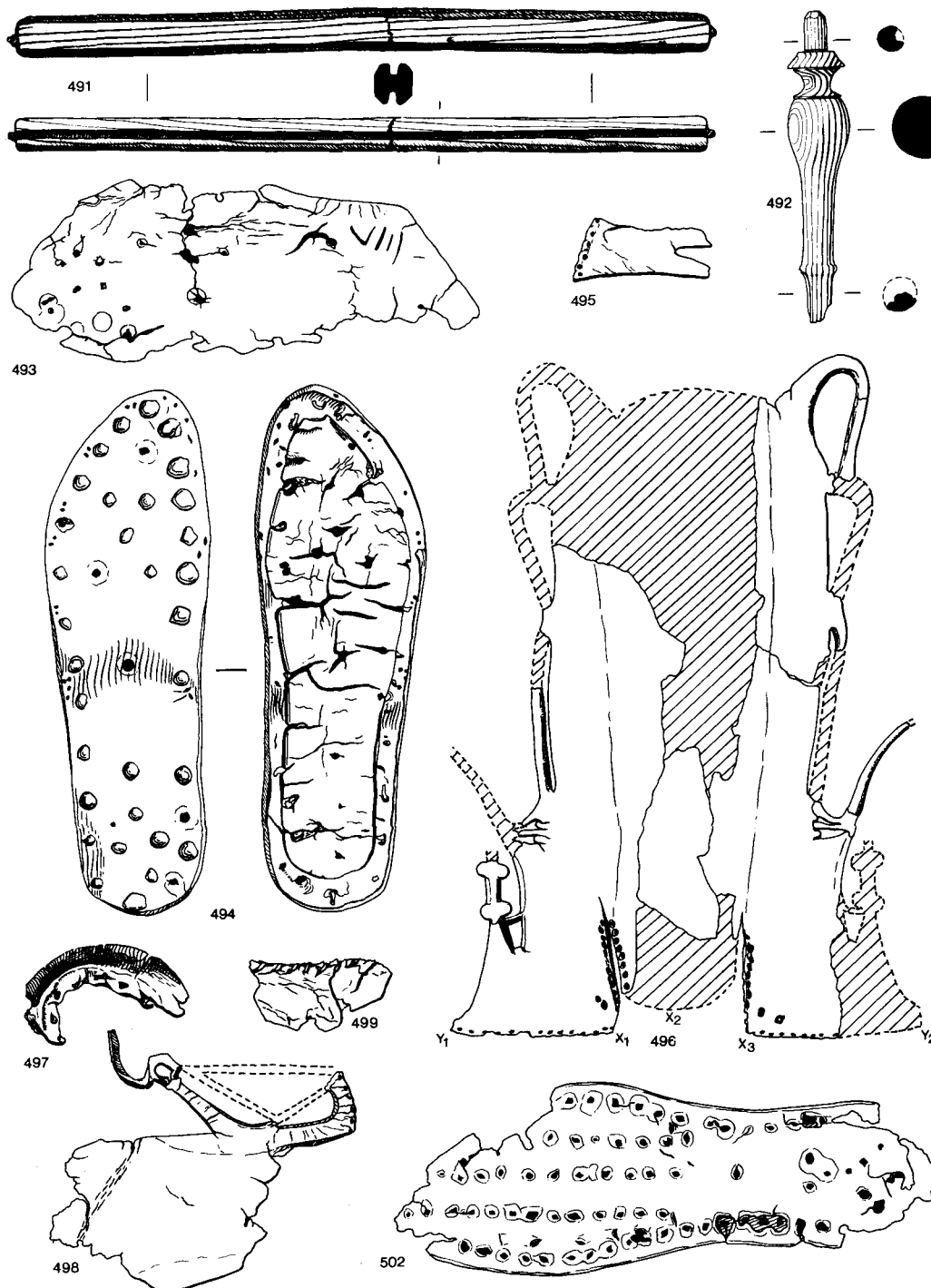


Fig. 21. Angel Court: Roman wooden objects Nos. 491 — 492 ($\frac{1}{3}$); Roman leather shoes Nos. 493 — 502 ($\frac{1}{3}$)

- cracks (illustrated to show grain side and also flesh side with insole superimposed).
495. (1590/124b) Fragment of upper tie-strap (?). Bifurcated at one end but with the two legs now torn and incomplete. The opposite end has a row of fine stitching holes, 5.0mm separation, where it was joined to the rest of the upper. One of the sides has a torn edge and there is a slight indication of stitch holes here so possibly the section was originally wider than it is now (grain side illustrated).
496. (1590/160) Fragments of a moccasin-type shoe. Formed from a single piece of leather which passed upwards either side of the foot from underneath, see Thornton (1970). The adjoining edges at the toe-end and the back were stitched together (the holes still remain at the back, stitch length *c.* 4.5mm) and a lace held the two sides together over the forepart and instep of the foot, see Thornton (1975). The sole part of the present shoe has now disappeared and so has most of the tracery pattern of straps which originally formed the top of each side of the upper; several detailed pieces of tracery remain. The back construction is still used in modern moccasins; see Thornton (1970). (Illustrated from the underside as is opened out, with conjectural areas shaded. X₁, X₂ and X₃ would have been stitched together. Y₁ would have been stitched to Y₂.)
- Trench A, Layer 18a c. AD 145-160*
497. (1589/122) Portion of upper backpart (?). Showing the lasting margin and some of the quarters (?). The impression inside of the edge of the insole is very marked as are the scallops caused by stitching or bracing during lasting. The stitch holes have a separation of *c.* 1.1mm suggesting bracing rather than permanent stitching. As this specimen is only *c.* 20mm high (above the angle), tapers in thickness to a cut top edge and has the grain inwards it may possibly be part of a *heel stiffener* rather than the actual upper itself, see Charlesworth and Thornton (1973). Height *c.* 20mm, width of lasting margin *c.* 15mm (illustrated to show grain surface of the up-side).
498. (1589/180) Portion of sole and upper. Probably from a moccasin (see No. 5). Has the remains of the top-edge tracery with stitch holes, 5mm apart possibly where the back was stitched to an adjoining edge (illustrated as if opened out with the grain surface of the sole and outside showing).
- Trench A, Layer 20 c. AD 120-280*
499. (1592/99) Sixteen fragments, possibly from a moccasin as some have tracery stamps (some may be laminae of the same section). One piece with large holes and scallops could be part of a lasting margin which was braced across the insole. Another has "hemstitched" leather thonging along one edge (illustrated) although it is not obvious how this piece was placed.
500. (1592/101) Four fragments. One with many holes is probably part of a bottom section (insole or middle).
501. (1592/102) Fragments of sole (or other bottom section) of a nailed shoe; two nails remain and there are many empty holes. The nails show the typical curvature caused by striking an iron last (see No. 494).
502. (1592/105a) Sole of nailed shoe for a right foot. Outside of forepart edge and back of seat now worn away. The nail holes are arranged in: (i) a continuous line round the edge of the sole; (ii) in three lines down the forepart (one straight and two curved); (iv) one in the waist; (v) a scatter in the seat. As some parts are now missing the exact number of nails can no longer be determined but as some 75 still remain, there may have been as many as 100 originally. The positions of the nails may be seen by their impressions although none remain *in situ*. Holes from large tunnel stitches may be seen on the flesh side (inside) of the sole (the flesh side is illustrated).
- (Fig. 22, Nos. 503-511).
503. (1592/105b) Heel seat part of a nailed shoe bottom. Consists of fragment of sole, possibly a middle and an insole. Eleven large nails remain *in situ* and there are several empty holes; the curled points rest on the insole surface. There are insufficient signs of wear to indicate whether this piece came from a right shoe or a left one (illustrated).
504. (1592/106) Moccasin-type shoe. In fragments, with remains of "tracery" tie loops each side and typical back construction with stitch holes, 6mm separation and marked edge scalloping. The forepart and the heel seat of the "sole" area have worn away in parts. (Illustration shows grain side, i.e., outside with sides of shoe flattened out. The free ends at the heel in fact join).
505. (1592/107) Fragments of nailed sole and filler. Left foot. Sole: many nail holes and a few nails *in situ*. The forepart and waist of the sole are now separated and the heel seat is missing. The nails, as usual, are in a row round the margin and there are three additional rows in the forepart and a scatter in the waist. Middle (or filler): this fitted centrally between sole and insole (or another section); its nail holes match those in the sole. (Illustrations show underside of sole and the upper side with the filler superimposed.)
506. (1592/110) Several very deteriorated fragments or laminae of a shoe, bottom and possibly an upper. Very large holes in two pieces are enlarged nail holes.
507. (1592/113) Shoe bottom and part of upper for right foot. Very heavily nailed. In poor condition with heel seat end missing. There are at least three layers — insole, middle and sole — with only the forepart of the insole remaining. In addition to the marginal row of nails there are four additional rows down the forepart, three in the waist and (presumably) there was a scatter at the heel seat. The total number of nails, most of which remain, must have been about 100 (as at Ickham, see Thornton, forthcoming).
- Upper: a fragment, *c.* 80mm x 60mm remains attached along the inside edge of the bottom with its lasting margin still sandwiched between sole and insole; the other edges are torn but traces of stitch holes remain at the rear edge, stitch length 4 — 5mm. (Illustrated as if opened out to show underside of sole and outside of upper.)
508. (1592/117) Sole and insole of a child's shoe. Nailed construction. Possibly right foot. On the insole an incised inscription in Greek reads: EKTOPI i.e. for Hector (identification by Mark Hassall). The nail holes are widely spaced round the margin, *c.* 25mm — 30mm apart and there are only two extra ones — one in the forepart and one in the seat situated at the outside front. 42mm x 60mm *c.* Size 5 (children's) in modern sizes (illustrated).
509. (1592/123) Small fragments of a shoe bottom with enlarged nail holes.
510. (1592/126) Sole of a child's sandal, now delaminated into two parts. Very broad toe with a slot hole for the

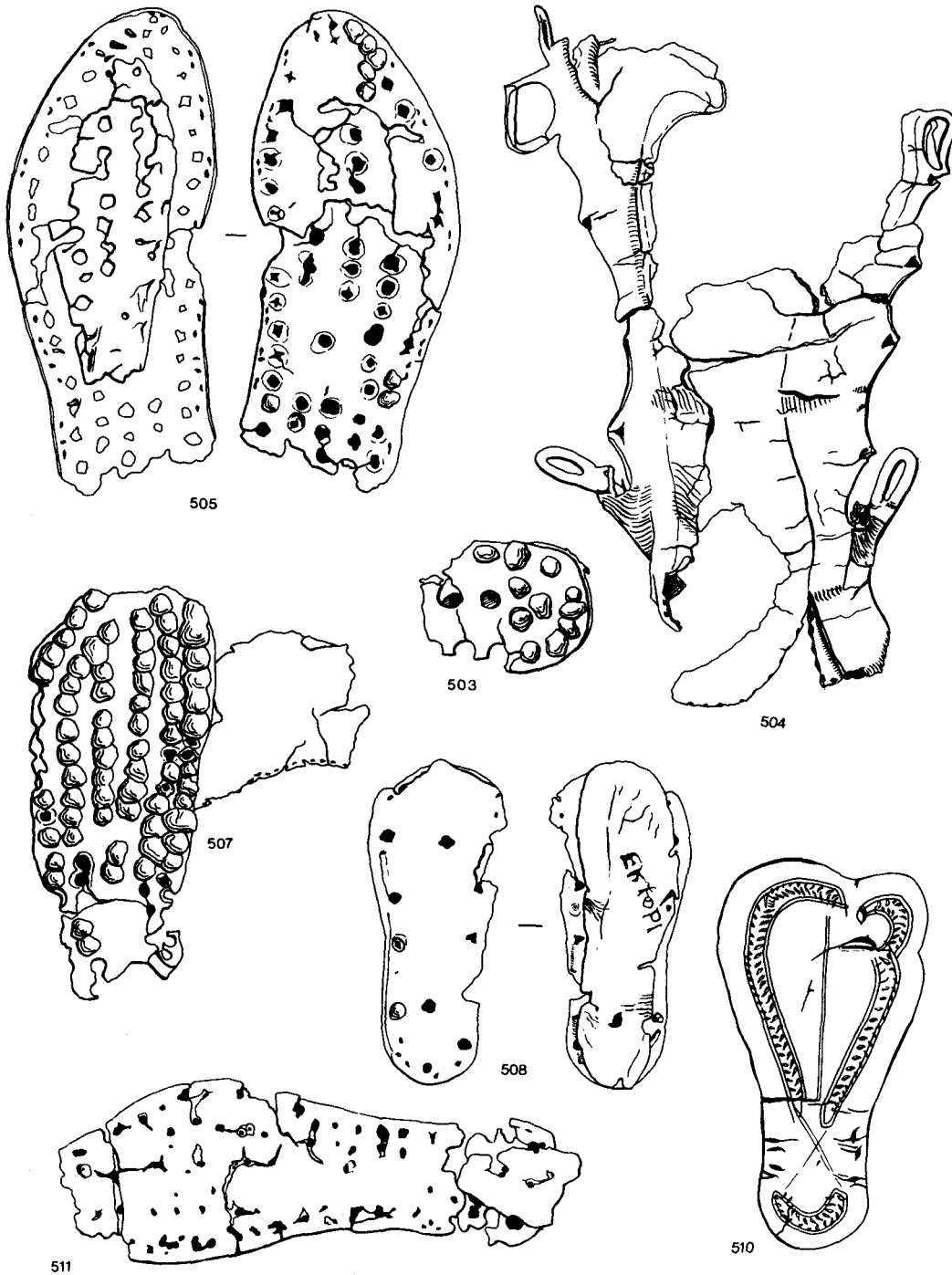


Fig. 22. Angel Court: Roman leather shoes Nos. 505 — 511 (1/3)

toe thong and a decorative leaf pattern running parallel to the edge round the forepart. Near the heel seat there are two pairs of holes either side where an ankle strap would have been attached. Since there are no nail holes or thong holes to indicate that several layers had been joined together to make the shoe bottom it must be assumed that the shoe was a single soled one intended for indoor use. The leaf decoration has been made by cutting and lifting the grain side of the leather. The sandal, which is similar to Egyptian types, probably belonged to the child of a wealthy family. An adult one of the same shape is in the Guildhall collection (see Thornton, 1975, Fig. 1, p.3). (Illustration shows upper side.)

511. (1592/171) Sole from a nailed shoe, left foot; seat portion detached. Apart from the usual marginal row of nail holes there appear to be three additional rows down the forepart. There are several detached nails but none *in situ*. (Illustration shows grain side, i.e., underside.)

(Fig. 23, Nos. 512-519).

512. (1592/179) Insole and other fragments of a nailed shoe, right foot. The insole is complete and its pointed toe and general slimness suggests it belonged to a woman's shoe. In addition to the usual marginal row of nail holes (finer than in a man's shoe), some of which still have the curled nail points in them even though the rest of the nail has gone, there is a central line of thonging from toe to seat which appears on the grain surface (uppermost) at three points. This was used to hold together the bottom assembly of insole and other intermediate layers while the lasting of the upper was carried out. One smaller middle section remains but is now much deteriorated. Another section is the now flattened stiffener which originally went round the back of the shoe to give support (see No. 497 above and Charlesworth and Thornton, 1973). It is crescent shaped and still has its lasting margin with a well-defined angle between the upper part and the margin itself. Three holes for the bracing thread and scallops formed by the thread remain in some places with very variable separation up to 18mm. A second row suggests that a repair was carried out here. There is also one sole attaching nail *in situ* at the extreme back. The stiffener would have been fitted in the shoe with the grain side inwards (standard practice). Other fragments are probably part of the upper and middle sections. (Insole drawn grain-side up. Stiffener drawn to show grain side and with a section to show the angle.)

513. (1592/184) Shoe bottom unit, nailed, right foot. Comprises: insole, middle and sole. Worn away at outside forepart and outside corner of heel seat. The nails are set in the usual marginal row, originally *c.* 34 in all; a group in the forepart originally *c.* 9; one in the waist and originally *c.* 6 at the seat. Twenty nails still remain *in situ* with well-defined curled points resting on the insole. The narrow pointed shape of the unit suggests that it is from a woman's shoe. Length: 215mm, corresponding to size 13 (children's) in modern sizes. (Illustrated to show underside.)

Area B, Unstratified and Poorly Stratified Finds

514. (1598/103) Insole, right foot, with toe indents (see No. 1) and marginal holes of lenticular shape, set in pairs. Round the forepart there is a separation of *c.* 8.5mm between centres of the holes of each pair and *c.* 23mm between centres of pairs; round the waist and seat the corresponding distances increase to *c.*

12mm and 133mm respectively. There is also a central lenticular hole near the toe, probably where a toe thong was inserted; also at least one extra hole at the seat. Part of the toe end is worn away. The shape and disposition of the marginal holes suggest that the insole was thonged to the sole and not nailed. This plus the general shape and size of the insole indicates a woman's indoor shoe. Corresponds to size 13 (children's) in modern sizes. (Illustration shows grain side.) Unstratified.

515. (1598/104) Shoe bottom unit, left foot. Comprises: insole (almost complete); very fragmentary sole; traces of an intermediate layer which may be either sole lamina produced by deterioration of the centre of the leather, or a separate middle. Eight headed nails remain *in situ* and there are others which have now lost their heads; there are also several points resting on the insole surface. Apart from the customary marginal row of nails there were two extra lines down the forepart and a curved line in the region of the outside joint (little toe) where extra wear normally occurs. At the seat there were also extra nails, some set in a roughly circular pattern. Overall deterioration of the sole prevents a precise analysis of the nailing pattern but there appear to have been some 80 nails altogether.

One curious feature is a single impression of a nail *head* on the insole surface near the centre of the tread. Perhaps a nail was driven in here to effect a repair but if so, it must have been very uncomfortable! There is also a fragment of upper showing the angle of the lasting margin and remains of nail holes where it was sandwiched between sole and insole. 155mm x 35mm. Unstratified. (Illustration shows both sides of the shoe bottom.)

516. (1601/1) Waist and heel seat of a right (?) foot nailed sole and shank. Heavily nailed with *c.* 35 remaining although some heads are missing. Part of the shank (or filler) remains attached on the flesh side. The extra wear on the right side (nail heads underneath) and the missing heads on the right corner of the seat suggest that the fragment came from a right foot shoe. From Trench B, Context 3 (illustrated).
517. (1601/128) Three fragments: (a) Possibly part of a child's shoe insole outside forepart, with marginal holes. 140mm x 47mm. (b) Possibly part of (a) or an associated section; two nail points remain in the grain surface. (c) Small fragment with a large rusty concretion; the fragment itself now resembles a piece of strap but this may be accidental; some small holes down one edge may be stitch holes. From Trench B, Context 3.
518. (1605/53) Some twenty fragments of a nailed shoe bottom unit, very deteriorated and delaminated.
 (a) The largest section is the waist and seat part of an *insole* with the *shank* (or filler) still thonged in position. Nail holes show where the sole attaching nails penetrated. The surface is depressed where the foot rested but this may be due to grain shrinkage (illustrated).
 (b) Two corresponding fragments of *insole* and *sole*. No nails now remain but there are several holes and the impression of at least one head remains on the worn surface of the sole. The insole surface is still comparatively smooth. Length: *c.* 95mm, width: 65mm.
 (c) Fragment of a bottom unit with three nails *in situ* still holding together parts of sole and insole. The

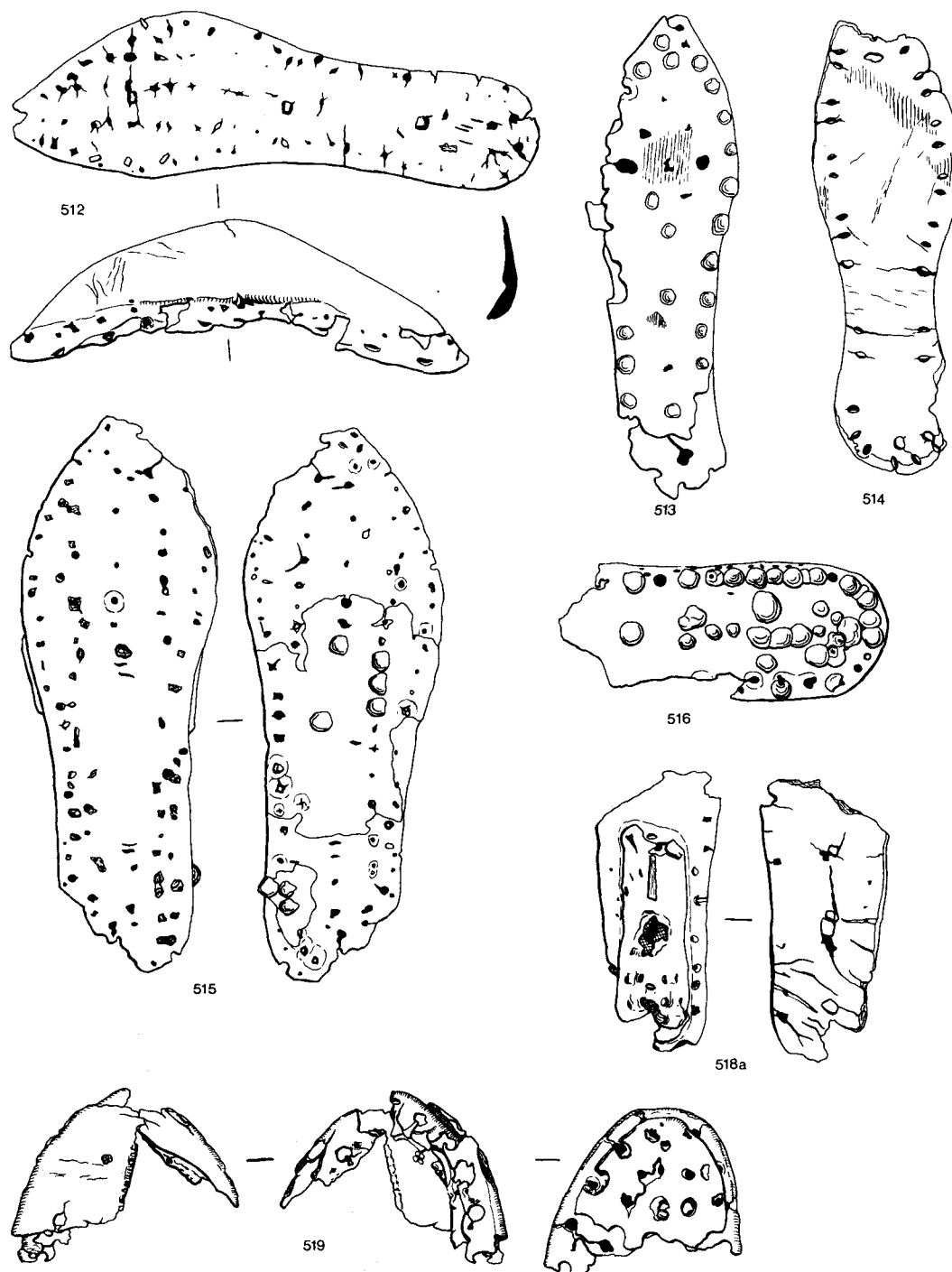


Fig. 23. Angel Court: Roman leather shoes Nos. 512 — 519 (1/3)

curved points are very prominent.

(d) The other small fragments all show nail holes and some also have thong holes.

From Trench B, Context 7.

519. (1605/54) Toe-end of upper, sole and insole of a nailed shoe.

Upper. On top the fragment has the remains of a fine butted seam where the adjoining edges of a V-cut were stitched together, stitch length: 3.5mm; one edge is now missing. Underneath there is a prominent lasting margin *c.* 13mm wide showing (a) the holes through which the bracing thong passed and (b) the larger holes made by the sole attaching nails. Some pleats still remain. There is a second layer of leather underneath the margin which may be either a lamina produced by deterioration of the centre of the leather during burial, or a separate lining. There is a curious group of what appear to be four small nails (like small modern tacks) on the flesh side of this toe portion with corrosion on the opposite side (outside); their purpose is obscure (illustrated).

Sole and insole. The pieces fit roughly within the upper lasting margin, the nail holes corresponding. A piece of thong remains *in situ* on the insole. (Illustration shows insole superimposed on the sole.) From Trench B, Context 7.

520. (1605/120) Portion of shoe bottom unit, several layers heavily nailed, probably the heel seat. Also a fragment of upper with no identifiable features. From Trench B, Context 7.

(Fig. 24, Nos. 521-522).

521. (1605/121) Back part of a nailed shoe, comprising heel stiffener insole, shank (?), sole and fragments or laminae; all heavily nailed together. There are a few nails missing from the right corner of the seat (as looked at from above) also the sole is worn away here exposing the lasting margin of the heel stiffener; this suggests that this specimen may be part of a right foot shoe but this is by no means certain. There is the usual row of marginal nails but the pattern of those in the waist and seat resemble a tennis racket. The stiffener has the usual long crescent shape and is *c.* 16mm high at the back. On the right side it has been pressed outwards by the foot so that it almost forms an extension in width of the sole. Some holes in the wing here may indicate that the upper was re-fastened to it after the lower edge of the upper itself had worn away. From Trench B, Context 7 (illustrated to show underside).

522. (1605/129) Back part of a shoe bottom unit with a repair addition comprising insole, sole and heel piece;

WALL PAINTING

BY JOAN LIVERSIDGE

(Figs. 25-7).

This collection of material poses problems because it has been seriously affected by fire. It consists of demolition material deposited between *c.* AD 120 and 160, and most of it came from Trench A, Layer 16 (ER 1587) which was probably dumped to raise the ground level. A few pieces from Trench A, Layer 26 (ER 1595) which is stratigraphically later than Layer 16 seem to come from the same building. Nothing noteworthy was found with Trench A, Layer 18b (ER 1590).

Pieces of the familiar imitation marbling stippled in red and black appear from both Layers 16 and 26 on ground colours now much discoloured by burning but originally probably grey or pink. They may have formed part of a dado design with rectangles of different colours used alternatively.

The best preserved fragment comes from Layer 16 and escaped the flames (No. 529). It appears to be part of a red panelled design with a border of white flowers alternating with a green and white motif set

nailed. There is the usual marginal row of nail holes with head impressions and some in the centre, especially at the seat. Four headed nails remain. The outside corner of the insole/sole unit is worn away and the additional seat piece was probably added to cover this; the addition itself has now worn away at the outside corner. One of the nails with a large head (now about 9mm diameter) was probably one of those used to attach the repair. Two other nails with only traces of their heads left were probably covered by the repair piece. From Trench B, Context 7. (Illustration shows both sides of sole and additional seat piece.)

523. (1609/11) Two fragments, possibly of an insole, very deteriorated. Many holes but these are fairly small suggesting that the sections belong to an inner part of the shoe bottom rather than to the sole itself where the holes tend to be larger due to corrosion of the nail heads. The smaller fragment from the toe has one nail point *in situ*. Presumably the two fragments belong to each other. Length (two sections together): *c.* 182mm; maximum width: 74mm. From Trench B, Context 11.

524. (1610/10) Fragment of a sole, many nail holes and one nail with a very large corroded head. The present holes are set in four roughly parallel rows but it is not clear whether these were the usual marginal rows either side with two inside rows or whether there were originally five rows — two marginal and three inside ones — as one edge appears to be a torn row. 105mm x 65mm. From Trench B, Context 12.

THE OTHER LEATHER FINDS

FROM NOTES BY JOHN WATERER

(Fig. 24, Nos. 525-528).

525. (1592/125) Perhaps goatskin. Probably part of a garment such as a jerkin, judging largely from the chevron-cut (lower) edge. The one straight edge appears to have been part of a seam. From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
526. (1592/179/2) Fragment of leather, perhaps goatskin, with incised ornamentation. Date and provenance as for No. 525 (illustrated).
527. (1592/112) Leather, perhaps calf. Possibly part of the binding of an army tent flap (see Richmond, 1950, and Waateringe, 1967). Date and provenance as for No. 525 (illustrated).
528. (1607/12) Fragment of probable calf leather bearing stitch marks. From Area B, Context 9 (illustrated grain-side up).

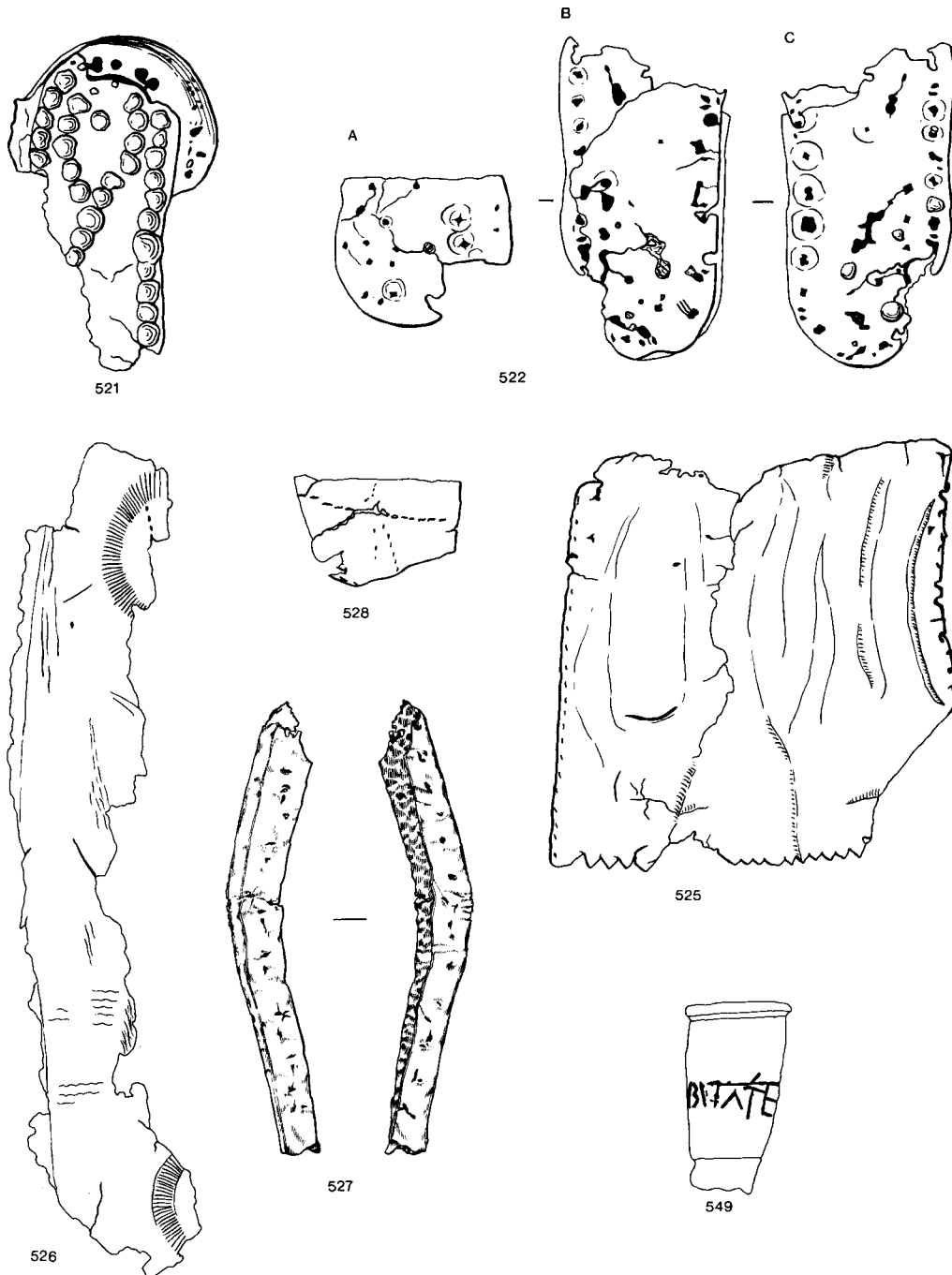


Fig. 24. Angel Court: Roman leather Nos. 521 — 528 ($\frac{1}{3}$); Roman inscription No. 549 ($\frac{1}{2}$)

between fine white lines. Below there may have been a green band at least 90mm wide, outlined in white (No. 530). Material from Layer 26 suggests that a black band belongs below the green (No. 531) although the white outline between green and black is missing from this piece. It may have been rubbed off as a result of damp or burning as the rest of the fragment is very discoloured. Below these bands there may have been the dado. The rest of the red material from Layer 16 is very scorched but seems likely to belong to the same panels and it does produce evidence for foliate motifs comparable to some found elsewhere. No. 532, for example, seems to be part of a rod we have to imagine as suspended from the top of the panel. This piece shows the rod at a point where one end of a garland is tied to it. No. 533 may be a pendant motif in black, yellow and/or white, suspended from the rod elsewhere. A number of other pieces hint at leaf motifs and streamers in paint which is either black or has turned that colour from burning and a yellow flower (No. 534) may also come from this area. Another less scorched red fragment seems to show a ghost design where the print of the detail has been destroyed (No. 535).

Presuming that the red material comes from the same series of panels, it seems doubtful if the border design of No. 529 goes all round the panel, as this piece is the only evidence for it. Some of the red ground occurs next to black without the intervening green band, and it would not be surprising if the red panels were divided by black pilaster strips. No. 538 is the only unburnt example of a red motif (flower or berry) with green and white leaves and stalks on a black ground, but leaves and stalks in white and possibly red appear on other pieces (Nos. 536, 537, 539, 540). Traces of a small yellow flower design are also dimly visible on a black ground (No. 541). Layer 26 also produced a very scorched fragment (No. 542) of red with traces of a blackened design. Two white lines *c.* 8mm wide meet at right angles and separate the red from black. Obviously this is most probably the corner of a panel.

Other motifs on fragments of plaster from Layer 16 may come from different walls. One slightly burnt piece, No. 543, is part of a candelabrum design outlined in black with black lights, and filled in in pink. No. 544 probably comes from the candelabrum stem decorated with black leaves, and white and possibly red or yellow flowers. The design is painted on a light coloured ground, perhaps cream as white details show up on it. Further fragments probably painted on the same light ground include No. 545 in dark red and blue outlined in black. This may come from a scroll design. There is also blue with black leaves (?), and a border with a red scalloped line between black blobs (No. 546). Other pieces have red designs on white (No. 547), red diagonals bordered with black, and one piece, No. 548, has a white design on yellow. Material not illustrated includes multicoloured stripes which may have framed panel or dado designs. On a red ground these include yellow 18mm wide overpainted with two white lines and with a black line outlining one edge; black, 30mm wide probably with white lines, dividing the red from white or yellow; and green separated from red by a black line 9mm wide. One piece now pale grey but probably originally white, bears a lightly incised design of two groups of curves crossing each other, probably originally drawn with a compass. Just possibly this is an experiment by someone trying to draw a guilloche design; it could even be vault or ceiling plaster as the back is convex in section.

The most that can be said for this collection of material is that it may all have come from the same site but not necessarily from the same room. The rod and garland design on the red ground occurs in other Romano-British cities, notably Leicester (see Davey, 1972, 262-3, Figs. 8, 9), Verulamium and Winchester. The probable presence of black pilaster strips between the panels can be paralleled at Verulamium (see Liversidge, 1971, p. 88, Pl. 24a, 27-8). The motif which separates the flowers painted on the red panel, No. 529, is more unusual. Other items of particular interest include the candelabrum motif, Nos. 539 and 540, and the scroll design, No. 545. The black blob motif, No. 546, bears some resemblance to unpublished material from the North Warnborough (Hants.) and Kintbury (Berks.) villas where small pieces occur using blobs of different colours combined with curvilinear designs.

GRAFFITO AND INSCRIPTIONS

BY MARK HASSALL

(Fig. 24, No. 549).

549. (1598/195) Graffito on sherd of Samian (Drag 18, Flavian, South Gaulish). Cut on outside, below rim after firing. Reads DU]BITAT(Λ)E], presumably the

owner's name in the genitive, i.e., 'of Dubitata'. See Brailsford (1964, 67 No. 8). From Area B, unstratified (illustrated).

For other inscriptions see Nos. 490 and 508.

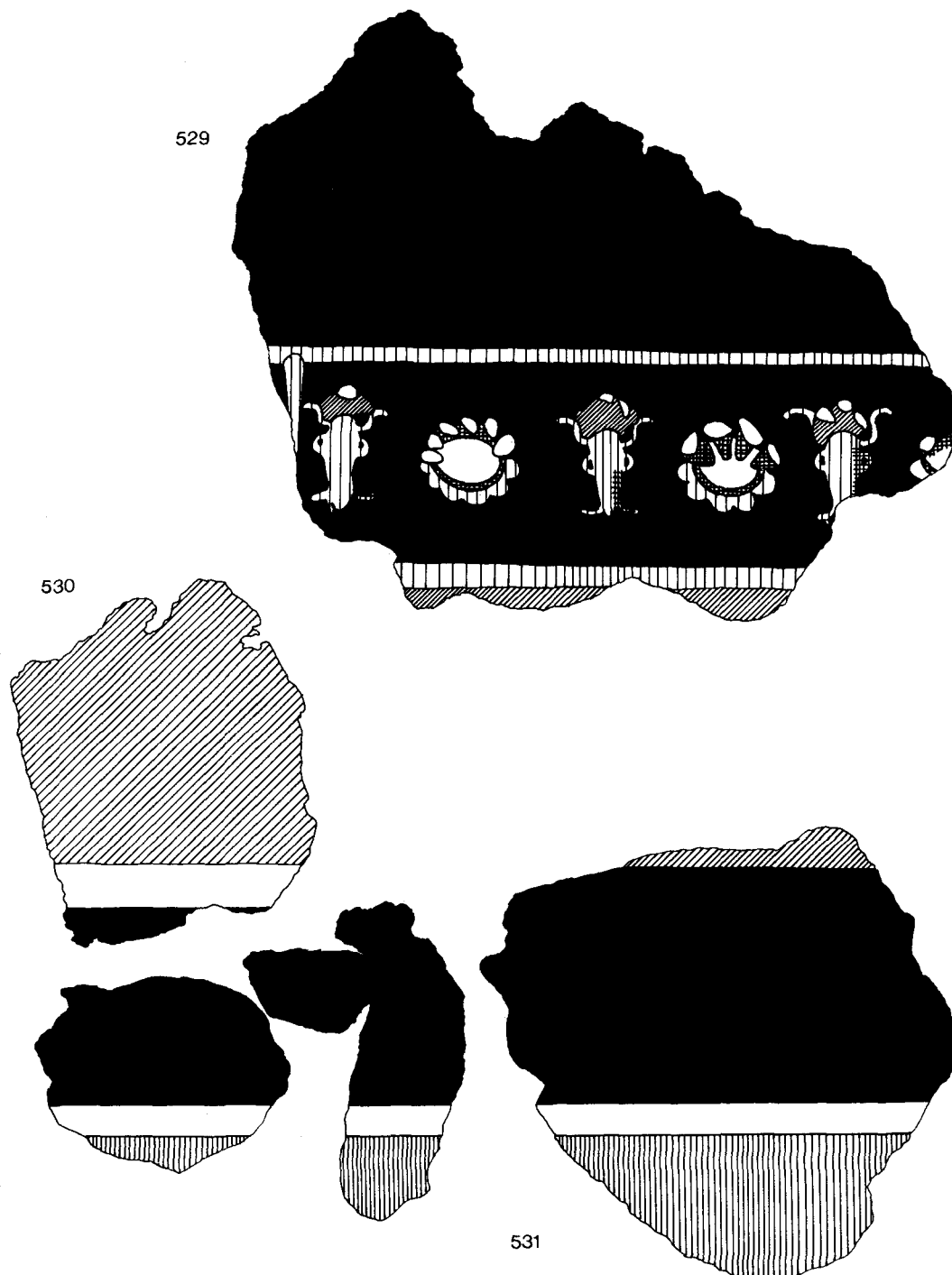


Fig. 25. Angel Court: Roman wall-painting Nos. 529 — 531 (½)

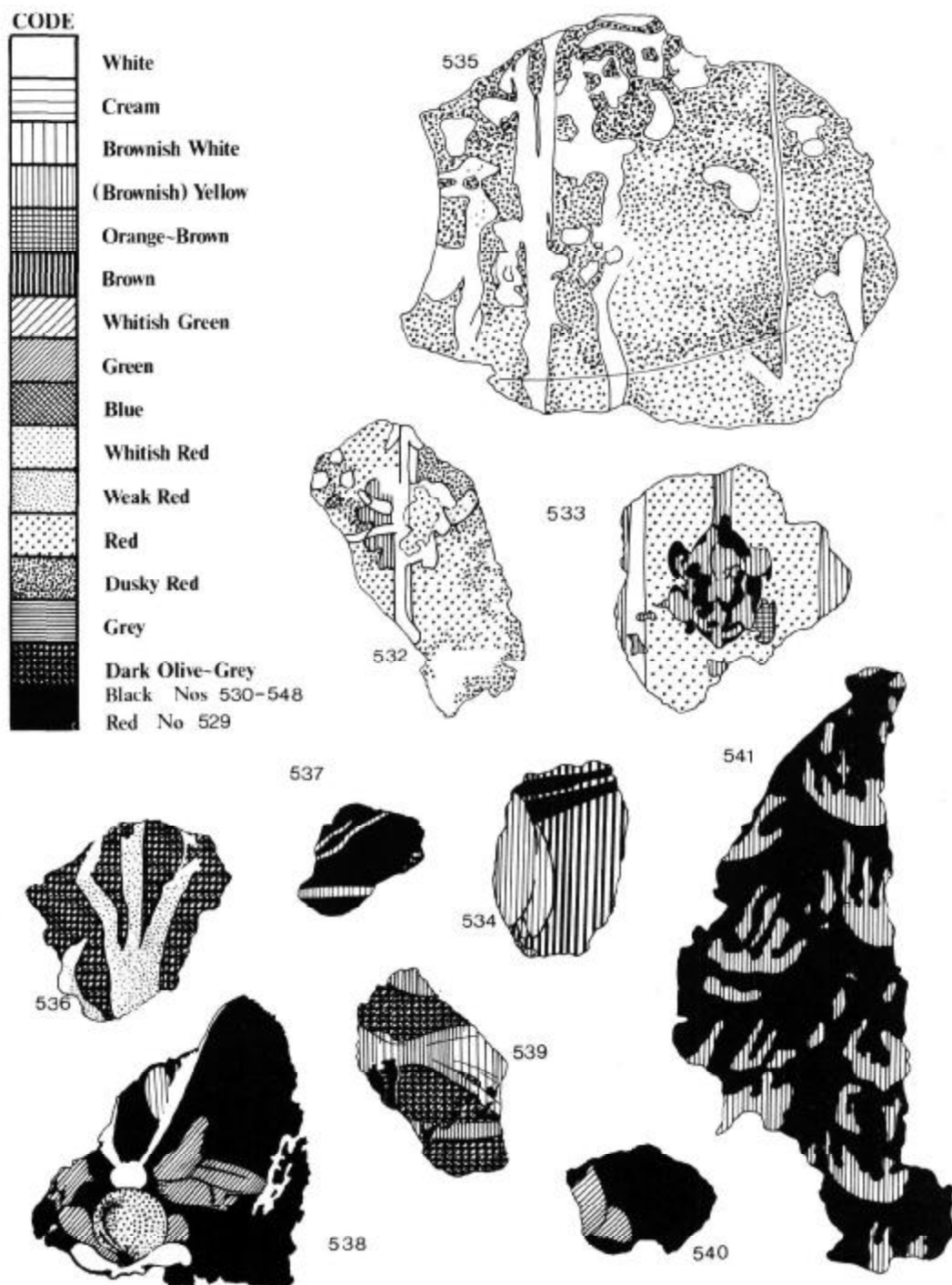


Fig. 26. Angel Court: Roman wall-painting Nos. 532 — 541 (1/2)

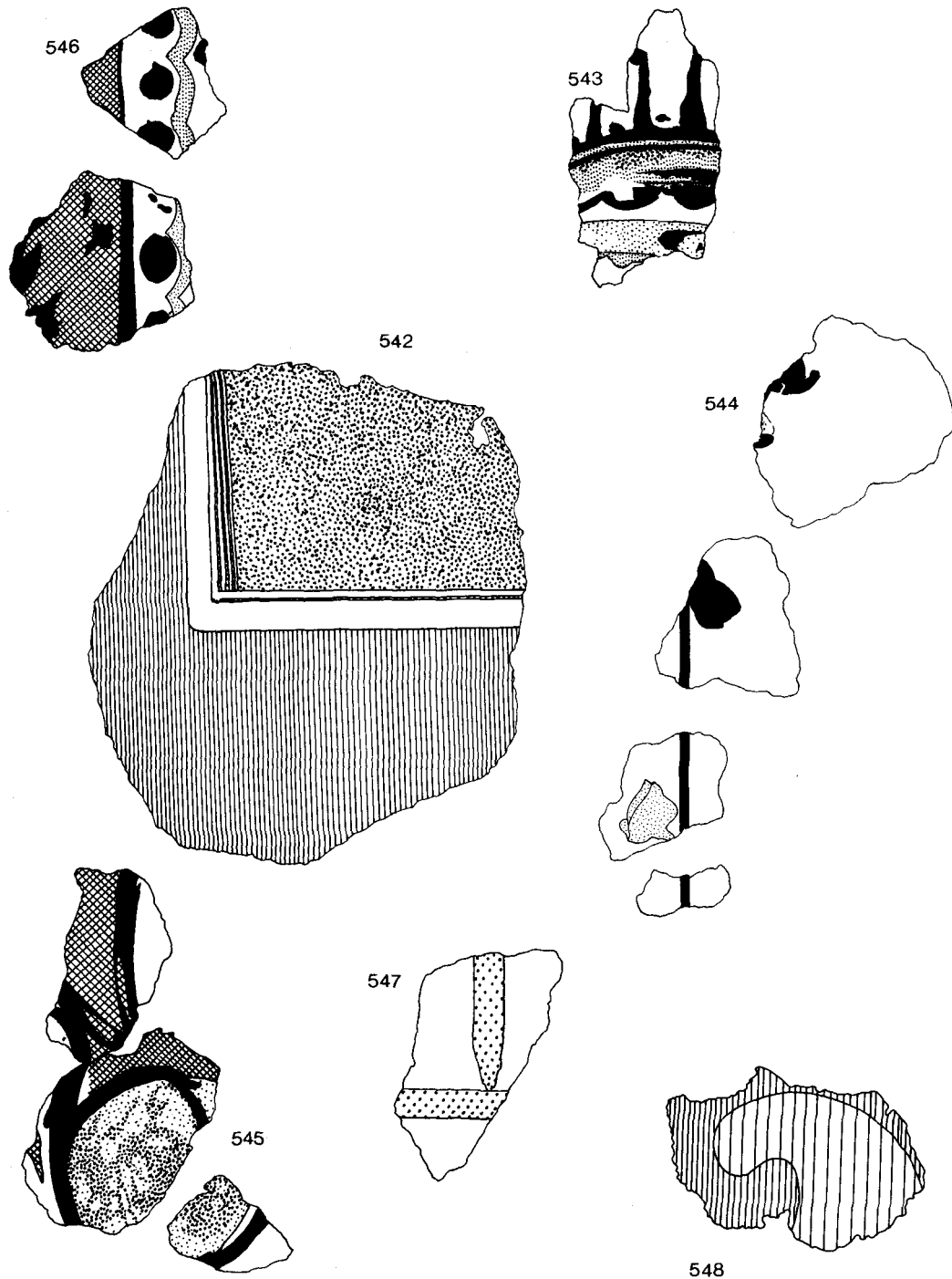


Fig. 27. Angel Court: Roman wall-painting Nos. 542 — 548 (½)

SAXON

POTTERY

(Fig. 28, No. 550).

One possible sherd of Saxon pottery came from Trench A, Layer 7 (ER 1581) which underlies the lowest medieval layers and seals Layer 9 which is clearly late Roman. The other 187 sherds are late Roman with the exception of two, probably intrusive, medieval sherds, but appear to be more abraded than those from Layer 9. Even if this sherd is Saxon it is unlikely to represent occupation in the immediate area.

550. Bowl. Rim sherd of a hand-made vessel with wipe marks on the outside. A fairly hard partially reduced fabric with a black core, yellowish-red margins and irregular fractures, being tempered with abundant crushed shell (probably fossil) <3mm. The inside

surface is abraded. This is possibly a St. Neots type ware, even though it is not particularly soapy to the touch. Bowls of this size are known from late Saxon times. No close parallels could be found in the Museum of London collections.

MEDIEVAL

POTTERY

BY CLIVE ORTON

1. The methods of examination and reporting have already been described in the section on the Roman coarse pottery.
2. The main groups of pottery are from Trench A, Layers 5-12 and 2; smaller amounts were also found in Trench A, Layers 6, 4 and 3. The small amount from other trenches is not described as it is unstratified and none is of special intrinsic interest.
3. The fabrics appear to be more variable than the Roman (i.e., there are less sherds per distinct fabric), perhaps reflecting the smaller overall amount of pottery. The main recognised ranges of fabrics account for some 70% of the pottery, and are described below: the rest are discussed under "other fabrics". Future work on larger groups may well lead to the recognition of groupings within this material. The main ranges are:

South Herts Grey Ware

These fabrics are hard with an irregular fracture, but often rather friable. Core colour is grey, but margins can be dark grey or (less often) brown. The most common inclusions are transparent and translucent (colourless and/or pale brown to yellow) quartz; others are white quartz, black iron ore, mica and limestone (or shell) — not necessarily all in the same sherd (see below). Surfaces generally have a harsh feel, and show turning marks. The only decorative traits are various forms of grooving, and thumbing on the handles (No. 554). It is difficult to identify forms: hollow shapes — jugs or cooking pots — seem to be represented. The majority of sherds have either (i) common coarse colourless quartz, some very coarse grains, moderate white quartz of similar size, sparse very coarse shell, and very fine mica and black iron ore (No. 553), or (ii) common coarse white quartz, moderate medium colourless quartz, sparse very fine black iron ore and white mica (No. 554). Other variants include one with moderate limestone, more brownish quartz (No. 568), and moderate limestone and black iron ore.

Hard grey unglazed medieval pottery, superficially similar to this group, is known to have been produced in two areas close to London: south Hertfordshire (Renn, 1964) and east Surrey (Limpsfield) (Prendergast, 1975). This pottery is more likely to come from the former: the presence of white quartz grains seems to indicate a source north of the Thames. The texture of pottery from the More (Biddle, 1959) is similar, but the colour is lighter and often browner. Possible sources are the kilns at Wild Hill, Hatfield and Potter End (Renn, 1964) but positive attributions will not be possible until more is known of the variations in the products of the kilns in this area.

Coarse Sandy Glazed fabrics

These are hard fabrics with an irregular fracture, often rather friable. Core colour is grey, with red or brown margins and surfaces. Main inclusions are translucent quartz (colourless, yellowish or brownish), up to coarse size with sparse larger grains: other inclusions are clear or white quartz, flint, mica, grog, black iron ore, shell, limestone (all moderate or less: not all present in the same sherd). The texture between inclusions is finely irregular, suggesting the presence of inclusions below 0.1mm in size. Surfaces generally have a harsh feel, and show turning marks. The (external) glaze is pitted, generally thin and patchy, but with locally glossy smooth areas.

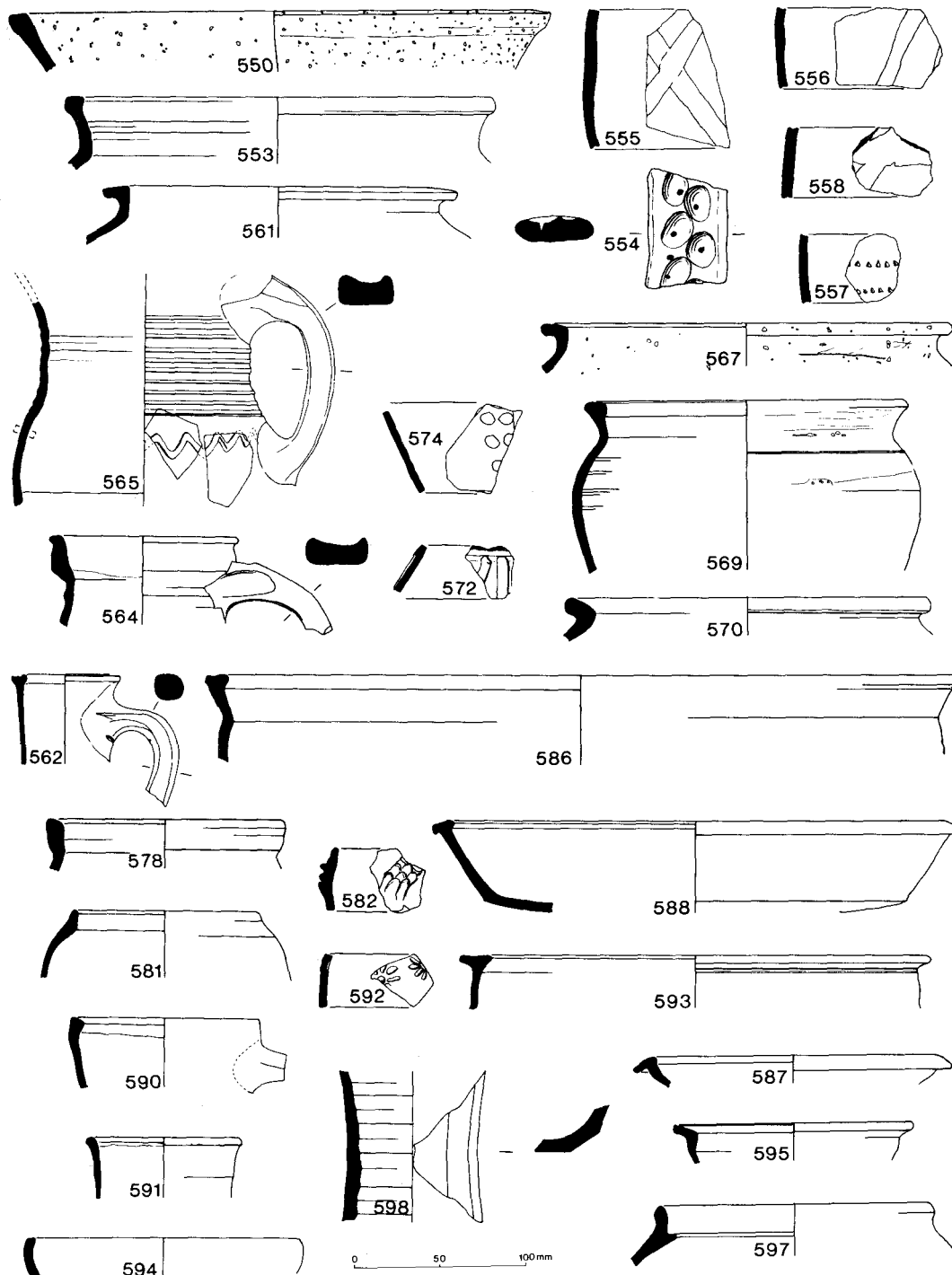


Fig. 28. Angel Court: Saxon (?) and medieval pottery Nos. 550 — 598 (1/4)

Forms represented appear to be jugs (Nos. 555-7, 563-4, 566). The usual form of decoration is white slip lattice (e.g. Nos. 555-6). The sources of these fabrics are not known, but they seem likely to be very local.

West Kent fabrics

This range is distinguished visually by extensive areas of white slip on the exterior. Fabrics are fairly hard, with a slightly rough "sandy" feel. The fracture is generally smooth, but finely irregular at 20x. There are abundant very fine colourless quartz inclusions (some larger grains) with sparse very fine white mica and black iron ore, and sparse coarse red iron ore. A minority of sherds have coarse or coloured quartz, some with moderate iron ore or mica.

Colour values are in the range 4 to 6 and hue is most commonly 2.5 YR, sometimes 5 YR, possible variants being red or yellowish red (chroma 6 or more), possibly with dark grey core; red from centre to exterior surface, dark grey from centre to interior surface; light grey/grey with thin brown/light red margins.

The slip is generally white and continuous, thinning near bases and handles, and continuing over tops of rims. Glaze varies from clear (showing yellow over slip) with green (copper) mottling, to pale green with darker mottling: both smooth and pitted finishes are found. Vessels represented appear to be jugs (Nos. 578-82). The usual decoration is vertical graffito combing. No kiln sites for these fabrics are known — the term West Kent, although well established (see e.g. Thorn, 1975, 118) is rather conjectural.

Surrey fabrics

This general term covers a range of broadly similar fabrics, thought to derive from the iron-free clays of the Reading beds which lie across the north edge of the North Downs (Holling, 1971, 63). All are hard, with a rough feel, and quartz inclusions — varying proportions of white, grey, pale yellow or brown, or red translucent grains, with a small proportion of clear transparent grains. The predominant grain size varies from fine to medium, often with a "tail" of larger grains, up to very coarse size. Frequency varies from abundant to moderate: grains, especially the larger ones, tend to be angular. Other inclusions are sparse very fine black iron ore and occasional sparse very fine white mica.

Except when burnt, fabrics are light in colour (value 7 or 8) and are in hue range 5YR-10YR. Chroma varies within sherds: 3 or 4 (pink or very pale brown) to 0, 1 or 2 (white or light grey) being the usual pattern, although some sherds range up to 6 (reddish yellow). The core is generally of lower chroma ("greyer") than the margins, although in some sherds this is reversed. The fabric tends to break around grains: between them it is smooth. Turning marks are apparent on both surfaces.

The variants recognised here are:

(a) *Kingston type*: (i) abundant medium translucent quartz (with some coarser grains), sparse medium clear quartz, very fine black iron ore and white mica (Nos. 586-9). (ii) similar but fine quartz predominates (Nos. 590). (iii) similar to (ii) but translucent quartz is all white or grey; no mica (Nos. 591-5). These all appear similar to the products of the Eden Street Kiln in Kingston (Smith, 1969).

(b) *Cheam type* Similar to (ii) above, but there is less quartz (moderate frequency) and possibly more black iron ore. The occasional piece of flint is probably not diagnostic (No. 597). Similar sherds, from the "1923" Cheam kiln (Marshall, 1923) are in Kingston Museum.

(c) "other" types Other variants have solely red translucent quartz (No. 596); moderate fine colourless quartz, no mica, smooth fracture (No. 562); fine colourless quartz or brownish/grey quartz.

Three basic forms are represented: jugs, with areas of external glaze and spots and patches on either surface; "cooking pots", with spots and patches of glaze on exterior and upper interior, and area of glaze on lower interior; bowls and/or dishes similarly glazed. The jugs generally have flat bases, and the other forms sagging bases. Continuous glaze on interiors is generally glossy, smooth, green with darker mottling, sometimes with red grains in fabric showing brown through glaze; exterior areas of glaze are similar but lighter and thinner, and some are pitted. Olive-brown and yellow glazes occur infrequently.

Decoration is not common: one sherd has "raspberry" stamps on small bosses (No. 592).

Other fabrics

Fabrics represented by very few sherds (often only one) are listed below. No attempt has been made to trace their sources.

Fig. 29. (below) List of all numbered sherds, with Figure Nos. of illustrated sherds, Layer and ER Nos., fabric group, internal parallels

No.	Fig.	fabric group	internal parallel
Layer 5=12 (ER 1579, 1584)			
551	—	shelly	—
552	—	shelly	—
553	28	S. Herts Grey ware	—
554	28	S. Herts Grey ware	—
555	28	Coarse sandy, glazed	—
556	28	Coarse sandy, glazed	No. 555 (D)
557	28	Coarse sandy, glazed	—
558	28	misc. inclusions	No. 555 (D)
559	—	other sandy, glazed	—
560	—	other sandy, glazed	—
561	28	other sandy, unglazed	—
Layer 6 (ER 1580)			
562	28	other Surrey Ware	—
Layer 4 (ER 1578)			
563	—	Coarse sandy, glazed	No. 555 (D)
564	28	Coarse sandy, glazed	—
565	28	other sandy, glazed	—
Layer 3 (ER 1577)			
566	—	Coarse sandy, glazed	—
Layer 2 (ER 1576)			
567	28	shelly	—
568	—	S. Herts Grey Ware	—
569	28	other white slipped	—
570	28	other sandy unglazed	—
571	—	misc. inclusions	—
572	28	other sandy, glazed	—
573	—	other sandy, glazed	—
574	28	other sandy, glazed	—
575	—	other sandy, unglazed	—
576	—	other sandy, unglazed	—
577	—	other sandy, unglazed	—
578	28	West Kent	—
579	—	West Kent	—
580	—	West Kent	—
581	28	West Kent	—
582	28	West Kent	—
583	—	other white slipped	—
584	—	other white slipped	—
585	—	other white slipped	—
586	28	Surrey-Kingston	—
587	28	Surrey-Kingston	—
588	28	Surrey-Kingston	—
589	—	Surrey-Kingston	—
590	28	Surrey-Kingston	—
591	28	Surrey-Kingston	—
592	28	Surrey-Kingston	—
593	28	Surrey-Kingston	—
594	28	Surrey-Kingston	—
595	28	Surrey-Kingston	—
596	—	Surrey—other	—
597	28	Surrey—Cheam	—
598	28	Spanish tin-glaze	—
599	—	Saintonge	—
600	—	Stamford	—

Fabric	Layer							total
	9 (ER 1582)	7 (ER 1581)	5=12 (ER 1579 1584)	6 (ER 1580)	4 (ER 1578)	3 (ER 1577)	2 (ER 1576)	
misc. inclusions			3		1		1	5
shelly			8		2		1	11
S. Herts Grey Ware (other sandy unglazed)			17	1		1	5	24
Coarse sandy, glazed (other sandy, glazed)		2	16		4	1	15	16
West Kent	1		10		3		13	23
(other white-slipped)			1				34	27
Surrey-Kingston			1				7	35
Surrey-Cheam							69	8
Surrey — other				3			1	69
imports							9	1
							6	12
							6	6
	1	2	57	4	10	2	163	239

Residual Roman pottery is found in Layers 5=12, 4, 3 and 2.

T. Richard Blurton

Fig. 30. Numbers of medieval sherds from Trench A by fabric and Layer (the quantities are too small for vessel-equivalents or percentages to be calculated)

Fabrics with 'miscellaneous' inclusions

Generally, these sherds have a relatively high proportion of black iron ore inclusions. Exceptions are: (i) No. 558, a decorated jug sherd in soft fabric with hackly fracture. Red throughout: abundant medium clear and colourless quartz (some coarse grains), common medium white 'dolomite' and sparse very fine black iron ore. Patchy pitted olive glaze, decoration as No. 555 (illustrated).

(ii) No. 571, two flat-topped flanged rim sherds with internal beading, probably from a bowl. Hard surfaces but soft section; hackly fracture. Reddish yellow/light grey core, red margins, red/reddish yellow/light grey surfaces. Abundant medium clear, colourless and red quartz, moderate angular very coarse hard grey limestone, medium black iron ore and sparse very fine white mica inclusions. Surfaces smoothed, traces of thick white deposit.

Shelly fabrics

All have moderate to abundant very coarse shell, some (Nos. 551-2, 567) also have 'sandy' inclusions.

They seem to belong to cooking-pots (Nos. 551-2 are sagging bases and No. 567 is a rim).

'Other' sandy unglazed fabrics

This group includes sherds from both cooking-pots (Nos. 561, 570) and jugs (Nos. 575-7). All except No. 577 have grey core with red or brownish margins and surfaces (No. 577 is red throughout), abundant very fine quartz with moderate or sparse grains up to "coarse" size and associated black iron ore and white mica (No. 577 also has sparse coarse red grog). All are wheel-thrown. The jug sherds are all from sagging bases with intermittent thumb impressions.

'Other' sandy glazed fabrics

All sherds appear to be from jugs (Nos. 559-60, 565, 572-3). The coarsest is No. 572, a decorated shoulder sherd with common medium sandy inclusions, clear external glaze and decoration of vertical bands of thick white slip, leading to a horizontal band of applied clay at the neck (illustrated). The others are all in fine-sandy fabrics: No. 559 is a flat base with grey core, reddish brown margins and brown/dark grey surfaces (?burnt) with a dribble of clear glaze on the exterior; No. 560 (a strap handle) and No. 573 (flat base) both have grey core and red margins and surfaces, clear to olive glaze with some copper mottling.

An unusual vessel is No. 565, which has light grey core, pinkish grey margins and dark grey interior. Abundant fine colourless quartz, sparse very fine black iron ore and white mica. Patchy light olive glaze with copper streaks, pitted. Broad shallow horizontal grooving on body between ends of handle, chevron incisions below (illustrated).

'Other' white-slipped fabrics

Included here are three decorated jug sherds (Nos. 583-5) and a 'cooking-pot' rim (No. 569). No. 583 differs from the West Kent group in having a fracture that appears smooth between inclusions, and a grey core. It is decorated with two vertical bands of slip, triangular in section and *c.* 15mm apart, overlaid by the edge of a 'beard' (presumably this sherd belongs to a face-mask jug) in grey clay. Nos. 584-5 also have grey cores, and common very fine black iron in addition to the usual 'sand'. Both come from jug necks: No. 584 has a horizontal line of slip at the neckpoint, and patchy slip elsewhere, while No. 585 has horizontal incised grooves, *c.* 2-3mm wide, which have been filled with white slip and trimmed off. This is an unfamiliar style and could be an import.

No. 569 is unusual, being a cooking-pot with white slip on both surfaces. The core is grey and margins red. Coarse 'sandy' inclusions with sparse red iron ore and flint. Spots and dribbles of clear glaze on the exterior.

Imports

598. Jug: three (out of ten) vertical facets present. Body sherd. Hard, irregular fracture. Reddish yellow fabric with abundant fine colourless quartz, moderate medium limestone and red and black iron ore, sparse very fine white mica. Thick greyish tin-glaze on exterior; dribble of white glaze on interior. Spanish, *c.* AD 1400.

599. Jug: 'parrot-beak' spout. Four body sherds. Hard; smooth fracture. Pink fabric with sparse inclusions. Craze very glossy green glaze on exterior. Saintonge, late 13th century. Residual.

600. Small body sherd. Fairly soft; irregular fracture. White fabric with moderate fine quartz and sparse very fine white mica. Thin pitted yellow glaze. Stamford Ware.

Discussion of dating

There are few firm dates in medieval pottery: one accepted as such is that 'Surrey' fabrics seem to start *c.* 1300 or a little earlier (e.g. Hurst, 1961, 254). However, the Kingston variant is thought to date to the second half of the 14th century; the Cheam kiln is now thought to be 15th century. Bifid rims in general may start in the last quarter of the 14th century (Hurst, 1961, 255). The south Herts grey pottery is thought to have a 12th or early 13th century date (Renn, 1964).

'West Kent' pottery is usually given a late 13th to mid-14th century date, but evidence from Southwark sites — e.g. Angel Place (Orton, 1978) — suggest that it may continue into the second half of the 14th century.

Summary of dating for Trench A

Layer 5 = 12 (ER 1579 and 1584): first half of 13th century

Layer 6 (ER 1580): first half of 14th century

Layer 4 (ER 1578): } no independent date, but 14th

Layer 3 (ER 1577): } century on stratigraphic grounds

Layer 2 (ER 1576): last quarter of 14th century.

There is insufficient material for a statistical discussion.

CRUCIBLES

(Fig. 31, Nos. 601-603).

601. (1576/37) Rim and lip of a large crucible of vitrified clay, showing traces of greenish metallic residue. Thin-section examination by D. F. Williams of the University of Southampton showed frequent inclusions of subangular quartz grains, average size 0.1 — 0.2mm set in a matrix of optically isotropic fired clay and a scatter of yellow anhedral crystals, ranging up to 0.35mm in size, which are probably fayalite, a characteristic constituent of furnace slags.

The fragment contained a considerable amount of sand, which he considered was added to the clay for refractory purpose. From Trench A, Layer 2 and therefore probably *c.* late 14th to 15th century (illustrated).

602. (1576/45) An almost hemispherical, basal fragment of a large crucible in a similar fabric to No. 601 except that no yellow crystals were found. Same provenance and date as No. 601 (illustrated).

The above fragments were submitted to Leo Biek of the Ancient Monuments Laboratory of the Department of the Environment who comments: "Both fragments belonged to crucibles of a size and wall thickness which it is surprising to find among 14th or even 15th century material; however, it may be necessary to revise present views in the light of current excavations in York (Addyman, pers. comm.). These finds will form part of a comparative study of such equipment to be reported elsewhere. For the present, the petrological report above makes it clear that the crucibles had been exposed to temperatures high enough to produce vitrification, i.e., probably above 1100°C and in view of the presence of 'fayalite' crystals possibly even higher. Justine Bayley examined the metallic inclusion under the 'milliprobe' an X-Ray fluorescence spectrometer and found both copper and zinc, but no traces of tin or lead; the metal melted in the crucibles was therefore a straight brass and would not have required such a high temperature. In the circumstances the crucibles might have needed overheating on account of their thickness, or the fragments might have suffered (?secondary) overfiring during or after use."

603. (1576/276) Rim fragment of a crucible in a hard light grey fabric with a dark grey outer surface fairly smooth to the touch, with abundant well sorted clear sub rounded quartz grains *c.* 0.1 to 0.25mm across and abundant black, irregular, specks of iron ore (?) of similar size. The fracture is irregular and there are wheel marks on the outer surface indicating the vessel was probably thrown. From Trench A, Layer 2 and

therefore probably *c.* late 14th to early 15th century (illustrated).

604. (1576/277) Body sherd of a crucible in a somewhat similar light grey fabric with abundant clear, white and grey sub-rounded quartz grains ranging between 0.1 and 0.5mm across. Also abundant, irregular black specks of iron ore (?) varying in size between 0.1 and 1.0mm across. Date and provenance as for No. 603.

Leo Biek comments: "These two, smaller fragments were clearly used for a different purpose. John Evans (North-East London Polytechnic) found that emission spectroscopy showed large amounts of both lead and copper to be present in the glassy slag coating the surfaces, as well as some silver and small but possibly significant amounts of tin and zinc. A pink coloration on the outside surface of No. 604 seemed to be related only to differences in iron and manganese content."

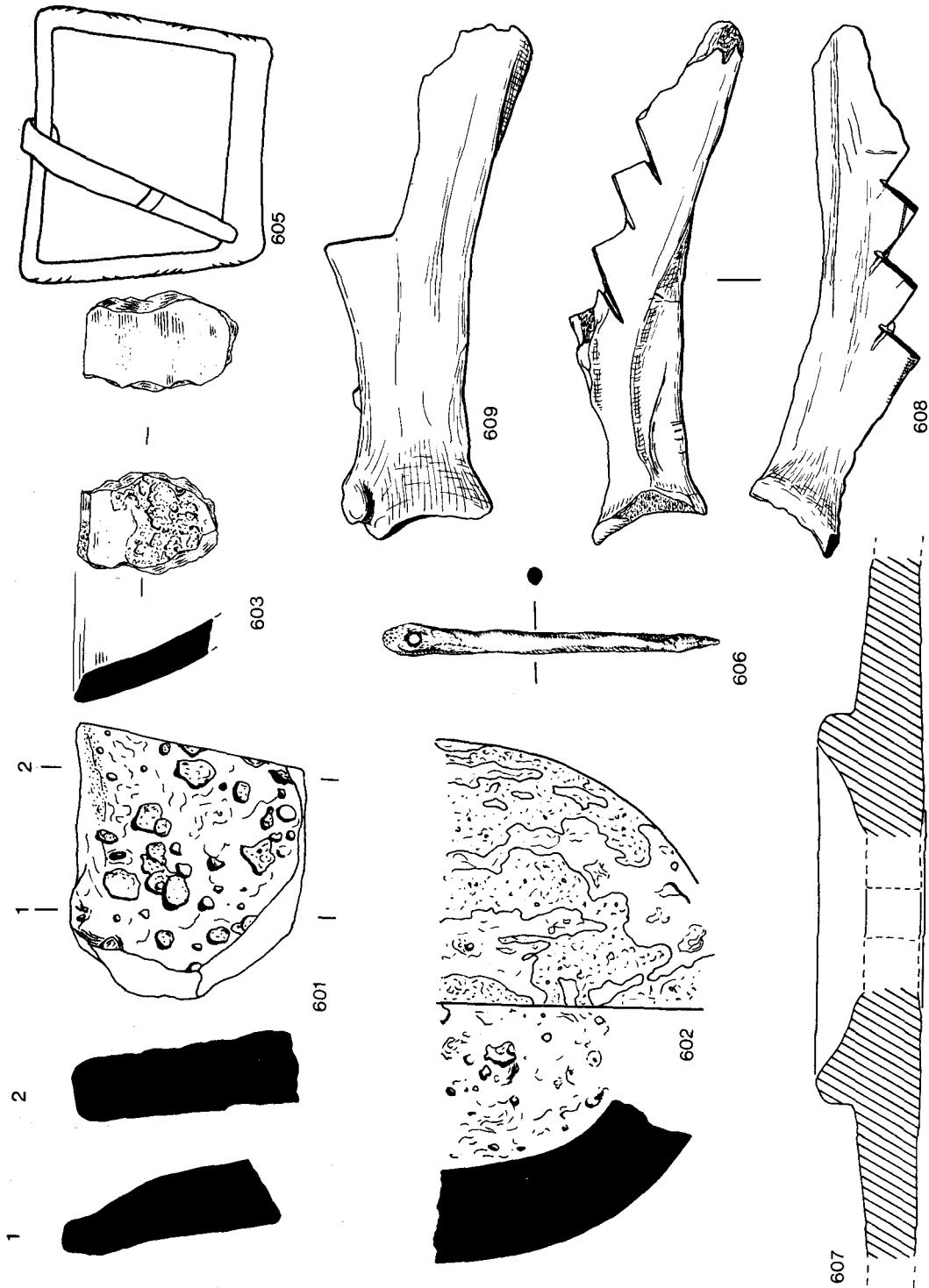


Fig. 31. Angel Court: Miscellaneous medieval finds Nos. 601 — 606 (1/4), 607 (1/2), 608 (1/3), 609 (1/3)

IRON

(Fig. 31, No. 605).

605. (1576/51) Buckle; rectangular with grooved decoration on sides and on pin. Possibly from a

harness. Cf. London Museum (1967, Pl. 79, 3). From Trench A, Layer 2 and therefore possibly *c.* late 14th to early 15th century. (Illustrated from a radiograph).

IRON NAILS

Three iron nails were recovered from Trench A, Layer 6, the fill of a wooden barrel. These appear to be equivalent in general shape to Roman Type I (p. 63), although any existing minor differences cannot be observed due to their much deteriorated condition. From the shape of their corrosion products it is clear that at least two of the three were still embedded in wood when they became buried. The only complete example is 51mm long and the others were probably of an equivalent length before breakage. The way in which nails of this size could have been incorporated in the barrel, as suggested by the excavator, is not immediately obvious.

A few other corroded medieval nails were recovered from Trench A, but these are not discussed in this report.

BONE

(Fig. 31, No. 606).

606. (1576/14) Needle; roughly carved. Probably used for weaving or coarse sewing. From Trench A, Layer 4 and therefore, probably *c.* AD 1250 to 1400 (illustrated).

sandstone. It shows no uniquely diagnostic characteristics and such sandstones are not uncommon throughout parts of the Geological Column. Comparison with specimens in the collections of the Institute of Geological Science has failed to reveal a specimen of similar character, although it may be compared with stone from the Hythe Beds division of the Lower Greensand formation, Cretaceous Age, from the Hythe area. The Hythe Beds show a considerable degree of natural change. The possibility remains that the stone is from abroad but it has not, unfortunately, been possible to compare this specimen with foreign material." From Trench A, Layer 4 and therefore probably *c.* AD 1250 to 1400 (illustrated).

STONE

BY HUGH CHAPMAN

(Fig. 31, No. 607).

607. (1576/38) Fragment of top stone of quern with raised rim round central hole to form hopper; grinding striations visible on underside. Mr. Francis Dimes (Institute of Geological Science) writes: "This may be described as a compact, fine grained, glauconitic

APPENDIX 1

MAMMAL REMAINS FROM TRENCH A

BY JULIET CLUTTON-BROCK AND PHILIP ARMITAGE

The complete collection of animal remains is held in store at the British Museum (Natural History). Accession Nos. ARC 1976 5000 — 5032 (Roman) and ARC 1976 5033 — 5035 (Medieval). Full data and measurements of the material are available on request in the form of an indexed computer print-out from the BM (NH) and from the Department of Urban Archaeology, Museum of London.

INTRODUCTION

The animal remains from the Roman and medieval levels of Trench A are described separately in systematic order under species. In the Roman levels there was only a scattering of animal bones except in Layer 9 (late 4th century) which contained a very large number of cattle horn cores, jaws, and postcranial elements. From both periods there is a great preponderance of cattle over other species of livestock. The large number of cattle horn cores in the Roman Layer 9 and the medieval Layer 5 together with the goat horn cores from the medieval levels probably indicate workshops for horn, although in the Roman level this was obviously not an exclusive industry as there are also a large number of postcranial bones (see Fig. 32).

Our thanks are due to Andrew Redfern who carried out much of the initial sorting and identification of the animal remains.

ROMAN LEVELS

Domestic dog

Remains of at least two dogs were recovered from Layer 9. There are the occipital regions of two adult skulls, a complete humerus, one complete tibia and one distal end of a tibia and two metapodial bones.

	Layer 7	Layer 11	Layer 9	Layer 20	Layer 13	Layer 19	Layer 15	Layer 18	Layer 18A	Layer 18B	Layer 16
Bone											
Skull	11		25	2							1
Horn core	2		98	8	1						1
Maxilla	24	1	10	5		1					
Mandible	17		54			1					1
Tooth	5		38	4		1			4		10
Vertebra	Large no.		34	4					27		17
Rib	5		42	15					2		
Scapula	10		32	1						1	1
Humerus	4		26	1							
Radius			26	1							
Ulna			8								
Carpal											
Metacarpal	24		71				2	1	2		2
Innominate	2		4	3					4	1	
Femur			6	2							
Tibia			18								
Tarsal	9		11								1
Metatarsal	38	1	115	2		1	2				1
Phalanx I	1		3	3			1		1		1
Phalanx II			2							1	1
Hoof core			3								1

Fig. 32. Numbers of identified cattle remains from Roman Levels in Trench A

Domestic horse

One large upper tooth from an adult horse was recovered from Layer 7, one adult incisor from Layer 13 and one complete left mandibular ramus from a stallion or gelding from Layer 20. In addition there is one 2nd phalanx from this level. The mandible has the complete row of cheek teeth, the canine and all but the two central incisors. The bones and teeth appear perfectly healthy although the horse was more than 12 years old at the time of its death. There is no evidence from the wear of the teeth that the horse was ridden with a metal bit.

Domestic pig

As the bones and teeth of primitive, unimproved pigs do not reach maturity until the animals are over four years old it is unusual to find the remains of fully adult pigs from archaeological sites. Two fragments of maxillae, one mandible fragment and two metapodials, all from subadult pigs were identified from Layer 7, whilst from Layer 9 there are the following remains of pig:

Mandible	one fragment with the lower right M3, length 31.4mm one fragment with P4, M1
Maxilla	one fragment
Teeth	one upper and one lower tusk and one incisor
Skull	one fragment
Scapula	two fragments
Humerus	one fragment
Radius	two fragments
Ulna	one fragment
Femur	two distal epiphyses
Talus	one fragment, gnawed by dog
Calcaneum	one nearly complete

Red deer (Cervus elaphus)

Three fragments of antler tines were found in Layer 7 and one antler tine and one upper molar tooth in Layer 9. There is no evidence for antler working although, no doubt, antler was a very important raw material.

Domestic ox

The remains of domestic cattle greatly outnumber those of any other species. The bones are not listed here in detail but a summary is given in Fig. 32 of the numbers of identified bones from the separate layers. In addition there is a large quantity of fragments of cattle bones as well as a few from other species which have been retained but are not registered.

The very large number of metatarsal bones from Layer 9 (115, see Fig. 32) is probably biased by the proximal and distal ends being counted separately, whereas some may be from single bones. Without the distal ends there are 83 complete and proximal ends which is closer to the number of horn cores and may indicate that at least 40 cattle are represented in Layer 9.

The 98 horn cores from Layer 9 are so complete and in such a good state of preservation that we have been able to use them as a type series for our work on a new method of establishing the sex of horn cores and description of their relative shape and curvature (Armitage and Clutton-Brock, 1976). The ox horn cores from Layers 7 and 9 are therefore listed below according to this system:

Horn Cores, Layer 7

Short horned group	1 adult, left, cow
	2 adult, right, cow
	2 adult, right, bull
	2 juvenile
Medium horned group	1 adult, left, bull
3 fragments, undetermined sex or group	

Horn Cores, Layer 9

Short horned group	12 adult, left, cow	
	11 adult, right, cow	
	6 adult, left, castrate	
	2 adult, right, castrate	
	5 adult, left, bull	
	1 juvenile, left, bull	
	8 adult, right, bull	
	1 adult, left, sex?	
	11 fragments	

Medium horned group	9 adult, left, cow
	5 adult, right, cow
	4 adult, left, castrate
	8 adult, right, castrate
	3 adult, left, bull
	5 adult, right, bull
	4 juvenile, sex?
	3 fragments

The short horned group contains all those horn cores that are between 96 and 150mm in length and the medium horned group contains those with lengths between 150 and 200mm. The other two groups that we have differentiated are small horned and long horned but neither of these is represented from Angel Court. These divisions are arbitrary distinctions taken for convenience so that the horn cores may be described precisely; they do not reflect any definite separation into breeds but rather they show the natural variation within a local population of cattle which would not have undergone any artificial selection for shape or length of horn. Furthermore these characters are not related to size of body and the postcranial skeletal bones cannot be divided into any equivalent grouping.

The following percentages can be given for the sexes of the horn cores from Layer 9:

Total no.	98
Cows	37.7%
Bulls	22.4%
Castrates	20.4%
Indeterminate	20.5%

No deductions may be made about methods of livestock husbandry or kill-off patterns from the proportions of sexed horn cores recovered from a horn worker's shop because the sexes will only reflect the craftsman's preference in the horn as his raw material. As has been said in the introduction the collection of horn cores from Layer 9 are not likely to be exclusively the debris from horn working as they are mixed with a large number of postcranial cattle bones. They are more likely to have been discarded by the slaughterer after the horns and hide had been removed as valuable side-lines to the butchery trade. It is notable that there are extremely few horn cores or parts of the skeleton that are from calves or even from young cattle. This is supported by an examination of the mandibles which were arranged in relative classes according to the tooth wear using the method described by Grant (1975), see Figure 33. This does not allow the absolute age to be determined but it can be seen from the figure that the majority of the mandibles are from cattle that were well over five years old when they were killed.

The skeletal bones of cattle from the Roman levels show that the animals were of the usual small stocky build that is characteristic of the period. An attempt has been made to sex the metatarsal bones from Layer 9 using the method of Mennerich (1968) where the length is plotted against the maximum proximal width (Figure 33). This method can only be used on complete metatarsal bones of which there are only 16 but it is clear that there are more cows than bulls or castrates. It is evident from the horn cores as well as from the qualitative and quantitative assessment of the skeletal bones that a high proportion of adult cows was killed (approximately 40%) and as only a very low percentage of the total number of cattle bones is from calves it is likely that old cows were slaughtered for food and raw materials when they were too old for breeding or draught.

Domestic sheep and goat

Most of the caprine material could be ascribed to either sheep or goat but it is difficult to determine the teeth and jaws so, although these are likely to be sheep as very few goat bones were identified, they have been classified as sheep/goat. Only Layers 7 and 9 produced appreciable numbers of caprine remains and these are listed as follows:

Sheep, Layer 7

Horn core	three
Rib	three fragments
Humerus	one distal end
Radius	one proximal end and one distal end
Metacarpal	two proximal ends
Metatarsal	six incomplete
Tibia	three incomplete

Sheep/Goat, Layer 7

Teeth	one upper and one lower cheek tooth
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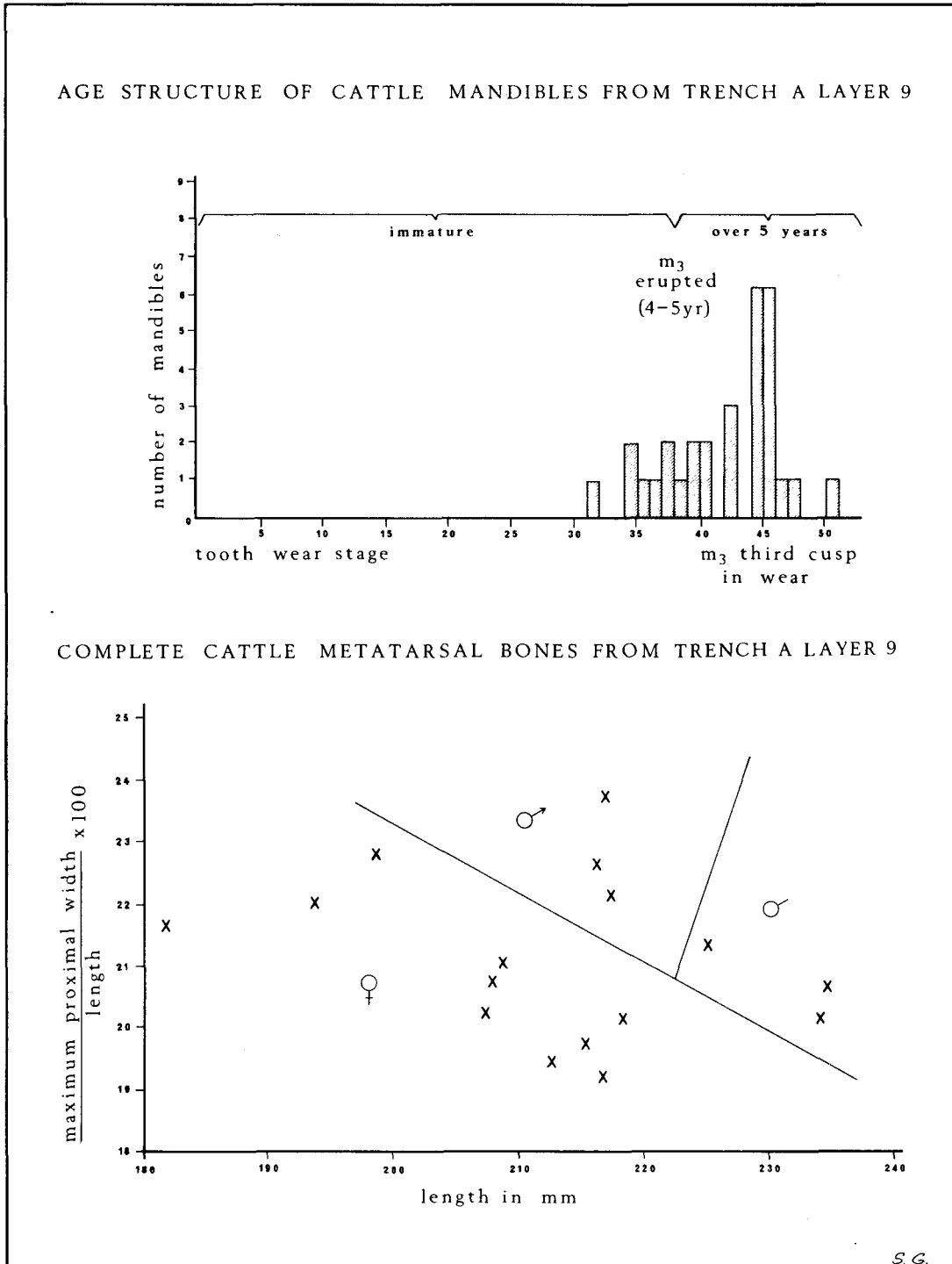


Fig. 33. Angel Court: Bone report; tables

Sheep, Layer 9	
Horn core	one fragment
Vertebra	one atlas, one cervical, adult
Radius	five incomplete, two adult, three lambs
Metacarpal	one almost complete, four incomplete, one juvenile
Metatarsal	seven incomplete, one juvenile
Tibia	one distal end
Goat, Layer 9	
Horn core	one, from a small goat
Sheep/Goat, Layer 9	
Tooth	one lower right M3, 3-4 years
Mandible	two fragments, 4-6 years one fragment, 2-3 years one horizontal ramus with cheek teeth, 3-4 years one horizontal ramus with cheek teeth, 4-6 years one horizontal ramus with molar teeth, 3-4 years.

The ageing of these mandibles was based on the method described by Payne (1973). The sample is, however, very small and no conclusions can be drawn from it on kill-off patterns, except that it provides no evidence for the slaughter of lambs or kids for food.

Evidence of butchery and bone working

Most of the bones show some form of butchery and it is clear that the collection as a whole consists of bone waste that was discarded at all stages from slaughterer, bone worker, cook and diner.

A number of the horn cores have cutting marks around the base showing where the horn has been removed from the skull; other bones, particularly the scapulae, provide evidence for the use of bone as a raw material, for they have had pieces sawn from the flat part of the blade (see Nos. 608 and 609, both from Layer 9, illustrated, Fig. 31). In contrast to the animals killed for food which, of course, include the bird remains, none of the horse, dog, or cat bones show any signs of butchery. A summary is given in Fig. 34 of the indications of butchery exhibited by the cattle bones from Layer 9.

MEDIEVAL AND LATER LEVELS

Domestic dog

One right mandibular ramus of a rather large adult dog was recovered from Layer 2 together with one metapodial bone, not necessarily from the same dog.

Domestic cat

One ulna of a small cat was identified from Layer 5 and a tibia and a shaft of a femur, also from a small individual, from Layer 4. The femur is from an immature cat.

Domestic horse

One cervical vertebra of an adult horse was recovered from Layer 4, and a lower cheek tooth from Layer 3.

Domestic pig

Layer 5 provided the majority of the pig remains as of other livestock. The identifications of pig from the separate levels are listed as follows:

Layer 5	
Mandible	1 right ramus with incisor, canine and cheek teeth, M3 unerupted, subadult 1 fragment of a left ramus, subadult
Rib	2 fragments
Humerus	1 fragment 1 distal end, subadult
Ulna	1 shaft
Radius	1 proximal end and shaft
Tibia	4 shafts, juvenile
Metapodial	4 shafts
Layer 4	
Mandible	1 anterior part of a right ramus, female, 2-3 years
Scapula	1 part of a blade
Radius	1 shaft, juvenile
Fibula	1 fragment, juvenile
Layer 3	
Two metapodial bones from juvenile pigs, both incomplete.	

Bone	Part remaining	Number	Description
Scapula (See Fig. 31)	Articular end+part blade	1 (No. 608)	Square pieces of bone removed from the blade by sawing, leaving a broad, saw-edged effect. Waste from bone working.
	Articular end+part blade	3 (inc. No. 609)	Pieces of bone removed, leaving the waste from bone working.
Humerus	Articular end+part blade	4	Blade chopped across. Butchery or bone-working.
	Part articular end+blade	10	Chopped obliquely across the posterior end of the articular surface.
	Distal end+part of shaft	10	Cleavage of the distal epiphysis and shaft.
	Shaft	4	Split with spiral fracturing.
Radius	Shaft	1	Irregular chop marks on the shaft just below the line of epiphyseal fusion. The lateral edge of the trochlea of the distal epiphysis has been sliced through.
	Distal epiphysis	2	Chopped fragments.
	Proximal end+shaft	5	Chopped longitudinally from the proximal end with the shaft split along its length.
	Proximal end+shaft	6	Spiral fracturing of the shaft.
	Proximal epiphysis	2	Chopped through obliquely.
	Distal end+shaft	1	Chopped through obliquely just above distal epiphysis.
	Distal end+shaft	3	Spiral fracturing of the shaft.
	Head of femur	2	Chopped through probably in the removal of the hind limbs from the body of the carcass.
	Distal epiphysis	1	Chopped through obliquely.
	Shaft	4	Proximal end removed by oblique chop through the joint.
Tibia	Shaft	7	Cleaved with spiral fracturing.
	(Shaft)	1	Proximal end gnawed away by dog.
Metatarsal	Proximal end and distal end	67	The bone has been chopped across transversely leaving the splintered ends as waste.
	Shaft	8	Split medially along the length.
Calcaneum	Corpus calcanei	1	Chopped through obliquely probably during the removal of the hind foot from the limb.
	Fragment	9	Some with spiral fracturing, others with straight-edged breaks. These are debris from the smashing of marrow bones.

Fig. 34. Evidence of butchery on the cattle bones from Trench A, Layer 9

Layer 2	
Maxilla	2 fragments with unerupted M3
Mandible	1 anterior part of a ramus with deciduous canine 1 fragment from an adult pig
Tooth	2 incisors and one fragment of an unerupted molar
Rib	3 fragments
Scapula	1 part of a blade
Humerus	1 shaft of a young piglet
Radius	1 shaft, juvenile
Ulna	3 proximal ends
Innominate	1 fragment, juvenile
Tibia	1 shaft, juvenile
Hoof core	1

Domestic ox

As with the Roman Layer 9, the large number of cattle horn cores (together with those of goat) suggests that the debris from horn working is represented here. The cattle horn cores have been grouped in the same manner as for the earlier levels. In addition there are the remains of three cattle skulls, two from polled animals and one from which the horn cores had been removed after death. Horn 'scars' are present on the two polled skulls, being more evident on one than on the other. These skulls were probably naturally hornless but it is not impossible that the horn buds had been removed, either with a sharp knife or by burning, when the calves were quite young.

Layer 5

Short horned group	1 frontal bone with both horn cores, adult, cow 6 adult, left, cow 4 adult, right, cow 1 adult, right, castrate (perhaps castrated when the animal was well grown) 9 adult, left, castrate 3 adult, right, castrate 1 adult, right, bull 9 juvenile, left, sex? 4 juvenile, right, sex?
Medium horned group	1 adult, left, cow 1 adult, right, cow 1 adult, left, castrate 1 adult, right, castrate 2 adult, left, bull 1 juvenile, left, sex? 1 juvenile, right, sex? 7 fragments, undetermined sex

Besides the horn cores from Layer 5 there are two mandibular rami, three isolated teeth and 59 postcranial elements, as listed in Fig. 35.

Layer 4

This level also provided a large number of cattle horn cores.

Short horned group	3 adult, left, cow 3 adult, right, cow 5 adult, left, castrate. One appears to have been "poll-axed" behind the horn core. 2 adult, right, castrate 3 juvenile, right, castrate
Medium horned group	1 adult, castrate, frontal bones with both cores

The total numbers of horn cores and postcranial remains of cattle are listed in Fig. 35. It is of interest that there are no apparent differences in the horn cores or in the limb bones between the Roman and Medieval periods, although the sample of postcranial elements from the later levels is too small for a metrical comparison to hold validity. From neither period are there any of the small horned cores that are typical of Iron Age cattle, nor of the long horned cores that have been recovered from the 15th century deposits at the nearby site of Baynard's Castle, London (Armitage in prep.).

Domestic goat

Evidence for bone working is further supported by the presence of 15 horn cores, some very large and nearly complete, from Layer 5. In addition Layer 4 provided 7 goat horn cores, and Layers 3 and 2 provided one each. A single metacarpal bone was also identified as goat from Layer 5 but with this exception all the other material appears to be from sheep.

Bone	Layer 2	Layer 3	Layer 4	Layer 5
Skull				3
Horn core	1	3	17	46
Maxilla				
Mandible	4			2
Tooth	2	1	4	3
Vertebra	8		5	11
Rib	3	3	8	23
Scapula			1	4
Humerus	2		6	2
Radius	4		4	2
Ulna			1	1
Carpal				
Metacarpal			3	
Innominate	6			1
Femur	1		3	5
Tibia	4	1	5	7
Tarsal	2		1	2
Metatarsal	1		1	
Phalanx I				
Phalanx II			1	
Hoof core	1			1

Fig. 35. Numbers of identified cattle bones from the Medieval Levels in Trench A

Domestic sheep

With the exception of the single goat metacarpal bone from Layer 5 all the postcranial remains could be sheep and have been listed as such, but it is, however, quite possible that some of the fragments are goat.

Layer 5	
Scapula	1 incomplete, young lamb
Radius	4 incomplete, two adult, one juvenile, one fragment
Innominate	2 incomplete, adult
Tibia	2 incomplete
Metatarsal	1 proximal end, adult
Layer 4	
Vertebra	2 fragments
Humerus	1 shaft, lamb
Radius	1 shaft, lamb
Metacarpal	1 proximal end
Tibia	1 shaft, adult
Metatarsal	1 proximal end, adult 1 incomplete, juvenile
Layer 3	
Radius	1 proximal end of shaft, adult
Layer 2	
Horn core	1 fragment
Skull	2 bisected skull parts, hornless
Scapula	1 fragment
Humerus	1 distal end, adult
Radius	1 proximal end
Ulna	1 fused to radius
Femur	1 proximal end, adult 1 shaft, lamb
Tibia	1 proximal end, juvenile 1 shaft 1 distal end, adult
Metacarpal	1 proximal end
Metatarsal	1 proximal end

Evidence of butchery and bone working

As with the animal remains from the Roman levels, most of the bones show signs of butchery in that they have been chopped. The numbers of bone from each level were, however, too small to merit the special attention paid to the cattle remains from Layer 9 (Fig. 34) where it was possible to distinguish the waste products of bone working from those of food preparation.

Most of the horn cores, including those of goat, show evidence for horn working for they have been chopped or sawn from the skulls and some have obviously been cut into sections.

APPENDIX II

BIRD BONES FROM TRENCH A

BY J. S. GASK

Roman

Layer 18a c. AD 145-60

Right tarsometatarsus (complete, chipped at proximal end).

It fits chicken (*Gallus gallus*) very well.

Clavicle (broken) Chicken (*Gallus gallus*).

Tibiotarsus (broken) immature. Possibly chicken (*Gallus gallus*).

Left femur (broken at proximal end) it fits Mallard, (*Anas platyrhynchos*), very well.

Layer 19 Late 3rd century AD

Sternum of Domestic/Grey Lag Goose (*Anser anser*).

Layer 9 Late 4th century AD

Right humerus, most probably a very small Chicken.

Medieval

Layer 5 12th-13th century AD

Right humerus (complete) Chicken

Right tarsometatarsus (complete) Chicken

Left tibiotarsus (broken at Proximal end) Chicken

Right tibiotarsus (broken at proximal end) Chicken

Right tibiotarsus (broken in two halves) Chicken

Immature tibiotarsus, possibly Chicken

Left radius (complete) quite possibly Chicken

Left coracoid (complete) Domestic/Grey Lag Goose (*A. anser*)

Right ulna (broken at distal end) Domestic/Grey Lag Goose

Part of right humerus, probably Domestic/Grey Lag Goose

Layer 4 between c. AD 1250 and 1400
 Right tibiotarsus (broken at distal end) Chicken
 Left carpometacarpus, Domestic/Grey Lag Goose
 Layer 2 c. late 14th to early 15th century
 Left tarsometatarsus (broken at proximal end) Chicken
 Right humerus (broken at proximal end) Chicken
 Left femur (complete) Chicken, probably immature

Right tibiotarsus (complete) Chicken
 Right tibiotarsus (broken at proximal end) Chicken
 Part of tibiotarsus, most probably Chicken
 Left coracoid (chipped at distal end) Domestic/Grey Lag Goose
 Left ulna (broken at proximal end) compares very well with Partridge (*Perdix perdix*)

APPENDIX III

FISH REMAINS

BY A. C. WHEELER

Trench A, Layer 2 c. late 14th to early 15th century
 Cod (*Gadus morhua*) 2 abdominal centra, 1 caudal centrum and 1 articular, probably all from one fish.

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