

ROCHESTER 1974-75*

A.C. HARRISON, B.A., F.S.A.

In 1974 it was learned that as a result of the widening of Corporation Street nos. 11, 13 and 15 Northgate, (N.G.R. TQ 7436 6866) and the "Rochester Castle" Public House on the corner of Corporation Street and George Lane (N.G.R. TQ 7433 6873) were to be demolished. At the request, therefore, of the Department of the Environment and with the co-operation of the Kent County and Medway Borough Councils excavations were carried out by the Society at these two sites, both of which are on the line of the Roman city wall (Fig. 1).

THE EXCAVATIONS

1. Northgate area.¹ A long section (Fig. 2) was cut outside the city wall to the north.

(a) *Roman*. The earliest feature was the ditch approximately 4 ft. deep and an estimated 7 ft. wide running in an east-west direction parallel to the Roman wall and cut by its foundation-trench on the south side. A layer of occupation material had accumulated in it containing pottery of late-second or early-third century date and the upper filling was of clean clay.

The city wall here survives to a height of 7 ft. It had been completely robbed of its facing-stones down to the level of its projecting plinth, at which level was the mouth of the drain or culvert previously noted on the south side (Plate I). At the eastern

*This paper is published with the aid of a grant from the Department of the Environment.

¹ This area is directly adjacent to "Northgate B", excavated by the author in 1961 and reported in *Arch. Cant.*, lxxxiii (1968), 70 ff. As in previous articles the city is regarded as having its long axis running from east to west.



(Photo. P.J. Tester)

Northgate. Exterior of Roman Wall showing Culvert.

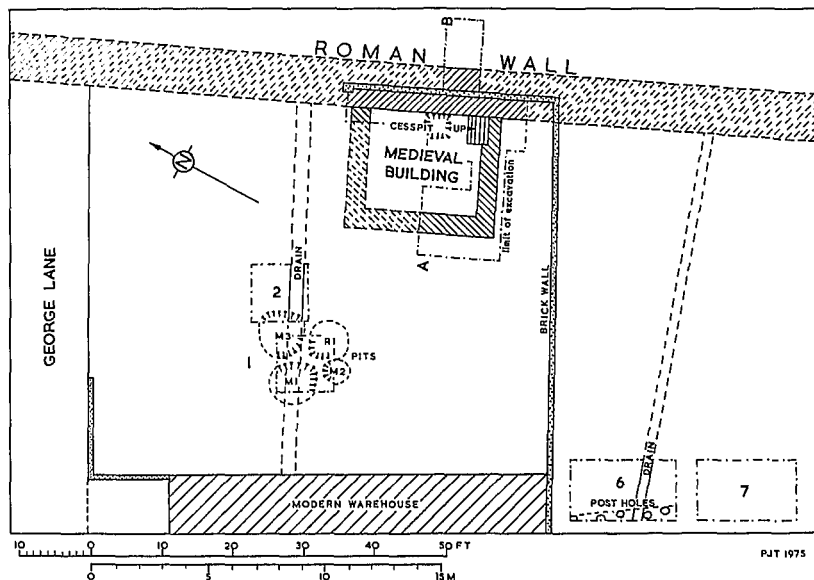


Fig. 1. Site Plan of excavated Area.

side of the exposed section of the wall there was evidence of a medieval repair but nothing to suggest the proximity of a gateway.

(b) *Medieval*. A layer of flint cobbles had been laid over the whole of the excavated area starting from the foot of the wall where it was only some 2 in. thick and extending for at least 30 ft., at which point it was 1 ft. thick. The cobbles had been rammed into clean river silt and followed the slope of the ground from 7 ft. below the surface at the foot of the wall to 9 ft. at the northern extremity. No dateable material was found with or beneath the cobbling. A second layer of cobbles had been laid approximately 18 in. from the first and, though this had been mutilated by the robbing of the wall's facing-stones and truncated by the sixteenth-century rubbish dump, the make-up of the material contained fragments of at least four medieval jugs (p. 00).

(c) *Sixteenth century*. As the wall went out of use for defensive purposes, rubbish began to accumulate outside. This included salt-glaze and early Bellarmine jugs and a quantity of burnt clay, suggestive of kiln debris. At a point approximately 3 ft. away from the wall this accumulation was cut away vertically by Pit 2, which penetrated as far as the first layer of cobbling mentioned above and

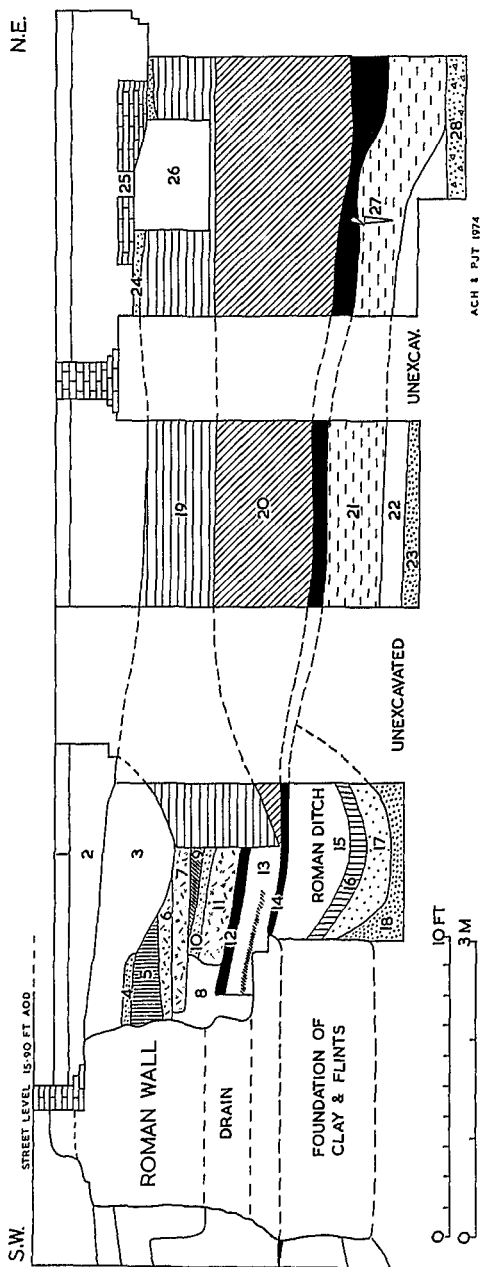


Fig. 2. Section North of the Rochester City Wall, skirting the north-west Side of Northgate.

1. Modern concrete floor. 2. Floor make-up. 3. Eighteenth-century pit. 4. Sandy soil
5. Black soil. 6. Sandy black soil and tiles. 7. Burnt clay, mortar debris and tiles. 8. Robber trench. 9. Dirty clay. 10. Reddish mortar. 11. Dirty clay and tiles. 12. Upper flint cobbling. 13. Dirty clay and mortar with medieval pottery, divided by thin layer of ash. 14. Lower flint cobbling. 15. Silty clay. 16. Black silt containing Roman pottery. 17. Silt. 18. Reddish brickearth. 19. Clay sealing Pit 2. 20. Black filling of Pit 2. 21. Grey silt. 22. Alluvium. 23. Brickearth. 24. Mortar make-up. 25. Brick oven. 26. Chalk block foundation. 27. Stake-holes. 28. Gravel.

Note: The section against the south-west side of the City wall at this point is illustrated and described in *Arch. Cant.*, lxxxiii (1968), facing p. 72.

extended over the whole of the remaining area of the excavation.² This pit was for the disposal of a very large deposit of black organic material, possibly derived from the emptying of cess-pits. Enclosed in this was a fence, made of interlaced brushwood. Besides pottery of the Tudor period it contained a mass of waste leather derived from the manufacture of shoes (pp. 131-2), gilt pins, a piece of chain and an interesting bone plaque interpreted as a beggar's badge (Fig. 11). This black deposit was sealed with a substantial layer of sandy clay on the surface of which was a worn shilling of Charles I.

Later. At the north end of the excavation were slight remains of an eighteenth-century building containing a brick-oven. These, and a deposit of rubbish of similar date close to the wall (Pit 1) were sealed by floors of the houses demolished in 1974.

Discussion. The purpose of the Roman ditch remains problematic. It seems too slight to have been defensive and was possibly intended to mark the boundary of the city prior to the construction of the wall. It would appear that it was deliberately filled when the wall was built. The most interesting point is that there does not appear to have been any defensive ditch in front of the wall in either Roman or medieval times. The reason for this would seem to be that the river was sufficient protection on this side of the city and its bank afforded a *glacis*, twice faced with flint cobbles,³ running down to the water's edge. This reinforces the suggestion previously made⁴ that the North Gate was not of any considerable size or importance. In the sixteenth century, when the wall was no longer defensive, large-scale dumping of rubbish began the process of land reclamation which produced the area known as "The Common", a process which seems to be shown as being started on William Smith's sketch of 1588⁵ and to have progressed considerably on the Bridge Wardens' map of 1707.⁶

2. George Lane Area. Seven trenches were opened, six inside and one (Trench 5) outside the Roman wall (Fig. 3).

Trench 1. This was sited some 40 ft. inside the wall with the intention of locating the limit of the internal wall-bank. In fact, owing to

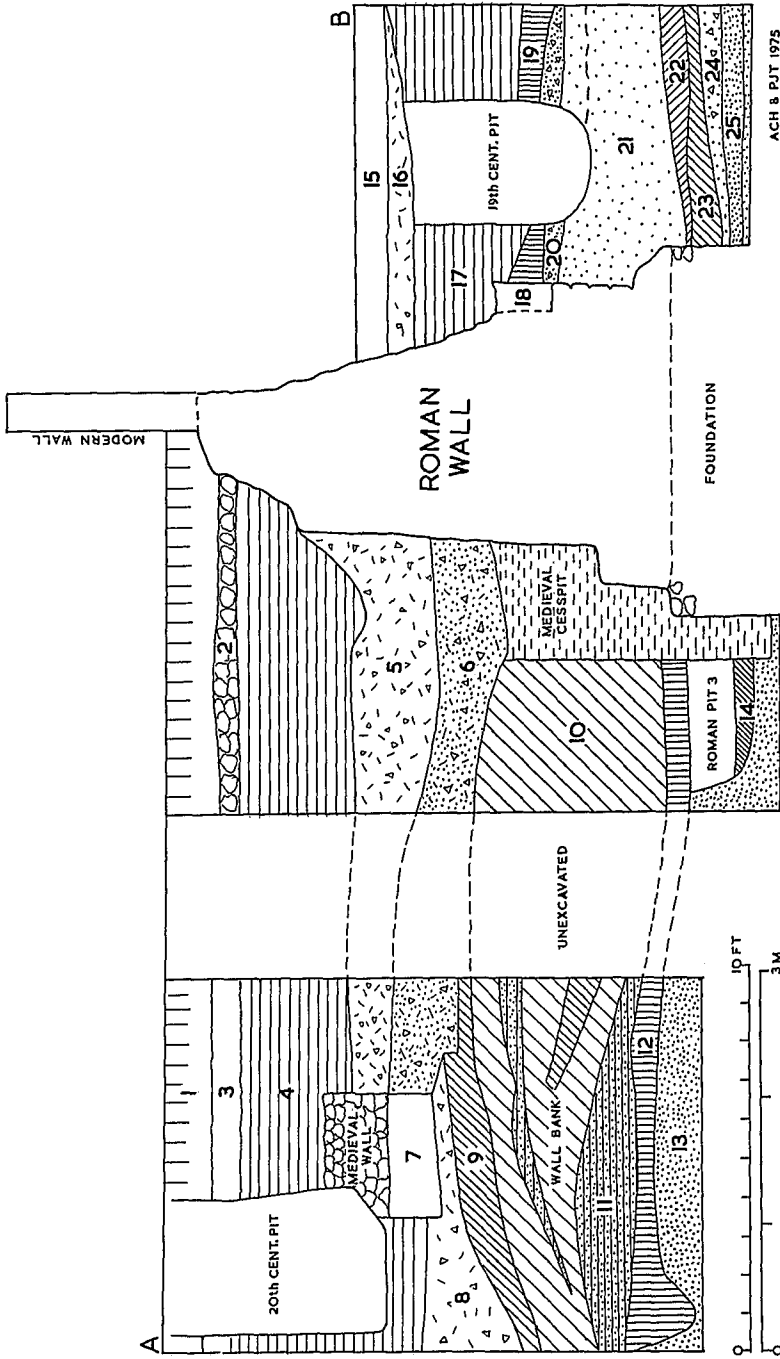
² This deposit was noted also in trenches cut into the roadway of Northgate and at a point 50 ft. to the west of our excavation and was clearly very extensive.

³ There is no evidence against the earlier cobbling being Roman in origin but, as the second is certainly medieval, it seems likely that the first was also.

⁴ *Arch. Cant.*, lxxxiii (1968), 70.

⁵ *Arch. Cant.*, vi (1864), 54.

⁶ *Arch. Cant.*, xviii (1889), 200.



ACH 8 PJT 1975

Fig. 3. Section in West Face of Cutting across City Wall East of George Lane.

1. Topsoil. 2. Cobbles 3. Destroyed cobbbling. 4. Disturbed garden soil. 5. Tiles and mortar rubble. 6. Black soil with building debris. 7. Chalk footing. 8. Domestic rubbish. 9. Blue clay. 10. Redeposited orange subsoil (wall bank). 11. Brown soil. 12. Romano-British topsoil. 13. Natural subsoil — orange brickearth. 14. Black soil with flint and brick debris. 16. Pipe-maker's debris with coin of 1821. 17. Black soil with flint and brick debris. 18. Medieval facing of wall. 19. Brown soil and chalk. 20. Mortar. 21. Black soil with tile layer. 22. Grey clayey soil. 23. Brown clay. 24. Brown soil with chalk rubble. 25. Dirty subsoil over reddish clay.

the intrusion of three large medieval pits, very little of the Roman levels remained undisturbed, although a *sestertius* of Antoninus Pius (p. 124) was recovered from the brown topsoil, 12 ft. 6 in. below the surface and sealed beneath bank material, and a coin of Constantine I (p. 124) from a pit (R.1) in the north-eastern corner 14 ft. below ground level.

The most interesting medieval feature was a well-constructed stone drain, 2 ft. 6 in. by 2 ft. in section, running from south to north across Trenches 1 and 2 towards the city-wall through which it presumably discharged. It is tempting to associate this feature with the medieval house fronting the High Street and situated approximately 130 ft. to the south. The richly decorated under-croft⁷ of this building survives as the cellar of the "George" public house and is dated c. 1320. Of the medieval pits the earlier (M1 and M3) produced pottery dateable to the twelfth century, (Fig. 8), the other being about fifty years later.

Trench 2 (Figs. 1 and 5). The earliest feature here was a pit (R.2) in the north eastern corner, 4 ft. 6 in. deep, sealed by the Roman wall-bank. This contained pottery dated c. A.D. 150 (p. 110) and numerous fragments of painted wall-plaster. The decoration consisted of white vertical panels 4½ in. wide framed by bands of red 2 in. wide. In this trench the wall-bank was intact except for a strip about 1 ft. wide along the south section where pit M3 had destroyed it. The pottery from the domestic rubbish incorporated in the wall-bank was in all respects similar to that from the same layer in Trench 4, which is analysed in detail in Appendix I, and is there dated to the late-second or early-third century. From this deposit came a *denarius* of Antoninus Pius (p. 124), a bronze *spatula* originally with silver inlay, a bronze ring, a blue glass bead, a bone gaming counter, a bone needle and several pins (Fig. 9).

Into the surface of the wall-bank had been cut a shallow grave containing the much decayed skeleton of a woman aged about 35, the legs of the skeleton having been cut off close to the hips by the medieval pit, M3. The body had been placed in the grave on its back with the head turned over the left shoulder. On the forearms were three heavy bronze bracelets and no less than twelve bronze bangles, several of these being heavily corroded (Figs. 9 and 10). In view of the unceremonious nature of the interment and the fact that burials inside the walls of a city were most strictly forbidden, it seems probable that she had been the victim of foul play. The

⁷ *Arch. Cant.*, xxiv (1900), 220-2.

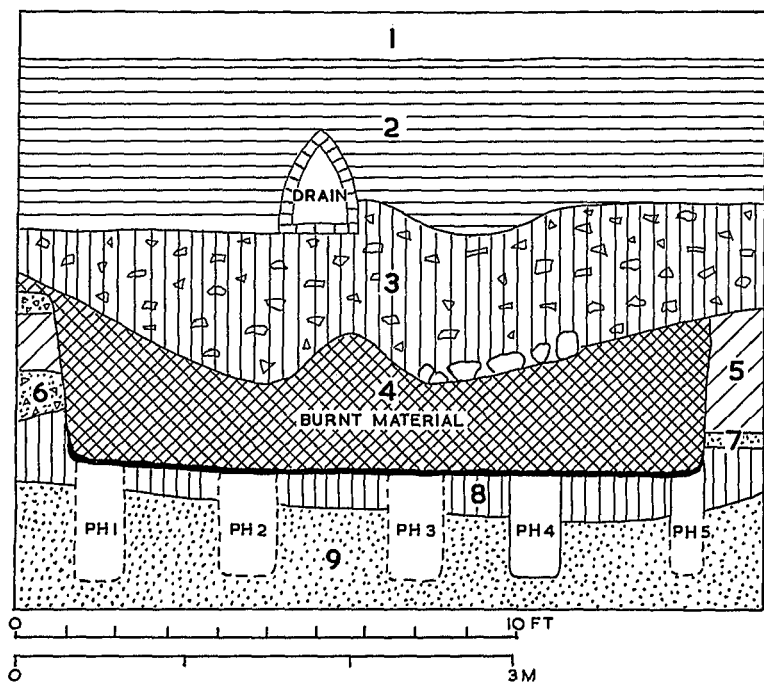


Fig. 4. Section in south Side of Trench 6.

1. Modern concrete. 2. Black humus. 3. Brown earth and building debris. 4. Burnt material including clay. 5. Brown soil. 6. Mortar debris. 7. Mortar floor. 8. Romano-British topsoil. 9. Natural subsoil.

Note: Post-holes 1, 2 and 3 are shown projected slightly forward of line of section.

jewellery is described below (pp. 125–31).

Trenches 3, 4 and 5 (Figs. 1 and 3). These trenches comprise a long section across the city wall, which at this point was approximately 12 ft. high. Four courses of the original rag-stone facing survived on the outside and there was evidence of medieval repairs both inside and out (Plates II and III). The construction of the wall was in all respects similar to that noted elsewhere including the layer of rammed flints below the plinth. The wall-bank inside the wall consisted mainly of redeposited brick-earth subsoil, but also included a substantial amount of domestic rubbish (Fig. 3, layer 8). From this and from the topsoil sealed beneath the bank a considerable amount of pottery was recovered, which is discussed in



(Photo. R.J. Mills)

George Lane. Interior of Roman Wall.

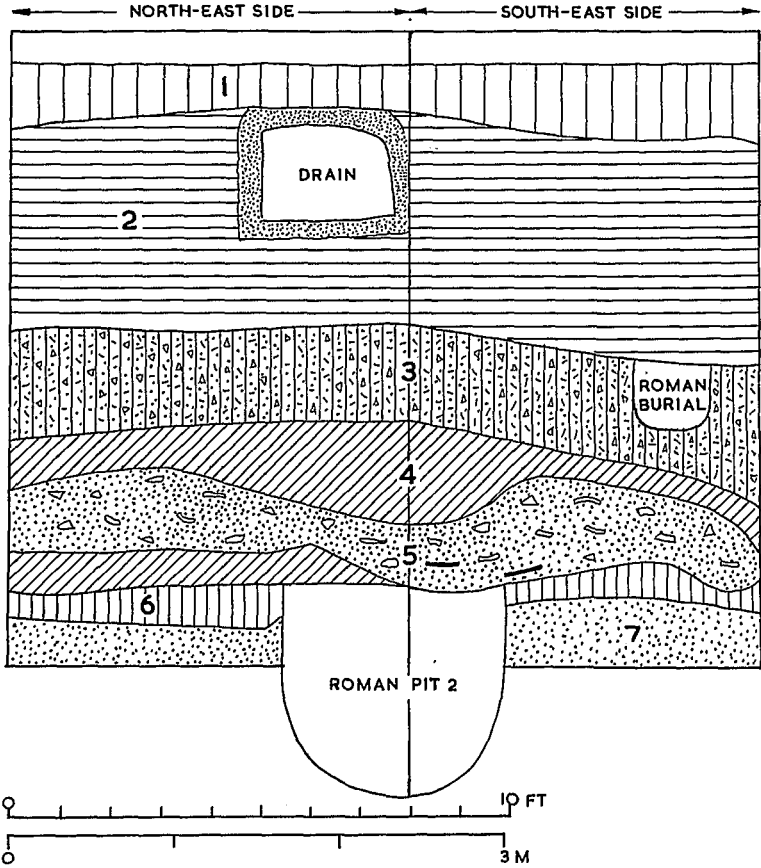


Fig. 5. Section in north-east and south-west Sides of Trench 2.

1. Modern rubbish.
2. Post-Roman build-up.
3. Brown soil with painted plaster and mortar debris.
4. Clay.
5. Dark soil with Romano-British domestic rubbish including tiles and oyster shells.
6. Romano-British topsoil.
7. Brickearth (subsoil).

detail on pp. 108-18. There the material from the topsoil is dated to the first half of the second century and that from the wall-bank to the later second to early/mid third century. Also from the rubbish-layer was a *denarius* of Vespasian, (p. 123), a *dupondius* of Diva Faustina (p. 123), a bronze brooch with blue enamel decoration (p. 135) and a bronze pin. In the topsoil level outside the wall (Fig. 3, layer 24) was a samian dish, Dr. 18/31 and an almost complete mortarium (Fig. 7) of mid-second century date.

In the medieval period the top of the wall-bank was levelled to allow a small rectangular building to be constructed against the inner face of the wall. The inside dimensions of this were 14 ft. x 15 ft., with walls 3 ft. 3 in. thick, well built of ragstone and chalk rubble set in a sandy brown mortar. The entrance was in the north-eastern corner with a flight of four stone steps leading down to floor level (Plate III). Opposite the steps and against the face of the city wall had been dug a large cess-pit, approximately 7 ft. deep. The purpose of this building is conjectural but, as the walls seem too slight for it to have been a defensive turret, it seems likely that it was a guard-room for the use of sentries patrolling the wall and the presence of the cess-pit suggests that its facilities included a latrine. Pottery from the cess-pit was scanty but suggests a twelfth-century date. In the demolition rubble above the floor level of the building (Fig. 3, later 5) was a Nuremberg *jetton* (p. 124), which may indicate that the building was standing until the late-sixteenth or early-seventeenth century.

Trenches 6 and 7. (Figs. 1 and 4). These were located at the southern extremity of the site as close as possible to the area where remains of a Roman building had previously been recorded.⁸

(a) *Roman*. The evidence from the Roman levels in both trenches made it clear that a substantial building had indeed been situated immediately to the south. Above the level of the Romano-British topsoil, from which coins dating from Claudius to Antoninus Pius were recovered, was a mass of building debris, including plain painted plaster, quarter-round moulding and great quantities of roofing-tiles. Part of the building had consisted of clay walls, the mortar rendering of which still showed the chevron pattern that had served as a "key". These walls do not seem to have been painted, though in other respects were very similar to those in the first period

⁸ A wall 10 ft. deep and 2 ft. thick, built of irregular blocks of Kentish rag, with a double bonding course of tiles and a return wall were found in a garden behind Barclays Bank in High Street, 63 ft. south of the Roman north-east wall. (VCH (Kent), iii (1932).



(Photo. R.J. Mills)

George Lane. Medieval building attached to Roman wall.

of Farningham Villa II.⁹ At the west end of Trench 6 remains of a slightly constructed floor of mortared flints survived, which is interpreted as a yard belonging to the building to the south. Beneath this was sealed a *denarius* of Commodus (p. 124). The latest pottery from the demolition layer is dated to the early part of the third century.

(b) *Medieval*. Along the south section of Trench 6 a pit, 3 ft. 3 in. deep and 12 ft. 2 in. long had been cut from a level 5 ft. 10 in. below

⁹ G.W. Meates, 'Farningham Roman Villa II', *Arch. Cant.*, lxxxviii (1973), 3-7, and Pls. II and III.



(Photo. P.J. Tester)

Tudor Brick Drain in Trench 6.

the modern surface. This projected into the trench 1 ft. 6 in. at the east end and 3 in. at the west. Along the side of the pit had been set five massive posts, averaging over 1 ft. in diameter, sunk over 2 ft. into the floor of the pit. This was covered with a layer of carbonised wood, suggestive of planking. The fill of the pit consisted of heavily burnt material including quantities of fire-reddened clay. In the

filling there were a few scraps of medieval pottery probably of eleventh- or twelfth-century date. It seems evident, therefore, that this was a substantial medieval structure of timber and clay, partly sunk below ground level and originally with a wooden floor. Its purpose and extent to the south could not be determined.

Later. A very well constructed brick drain ran approximately north-south across Trench 6 in the direction of the city wall (Plate IV). This drain is considered to be of late medieval or Tudor date and presumably fulfilled the same purpose as its medieval predecessor in Trenches 1 and 2. The bricks of which it was constructed averaged 8¾ in. x 4 in. x 2 in. Both these trenches gave clear indications that substantial buildings of both the Roman and medieval periods had existed immediately to the south and should the opportunity occur to investigate this area it should not be missed.

THE FINDS

I. POTTERY

(1) Roman Coarse Pottery (Fig. 6)

R.J. Pollard, B.A.

Four contexts produced Romano-British pottery; of these, the clay layer contained just three small sherds, the brown soil a small group, and the Romano-British topsoil and rubbish layer both contained large groups of some importance. The latter two groups were quantified by vessel equivalence analysis, whereby the proportion of a complete vessel rim represented by each rim sherd is measured in percentage terms on a radially divided diameter chart (Orton 1975). Fabric analysis was restricted to the use of a x20 hand lens to examine fresh fractures. Sherds for illustration have been restricted to the less common forms found in north Kent, the more usual forms being referred to parallels from Greenhithe (Detsicas 1966), Rochester (Detsicas 1968; Detsicas 1972), and Richborough (Bushe-Fox 1932).

Group 1 — Romano-British topsoil (Size of sample by vessel equivalence of rims, including samian, 955 per cent): the assemblage is dominated by three distinct classes of vessel; neckless bead-rim jars in reduced sandy fabrics (c. 21 per cent), neckless everted-rim jars in BB2 fabrics (c. 13 per cent), and decorated pie dishes in BB2

ROCHESTER 1974-75

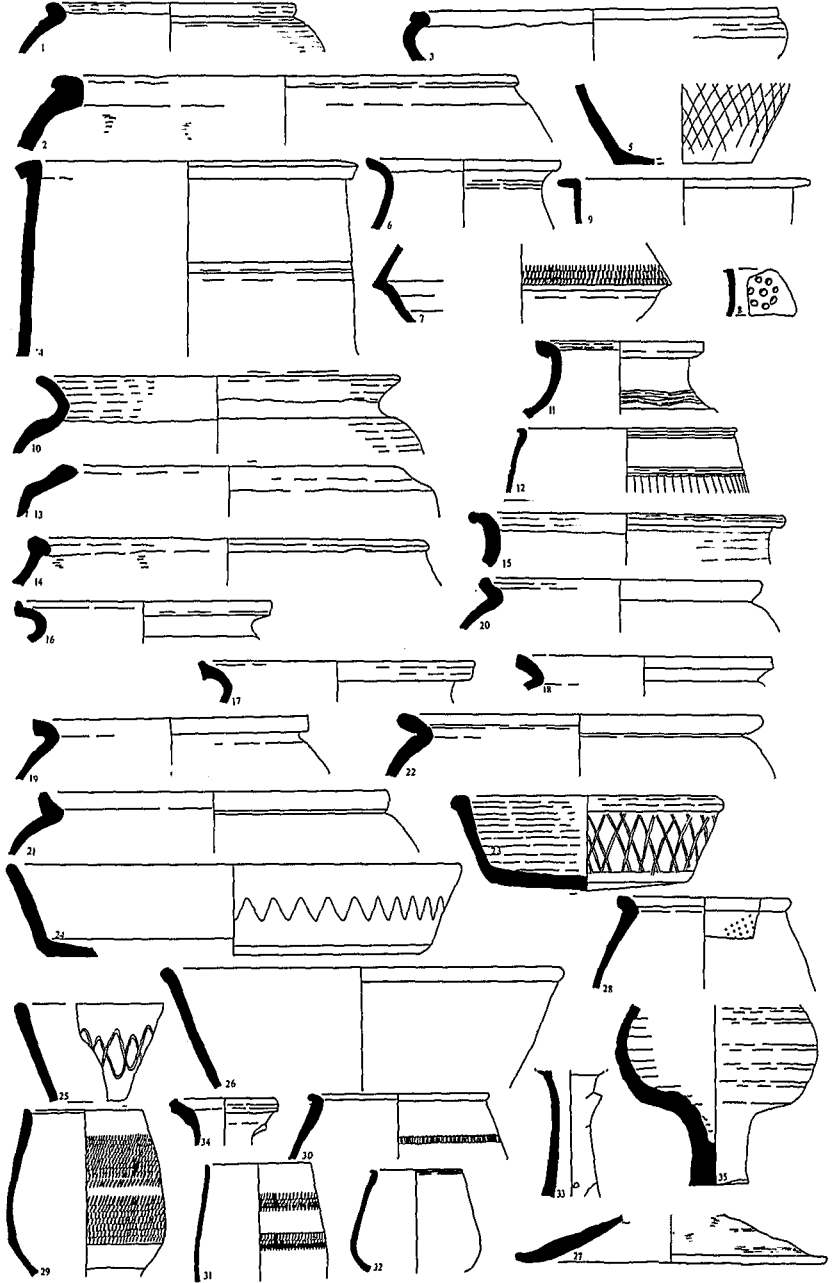


Fig. 6. Roman Pottery (1/4).

(c. 10 per cent). The bead-rim jars include nos. 1, 2, Detsicas 1966, 118 and 120, and Detsicas 1968, 12, 23 and 54. Other types of vessel present include necked jars (Detsicas 1966, 54–56) in reduced sandy fabrics, BB2 dog-dishes, and in fine reduced micaceous fabrics, tall-rim poppy-head beakers, biconical beakers (nos. 6, 7), and jars or beakers with short-everted rims, sometimes necked (Detsicas 1966, 60; Detsicas 1972, 16). All these forms are common finds on excavations throughout north-west Kent, and all may reasonably be claimed to be local products (Allen 1954; Catherall forthcoming; Miles forthcoming; Noël Hume 1954). The pink ware with a white colour-coat frequently applied to the exterior, which is again a regular occurrence in north Kent (see for example the Ospringe cemetery collection at the Maison Dieu in Ospringe), appearing in all three groups of pottery from the north wall-bank here under discussion, is in all probability a local product, although there are as yet no known kiln sites.

Other vessels present include a shell-tempered storage jar (Detsicas 1972, 22), a pinched-spout flagon (Bushe-Fox 1932, 207) in a brown, slightly sandy fabric, a mica-dusted bowl (no. 9) and the unusual bowl or jar illustrated (no. 4). There is one mortarium, which is very closely paralleled by Detsicas 1972, 29 and 30, both in form and fabric.

The coarse wares provide little close-dating evidence; the mortarium is dateable to *c.* A.D. 130–180, and the mica-dusted bowl, is at the latest, of early second-century manufacture. The majority of sherds could be as late as *c.* A.D. 160 in deposition, but scarcely later: the absence of undecorated pie-dishes, first manufactured in the later Antonine period, must be considered significant, even as negative evidence. The earliest sherds — a shell-tempered bead-rim jar, the necked jars, the mica-dusted bowl, and the biconical beakers, could all be of first-century derivation, but may equally be considered as early second-century. The overall date range of the coarse pottery may thus cover 50 years or so, from A.D. 110–160, in a round figure.

Group 2 — Romano-British brown soil (Size of sample by vessel equivalence of rims, including samian — 244 per cent)

The major classes of vessel found in Group 1 are present — bead-rim and sand-tempered jars, BB2 jars and dishes — alongside tall-rim poppy-head beakers in fine reduced micaceous ware, BB2 everted-rim beakers (Detsicas 1966, 234), and several shell-tempered sherds, one at least being from a storage jar. Also present are clay-pellet rough-cast sherds in fine micaceous brown fabric, with buff and grey metallic colour-coats; sherds of “Cologne” rough-cast ware (Greene 1978, figs. 2, 3, no. 1); a Drag. 36 form

vessel in fine micaceous orange fabric without the barbotine decoration; a mortarium in close grey-buff fabric containing mica, chalk and haematite, but without trituration grit on the upper body/rim sherd (Detsicas 1972, 36), plus the vessels illustrated (nos. 2, 4, 10-12).

The brown soil assemblage may be bracketed within the same date-range as that of Group 1; the absence of the biconical beakers and necked jars tempts one to give the group a later *terminus post quem*, but in such a small assemblage it would be unwise to heed negative evidence.

Group 3 — Domestic rubbish deposit (Size of sample by vessel equivalence of rims, including samian — 1927 per cent) — The assemblage is dominated by BB2, in particular pie-dishes: pie-dishes *c.* 52 per cent, everted-rim jars *c.* 9 per cent, dog-dishes *c.* 6 per cent, everted rim-beakers *c.* 1.5 per cent. Of the pie-dishes, 60 per cent are definitely undecorated, and the proportion is almost certainly considerably higher — only 16 per cent are definitely decorated. Sandy neckless bead-rim jars comprise only 2.75 per cent of the assemblage, other sandy jar (and jar/bowl) forms a further *c.* 9 per cent: the latter category includes nos. 15-22 and Detsicas 1968, 10, 12. Bag-beakers are the most common fine ware forms (nos. 28-32) in a variety of fabrics. Other fine ware forms represented include tall-rim poppy-heads, tall everted rim-jars, short everted rim-beakers (all in fine reduced micaceous ware), and a flanged bowl in fine red ware with a white colour-coat. Two mortaria are present, one in a Colchester/Kent white ware (Hull 1963, fig. 65, 5-7), the other in a Brockley Hill sandy fabric (Castle 1976, fig. 6, MS90, MS 126).

Fine wares of known source are rare, but include sherds of Central Gaulish "Rhenish" ware with barbotine decoration (Greene 1978, 18), a plain-rim beaker of Nene Valley/"Cologne" ware, a beaker in Colchester colour-coated ware (no. 31 — fabric designation not certain), and a single sherd of Pompeian Red ware (Peacock 1977, fabric 1). Other fine wares include a brown micaceous fabric with brown colour-coat and clay-pellet rough-casting on the exterior (of British or Continental design — Greene 1978, 17), and the ? local pink ware with white colour-coat or red-burnishing on the exterior (e.g. no. 33).

A handful of sherds in non-sandy coarse fabrics is also present: body sherds in shelly fabric (probably from a storage jar), in a black flint-grog-tempered fabric, and in hard and soft grogged fabrics — the latter including the bead-rim no. 13. Patch Grove ware is represented by a single small sherd. Dating evidence: individual vessels. Brockley Hill mortarium *c.* A.D. 110-150; Colchester/Kent

mortarium — later second century to early third century (or somewhat later); Central Gaulish “Rhenish” ware *c.* A.D. 150–200 (the date range awaits confirmation through excavation); ?Colchester colour-coated beaker *c.* A.D. 175–250 + (Hull 1963, 177–8, form 392). The Nene Valley/“Cologne” beaker is of an uncertain date, as differentiation between the fabrics of the two sources is impossible macroscopically or under a hand-lens — a Nene Valley source would imply a *terminus post quem* of *c.* A.D. 150. The Pompeian Red ware sherd must be considered residual (Peacock 1977, 159).

The most important piece of positive dating evidence is the large number of undecorated rounded-rim pie-dishes, a form apparently introduced into the BB2 repertoire in the later second century. In conjunction with dateable fine wares, this suggests a *terminus post quem* of *c.* A.D. 160, and perhaps a somewhat later date is more likely. The amount of earlier material is small enough to allow residuality to be considered a probability. The *terminus ante quem* may be suggested by employing the negative occurrence of coarse ware flanged bowls, which probably first appeared early in the second third of the third century; they occur very rarely in deposits considered to be of an earlier date than *c.* A.D. 230. It is to be admitted that well-dated early-mid third century groups are at a premium, however. The absence of Oxford colour-coated ware, which might be expected in deposits from the second half of the third century onwards (Young 1977, 133), provided further negative evidence for a *terminus ante quem* within the first half of the century; it will be realised that the *terminus ante quem* could be as early as the very late second century, however. Trier “Rhenish” ware is virtually the only fabric that is exclusively early-mid third century in its importation (Greene 1978, 18), and it is too uncommon to allow any significance whatsoever to be placed in its absence from this deposit. The broadest date-range is therefore *c.* A.D. 160–250, although the possibility of refining this range to *c.* A.D. 180–230 remains open.

The sherds from the clay layers — these comprise (i) a short-everted rim in fine reduced micaceous ware; (ii) a small sandy grey body sherd; (iii) a fairly fine, micaceous dark grey fabric sherd, with possible very fine quartz inclusions, and a panel of barbotine dots on the exterior — the fabric is similar to the Highgate Wood fine ware (Orton 1977, 32).

Summary of dating. Two large groups of pottery are present, from the Romano-British topsoil and the rubbish deposit. These were examined under a hand lens, and quantified by vessel equivalence analysis. The date-ranges of the two groups are considered to be: first half of the second century and later second to early/mid third

century, at the latest, respectively. There is probably little or no overlap in the date ranges of the two groups. A third, smaller group, from the brown soil, contains sherds joining with others from the Romano-British topsoil; this group may be placed within the date range of the topsoil group.

Description of illustrated vessels (wheel-turned unless stated otherwise).

1. Grey sandy fabric, with black surfaces, burnished on the exterior and over the rim. Gp. 1.
2. Grey sandy fabric. Joining sherds from Gps. 1 and 2.
3. Coarse grey sandy fabric, with brown margins and black surfaces. Burnished on shoulder and over the rim. Possibly hand-made. Considered here to be a bowl form. Gp. 1.
4. Finely irregular white fabric containing haematite and black iron ore; similar to Nene Valley fabrics. Grey to brown metallic colour-coat on all surfaces. Joining sherds from Gps. 1 and 2. A decidedly unusual vessel, for which local parallels do not apparently exist.
5. Fine micaceous grey fabric, burnished on the exterior, and with a tooled lattice. Probably of Greenhithe 234 (Detsicas 1966) form, this base illustrates that the lattice is not confined to BB2 and other sandy fabrics. Gp. 1.
6. Fine micaceous black fabric, with red margins and black surfaces, burnished on the exterior and over the rim. Possibly from a biconical beaker, and quantified as such. Gp. 1.
7. Fabric as 6, with rouletting. Gp. 1.
8. Fine micaceous black fabric, with brown margins and surfaces. Barbotine dots in a rosette scheme, an unusual pattern not normally associated with the local industry, or with that of Highgate Wood (Brown and Sheldon 1974). Possibly an import from the Continent. Gp. 1.
9. Fine black fabric, with brown margins and surfaces. Mica-dusted on the rim and exterior. The fabric contains sparse large (> 1 mm.) haematite/grog inclusions. Cf. Marsh 1978, form 35. The fabric is finer than that described by Marsh (*ibid.*, 123), and could be an import. Gp. 1.
10. Coarse sandy fabric, similar to that of 3 above, with grey core, brown margins and surfaces. Occasional coarse red grog inclusions. Burnished on the shoulder and upper rim externally, and on the rim and neck internally. Gp. 2.
11. Fine micaceous brown fabric containing sparse "chalky" inclusions. White slip on exterior and over the rim, burnished on rim, and lower neck externally. Gp. 2.
12. Fine brown fabric, metallic black slip on all surfaces. Possibly

Colchester product (Hull 1963, form 391).

13. Brown grogged, hand-made vessel, abraded and almost certainly residual. Gp. 3.

14. Pink/grey sandy fabric, hand-made, with smooth surfaces. Probably residual. Gp. 3.

15. Sandy brown fabric with black surfaces. Burnished on the exterior except on the rim, and over the rim internally. A slight groove on the rim-top. Gp. 3.

16. Grey fine sandy fabric, with brown margins and grey surfaces. Found on the Higham kiln site (Catherall forthcoming, 40). Gp. 3.

17. Similar fabric to 16. A fairly common local form, found on the kiln site at Higham (Catherall forthcoming, 41). Gp. 3.

18, 19. Hard, somewhat brittle sandy grey fabric, the latter vessel with a brown core. The angularity of the short everted rim is unusual, being more commonly associated with necked vessels. Gp. 3.

20. Grey sandy fabric, with brown margins and black surfaces. Cf. Catherall forthcoming, 32. Gp. 3.

21, 22. Similar fabric to 18 and 19. 22 has a metallic grey slip on the exterior and over the rim, flaking off. Gp. 3.

23. Brown sandy fabric, with grey margins and surfaces. The surfaces are facet-tooled, with tooled lattice. This vessel might be considered a copy of BB2; however, vessels of a similar degree of crudeness from Greenhithe (Detsicas 1966) e.g. 171, 173-6, 180, 182-3, 186, are classified by Williams (1977, 198) as BB2. This highlights the problems of definition of BB2 in production areas, where the range of variation in quality may be greater than in areas of importation such as the northern frontier. Williams ascribes two pie-dishes found in previous excavations at Rochester (Detsicas 1968, 18 and 19; Williams 1977, 198) to the same industry as the crude Greenhithe vessels. All of the latter come from a deposit dated c. A.D. 120-150 (Layer 17: Detsicas 1966, 145), and in the present author's opinion are to be distinguished from Greenhithe 58, 59, 61-63, which are of better quality manufacture (pers. exam., Dartford Museum). The latter series comes from a slightly later deposit (Oven 1: Detsicas 1966, 145, c. A.D. 160+), and are matched by one or two vessels from layer 17 (e.g. 181). Williams, erroneously in the author's opinion, ascribes both series of vessels (171, etc.; 58, etc.) to the same elusive factory. Vessel 23 has been considered as BB2 for quantification here. Gp. 3. The remainder of the pie-dishes from the north wall site are of a better quality, incontrovertibly BB2, matched by the products of the kilns at Chalk (Allen 1954) and Higham (Catherall forthcoming), and by the Colchester (Hull 1963; Farrar 1973) factories. The same can be said of the other BB2 forms from the north wall.

24. Sandy grey BB2 fabric, tooled decoration. Gp. 3.
25. Fabric as 24, with unusual decoration. Diameter of rim approx. 32 cm. Gp. 3.
26. Fabric as 24, but more compact. Gp. 3.
27. Grey close fabric, probably with sub-visible quartz. Brown margins, grey surfaces. Gp. 3.
28. Fine grey micaceous fabric, with red margins and grey surfaces, burnished externally and over the rim. Part of a barbotine dot panel survives. Gp. 3.
29. Fabric as 28, with rouletting. Burnished exterior except lowermost part, and over rim. Gp. 3.
30. Fine micaceous black fabric with brown margins and black surfaces, burnished externally and over the rim, and a single rouletted line. Gp. 3.
31. Colchester brown colour-coated ware, rouletted. Hull 1963, form 392. Gp. 3.
32. Fine micaceous brown fabric, with a metallic grey colour-coat overall. The surface has a slightly rough feel, and the vessel is fired to a "stoneware" consistency. Source unknown; a Romano-British or Continental origin is equally possible. Gp. 3.
33. Fine micaceous pink fabric, with white colour-coat on the exterior. An uncommon flagon form, but possibly of local manufacture — cf. Ospringe cemetery series for fabric. Note the small vent hole at the base of the neck, and the handle application scar next to it. Gp. 3.
34. Orange sandy fabric with white colour-coat. Flagon. Gp. 3.
35. Similar fabric to 34, with pimply surfaces and cream colour-coat on the exterior. The manufacture, although wheel-turned is quite rough. From Gp. 3. come two pedestal base-lower bodies, and body sherds of a third, representing three distinct vessels of equal size. The vessels were unlikely to have been free-standing, as they are ill-balanced and the bases poorly formed; the co-occurrence of three suggests a form of "triple-vase", but no sherds either of the ring that would thus perhaps link them, as with scars suggesting the attachment of a ring, or another vessel, were recovered. The simplest explanation is therefore of three separate vessels, perhaps performing a common function in a single place, being dumped together. A "ritual" function cannot be overlooked, but a domestic one is equally possible. Gp. 3.

QUANTIFICATION OF THE POTTERY BY VESSEL EQUIVALENCE ANALYSIS OF RIMS
(Results tabulated as percentages of the total assemblage of each Group (P = form present))

<i>Fabric</i>	<i>Form</i>	<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>	<i>Illustrated examples</i>
Reduced sandy	Neckless bead-rim jars (wheel turned)	20.84	P	2.75	1, 2
Others	Neckless bead-rim jars (incl. hand-made sandy)	1.15		0.73	13, 14
BB2	Everted-rim jars	12.88	P	9.44	20-22
Reduced sandy	Lid-seated jars			2.54	
Reduced sandy	Necked jars/bowls	1.57		1.45	
Reduced sandy	Other jars	4.61	P	5.35	10, 15-19
BB2	Everted-rim beakers		P	1.56	
Reduced sandy	Everted-rim beakers			1.14	
BB2	Pie-dishes, decorated	10.47	P	8.67	23
BB2	Pie-dishes, undecorated	0		31.76	
BB2	Pie-dishes, ?	0		11.88	
BB2	Dog dishes	2.41	P	6.23	24-36
Reduced sandy	Other bowls and dishes	1.36			3
Reduced sandy	Lids	2.93		0.42	27
Fine reduced micaceous	Biconical beakers	4.19	P		6, 7
Fine reduced micaceous	Tall-rim poppy-head beakers	5.76	P	0.62	
Fine reduced micaceous	Short-everted-rim beakers			1.92	
Fine reduced micaceous	Bag (incl. short-rim "poppy-head") beakers	1.99			
Fine reduced micaceous	Necked jars/beakers	3.25	P		8
Fine reduced micaceous	Other jars/beakers	1.99	P	0.83	
Other fine wares	Bag beakers		P	3.94	12, 31-32
Other fine wares	Other forms	0.73	P	0.42	9
Shell-tempered	Storage jars	1.68	P	P	
Fine white ware	Jar/bowl, cylindrical upper body	2.93	P		4
Misc.	Flasks/Flagons	11.62	P	1.71	11(?), 33, 34
Misc.	Mortaria	1.15	P	1.25	
Samian ware	All forms	6.39	P	4.26	

REFERENCES

- Allen 1954 A.F. Allen, 'Roman and other Remains from Chalk, near Gravesend', *Arch. Cant.*, lxxviii (1954), 144-58.
- Arthur and Marsh 1978 P. Arthur and G.D. Marsh (eds.), *Early fine Wares in Roman Britain*, BAR 57, Oxford 1978.
- Brown and Sheldon 1974 A.G. Brown and H.L. Sheldon, 'Highgate Wood, the Pottery and its Production', *London Archaeol.*, no. 9 (1974), 223-31.
- Bushe-Fox 1932 J.P. Bushe-Fox, *Third Report on the Excavation of the Roman Fort at Richborough Kent*, Reports of the Research Committee of the Society of Antiquaries of London, x, Oxford 1932.
- Castle 1976 S.A. Castle, 'Roman Pottery from Brockley Hill, Middlesex, 1966 and 1972-74', *Trans. London and Middx. Arch. Soc.*, xxvii (1976), 206-27.
- Catherall forthcoming P.D. Catherall, 'A Romano-British Pottery Kiln Site at Higham, Kent', forthcoming.
- Detsicas 1966 A.P. Detsicas, 'An Iron Age and Romano-British Site at Stone Castle Quarry, Greenhithe', *Arch. Cant.*, lxxxii (1966), 136-90.
- Detsicas 1968 A.P. Detsicas, 'I. Pottery', in A.C. Harrison and C. Flight, 'The Roman and medieval Defences of Rochester in the Light of recent Excavations', *Arch. Cant.*, lxxxiii (1968), 81-91.
- Detsicas 1972 A.P. Detsicas, 'Roman Pottery', in A.C. Harrison, 'Rochester East Gate 1969', *Arch. Cant.*, lxxxvii (1972), 132-6.
- Farrar 1973 R.A.H. Farrar, 'The Techniques and Sources of Romano-British black-burnished Ware', in A. Detsicas (ed.), *Current Research in Romano-British coarse Pottery*, CBA Research Report 10, London 1973, 67-103.
- Greene 1978 K.T. Greene, 'Imported fine Wares in Britain to A.D. 250: A Guide to Identification', in Arthur and Marsh, 1978, 15-30.
- Hull 1963 M.R. Hull, *The Roman Potters' Kilns of Colchester*, Reports of the Research Com-

- mittee of the Society of Antiquaries of London, xxi, Oxford 1963.
- Marsh 1978 G.D. Marsh, 'Early second century fine Wares in the London Area', in Arthur and Marsh 1978, 119-24.
- Miles forthcoming A. Miles, 'Excavations at Broomhey Farm, Cooling', forthcoming.
- Noël Hume 1954 I. Noël Hume, 'Romano-British Potteries on the Upchurch Marshes', *Arch. Cant.*, lxviii (1954), 72-90.
- Orton 1975 C.R. Orton, 'Quantitative Pottery Studies: Some Progress, Problems and Prospects', *Science and Archaeology*, xvi (1975), 30-5.
- Orton 1977 C.R. Orton, 'Roman Pottery (excluding samian)' in T.R. Blurton (ed.), 'Excavations at Angel Court, Walbrook, 1974', *Trans. London and Middx. Arch. Soc.*, xxviii (1977), 30-53.
- Peacock 1977a D.P.S. Peacock (ed.), *Pottery and early Commerce*, London 1977.
- Peacock 1977b D.P.S. Peacock, 'Pompeian red Ware', in Peacock 1977a, 147-61.
- Williams 1977 D.F. Williams, 'The Romano-British black-burnished Industry: An Essay in Characterisation by heavy Mineral Analysis' in Peacock 1977a, 163-220.
- Young 1977 C.J. Young, *The Roman Pottery Industry of the Oxfordshire Region*, BAR 43, Oxford 1977.

The Samian Ware

A.P. Detsicas, M.A., F.S.A.

The samian ware found in the excavations calls for little comment. It consisted of the usual range of forms normally found during the second century. Central Gaulish material was preponderant, though a few sherds of residual South Gaulish samian were also present as well as some East Gaulish scraps.

Decorated sherds, either of Form 37 or, less frequently, 30, of Central Gaulish provenance were recorded in the styles of CASVRIVS, CINNAMVS, BVTRIO, SACER, CETTVS,

PATERNVS, CATVLLVS, ADVOCISVS and PUGNVS, but none were sufficiently large to restore the scheme of decoration.

A number of potter's stamps was also recovered. TETT(VRO·F) on Form 33, VERECVND· on Form 33, IVS(TIM) on Form 18/31, from the rubbish layer incorporated in the wall-bank in Trenches 3 and 4; PAT(RI·CIMA), probably on Form 18/31, from the Romano-British topsoil sealed by the wall-bank in Trenches 3 and 4; and, from unstratified contexts, APRILIM· on Form 33, (C)ARV(SAF) on Form 33, and (GERM)ANIOFC· on Form 33.

A Mortarium from Rochester

K.F. Hartley, B.A., F.S.A.

This mortarium (Fig. 7) was made in one of the workshops active at Colchester in the second half of the second century. The herring-bone stamp is from one of several dies used there primarily within the period A.D. 140-170. Such stamps are particularly common on the Antonine Wall (M.R. Hull, *The Roman Potters' Kilns of Colchester*, Oxford 1963, 112-6).

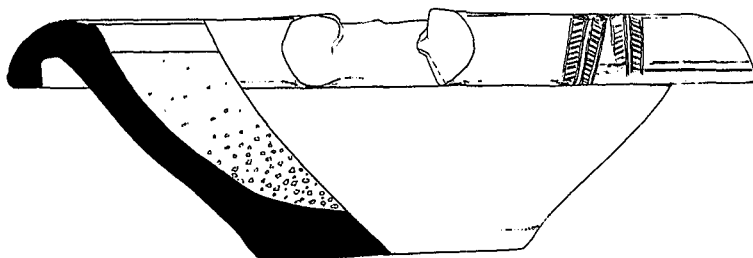


Fig. 7. Roman Mortarium (1/4).

(2) Medieval Pottery

P.J. Tester, F.S.A.

- A. Pottery from between the two flint layers (layer 13 shown in Fig. 2). Sherds from this context represent five identifiable vessels:
- (1) Strap handle of unglazed grey ware jug, probably of the squat, wide type represented by an example from Canterbury figured in

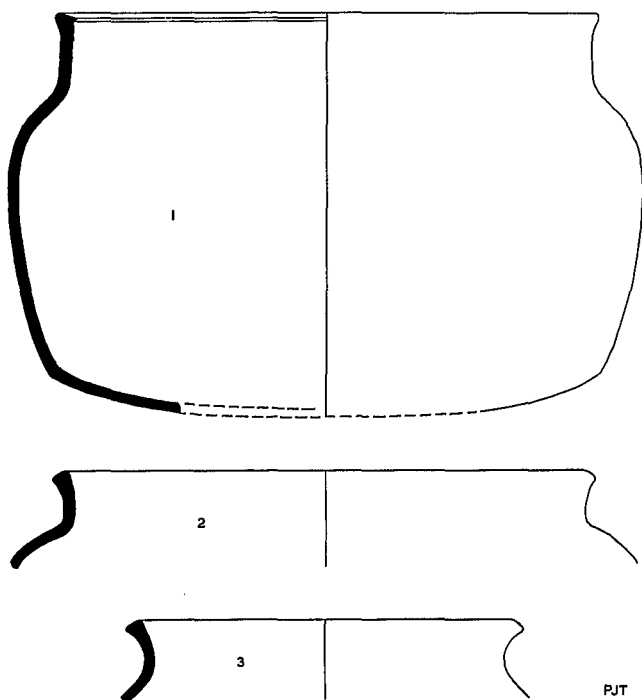


Fig. 8. Medieval Pottery. 1, Cooking-pot from Pit M1; 2-3, from Pit M3 (1/4).

Arch. Cant., lxxviii (1954), 137. The handle has similar multiple stabbings.

(2) Strap handle of unglazed grey ware jug, fired to dull orange-red on the surface, and belonging to the same class of vessel as no. 1. A single row of stabbings occurs down the shallow medial groove of the handle.

(3) Two small wall sherds of a mottled green-glazed jug of grey ware.

(4) A small fragment of a buff ware jug with green glaze similar to no. 3.

(5) Rim of cooking-pot of grey-buff ware tempered with sand and a few fragments of crushed shell. The rim form is closely similar to that of a vessel from Leigh, figured in *Arch. Cant.*, xcii (1976), 190, no. 36, and is probably to be classed with those from Eynsford

Castle assigned to Phase D (*Arch. Cant.*, lxxxvi (1971), 165).

From these comparisons it would appear that the sherds most likely form a unitary assemblage belonging to the thirteenth or early fourteenth centuries. There are no intrusive earlier medieval elements and a piece of glazed roof-tile in association is compatible with the suggested dating. As usual in Rochester medieval contexts, the layer also contained a few Romano-British rubbish survivals.

B. Fig. 8, no. 1. Cooking-pot of coarse grey-brown shelly ware from Pit M 1. The internal bevel of the rim resembles examples from Canterbury dated provisionally to the first half of the twelfth century (*Arch. Cant.*, lxxviii (1954), 131-2).

C. Fig. 8, nos. 2-3. Rims of two vessels of similar ware and form from Pit M 3. Grey ware containing some fine shell. Probably second half of the twelfth century. Cf. the Eynsford and Lullingstone series in *Arch. Cant.*, lxxvii (1971), 153.

(3) Early sixteenth-century Pottery from Northgate

D.B. Kelly, B.A., F.S.A., A.M.A.

The pottery can be divided into four groups:

1. Hard-fired wares, with small, sandy grits, red or red with a grey core, the external surfaces ranging in colour from pinkish buff through reddish brown to purple, presumably from a local kiln or kilns.
2. Surrey, or Southern whitewares.
3. Miscellaneous glazed or painted wares.
4. Imported stoneware.

1. *Local hard-fired Wares.*

About two-thirds of the pottery belongs to this group. The general forms, large and medium sized jugs, flanged bowls or dishes, cooking-pots with recessed rims and lids are known from sites of the early sixteenth century throughout south-eastern England¹⁰. They are most nearly paralleled by the pottery made at the Hareplain kiln, Biddenden¹¹, but differ in minor details, the

¹⁰ e.g. in Kent at Pivington (*Arch. Cant.*, lxxvii (1962), 42-3) and Temple Manor, Strood (*Arch. Journ.*, cxxii (1965), 129-31).

¹¹ *Arch. Cant.*, lxxxvii (1972), 159-76.

large jugs, for instance, having the base of their handles making a smooth join with the body instead of showing the exuberant thumb impressions of the Hareplain jugs. Without analysis of the fabric¹² it is not possible to say whether or not they came from the same kiln or group of kilns. There are sherds from: (a) Six large jugs or 'gotches', with flat-topped rims, pricked strap handles and, usually, a bung-hole. There is one bung-hole present. Cf. Hareplain type I jugs (Hareplain, fig. 2). (b) Two medium sized jugs with upright, pointed rims, one having a single moulding below. Patch of green glaze on neck of one. Cf. Hareplain type II jugs (Hareplain, fig. 2). (c) Two flanged bowls or dishes, with upturned, concave flanges with pointed top. Cf. Hareplain type III flanged bowls (Hareplain fig. 4, 35). (d) Two cooking-pots, with wide, sharply everted rims, which have a concave upper surface to provide a seating for a lid. Cf. Hareplain type III cooking-pots (Hareplain fig. 5, 44). (e) Two handles from lids, close to the Hareplain examples (Hareplain fig. 6, 56-8). (f) Two medium sized jugs with exaggerated, wavy thumb-pressed bases. The jugs from Hareplain with thumb-pressed bases were smaller and had far less pronounced thumbing. (g) Cooking-pot with squared, undercut rim. The type was not found at Hareplain, but the rim is like those on some type II flanged bowls. (h) Globular jar with internal, thin yellow-green glaze on base and neck; top of rim missing.

2. *Surrey or Southern Whitewares.*

(a) Base sherd from medium sized jug. (b) Pricked strap handle from jug. (c) Handle from cup; ribbon-like with concave upper surface. (a-c have patchy 'Tudor green' glaze.) (d) Part of small, shallow dish, unglazed.

3. *Miscellaneous.*

(a) Small, single-handled, corrugated mug; grey ware with pink surface and covered with a treacly, green glaze. Corrugated cups in Tudor greenware occur in early sixteenth-century contexts, but the closest parallels appear to be the rather later, wider mugs from the Farnborough kilns.¹³ Our mug may possibly copy an earlier form. The Lower Parrock kiln in Sussex produced single-handled mugs, but of a different form.¹⁴ (b) Body sherds from two jugs or large jars with white-painted decoration, both hard-fired wares, one red, the other red with grey core.

¹² *Post-med. Arch.*, 13 (1979), 114-6.

¹³ *Surrey A.C.*, lxxviii (1971), 74 and fig. 3, C2 left.

¹⁴ *Post-med. Arch.*, 13 (1969), 103, fig. 15.

White-painted wares were made in Surrey and Sussex,¹⁵ though no kiln is known from Kent. There is a bung-hole jug from Pivington with white-painted decoration and a storage jar from Temple Manor, Strood.¹⁶ (c) Bung-hole; a hard-fired, sandy grey ware. (d) Feet from two separate pipkins, both of hard-fired red ware with reddish brown surfaces. One has a patchy brown glaze on the interior, the other a richer, speckled brown glaze. The type occurs in the early sixteenth century.¹⁷

4. *Imported Stonewares.*

Sherds from at least four Raeren jugs. These jugs were imported from the late fifteenth century and are common in early sixteenth-century contexts.¹⁸

II. COINS AND JETTONS

E.H. Redfern

I. Roman

- (1) Trench 4, Wall-bank, Vespasian *denarius*, A.D. 78-79.
Obv.: CAESAR VESPASIANVS AVG Laureate head r.
Rev.: CERES AVGVST. Ceres standing l., holding corn-ear and sceptre. R.I.C. 132.
- (2) Trench 7. Romano-British top-soil. Trajan, *sestertius* A.D. 103-111.
Obv.: IMP CAES NERVAE TRAIANO AVG GER DAC PM TRP (COSV PP) Laureate draped bust r.
Rev.: SPQR OP(TIMO P)RINCIPI. Emperor standing l. holding sceptre, being crowned with wreath by Victory—S C. R.I.C. 549.
- (3) Trench 4, Wall-bank. Faustina I, *dupondius*. Issued between her death (A.D. 141) and A.D. 161 by her husband Antoninus Pius.
Obv.: DIVA FAV(STINA). Diademed draped bust r.
Rev.: (AVG)VSTA. Ceres standing l. holding torch and sceptre SC. R.I.C. 1173.

¹⁵ K.J. Barton, *Medieval Sussex Pottery*, Chichester 1979, 122-9; *Sussex A.C.*, cxviii (1980), 108-10.

¹⁶ *loc. cit.* in note 10, figs. 6, ix, and 14, 10 respectively.

¹⁷ *Antiq. Journ.*, xl (1960), 192-4.

¹⁸ J.G. Hurst, in Barry Cunliffe, *Winchester Excavations, 1949-60*, i (1964), 142-3 and in *Wilt. Arch. Mag.*, lxxii (1967), 74.

- (4) Trench 2., Wall-bank. Antoninus Pius, *denarius*.
Obv.: ANTONINVS AVG PIVS PP TRP COS III.
Rev.: AEQVITAS AVG. R.I.C. 74a.
- (5) Trench 1. Romano-British top-soil, sealed by wall-bank.
 Antoninus Pius, *sestertius*. A.D. 140–143.
Obv.: ANTONINVS AVG PIVS PP TRP COS III.
Rev.: ITALIA Italy seated 1. on globe holding cornucopiae
 and sceptre. R.I.C. 74.
- (6) Trench 6. Romano-British top-soil. Commodus, *denarius*,
 A.D. 189.
Obv.: L AVREL COMMODVS AVG TRP IIII.
Rev.: FIDEI COH PM TRP XVI COS VI. Fides standing 1.
 holding corn-ears and standard. R.I.C. 220.
- (7) Trench 6. Unstratified. Tetricus Junior, *antoninianus*. A.D.
 270–274.
Obv.: PIV ESV TETRICVS CAESAR
Rev.: SPES AVGG. R.I.C. 270.
- (8) Trench 1. Pit cut through wall-bank. Constantine I, *Ae* 17.
 Mint of Trier A.D. 324–326.
Obv.: CONSTAN TINVS AVG, Laureate head r.
Rev.: PROVIDEN TIAE AVGG. Camp-gate, star above.
 PTR. LRBC 12.
- (9) Trench 6. Fourth-century pit. Constantinian *Ae*. 17 Mint of
 Trier A.D. 330–335.
Obv.: (CONSTAN) TINOPO(LIS) Helmeted bust of
 Constantinopolis 1.
Rev.: Victory on prow 1. LRBC 52 or 59.
- II. Later
- (10) Trench 6. Unstratified. Charles I Maltravers token farthing
 1634–36 A.D. Incomplete.
Obv.: Mint Mark harp
Rev.: Mint mark. Piece missing.
 Peck type 3c. A “double-ring type” token farthing, used after
 many forgeries of the “single-ring type” had been put into
 circulation.
- (11) Northgate. Seal of Pit 2. Charles I clipped shilling Tower
 Mint 1643–48. (the legend had been completely clipped off).
- (12) Trench 6. Unstratified. Nuremberg *jetton* of Hans Schultes,
 late sixteenth century.
Obv.: Reichsapfel in trilobe Hans Schultes Nurnberg.
Rev.: Three crowns and three lys “Glick kumpt von Got ist
 war”.
- (13) Trench 3. Demolition debris of city wall. Nuremberg *jetton*.
 Second quarter of seventeenth century.

Obv.: Reichapfel in trilobe.

Rev.: Four crowns and four lys in circle around flower.

III. THE BRACELETS (Figs. 9-10)

Hilary Cool

Cable twist bracelets were the commonest single group of bracelets found in Roman Britain and were in use from the late first to the fourth century A.D.. Penannular ones such as no. 1 were always in a minority compared with the number fastened by hook-and-eye terminals. The penannular examples tend to be more massive than the other varieties of cable twist bracelets and this may indicate that they had a more limited date-range. In the fourth century there was a development of heavier, more massive bracelet groups, such as that represented here by no. 2, and this development may have had a rejuvenating effect on the long established cable twist form and have led to the production of heavy penannular examples like no. 1. Certainly, where penannular cable twist bracelets come from stratified contexts they have fourth-century dates but unfortunately there are only very few of these. One came from Grave 143, Lankhills cemetery, Winchester (Clarke 1979, Fig. 77/155) which had a date of *c.* A.D. 350-370 based on vertical stratigraphy; another from a burial at Richborough (Cunliffe 1968, Pl. XL, 153) was found with coins, the latest of which was one of Theodosius (A.D. 379-395). On such evidence we cannot be sure that penannular cable twist bracelets were confined to the fourth century, but it is a strong possibility.

Massive bracelets with blocks behind their hook and eye terminals like no. 2 are found in both plain and decorated forms. Only a few come from well-dated contexts and these suggest that they were in use during the mid- to late-fourth century; one pair came from Grave 326, Lankhills cemetery, Winchester (Clarke 1979, Fig. 87, 403 and 406) which was dated to *c.* A.D. 350-380 by the pottery vessels found in it, another pair came from Krefeld Gellup Grave 1362 (Pirling 1974, Taf. 24/4 and 6) which also contained a coin of Valens (A.D. 364-378) and one of Gratian (A.D. 367-383). There is slight evidence that the type developed earlier in the fourth century. Most of the bracelets of this type have the blocks behind the terminals cast in one piece with the rest of the bracelet. No. 2 has the blocks inserted as separate drums and this is a most unusual feature shared with a very similar bracelet from Hadstock, Essex (Cambridge Museum of Archaeology and Ethnology, no. 48.896A).

Snake-headed bracelets had an intermittent popularity in Roman

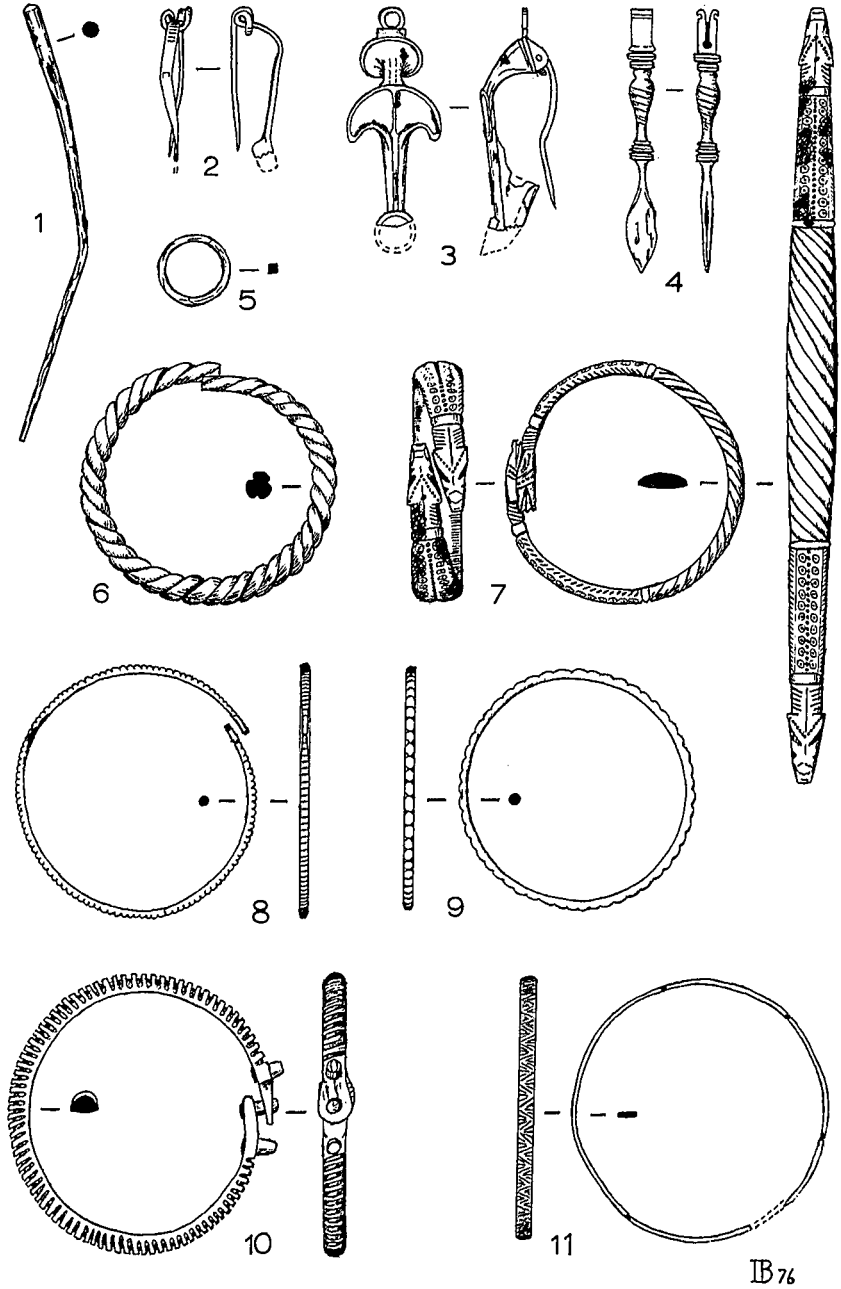


Fig. 9. Small Finds (1/2).

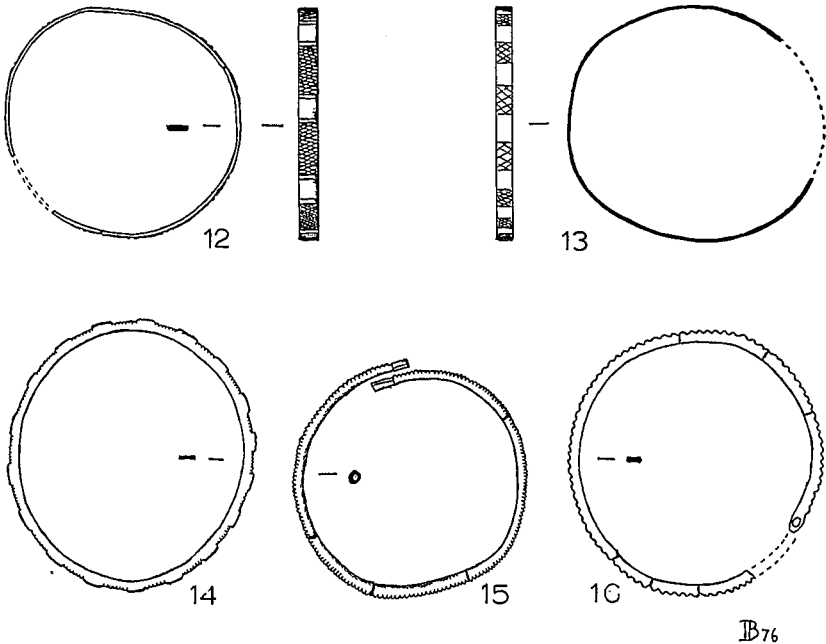


Fig. 10. Small Finds (1/2).

Britain and took a variety of forms. No. 3 belongs to the group with well-formed, vertical, zoomorphic heads. Only one bracelet of this group has come from a stratified context in Britain and that is a fragment from the general Roman layer at Portchester, which dates from the late-third century to the end of the occupation there (Cunliffe 1975, Fig. 112, 39). Another bracelet of this type came from a possibly Frankish grave at Krefeld Gellup (Pirling 1966, Taf. 55/13). Some members of this group, including no. 3, have their hoops decorated with a variety of motifs arranged in a symmetrical fashion. This method of decoration is also seen on bracelets of the multiple unit group (see for example Clark 1979, Fig. 98, 525) and there can be no doubt that this type of snake-headed bracelet is contemporary with the multiple unit group and can, therefore, be dated to the late-third and fourth centuries A.D.

The combination and order of the decorative motifs seen in no. 3 is precisely paralleled by a penannular multiple unit bracelet from Shernbourne, Norfolk (Norwich Castle Museum, unnumbered). The similarity between the two extends not only to the pattern and ar-

rangement of the decorative motifs, but also the way in which they are worked. Such a complete similarity is very unusual as analysis of complete members of the multiple unit group has shown that the same group of decorative motifs is rarely found on two different bracelets. In an analysis of 46 bracelets, only three pairs were found to have the same group of decorative motifs; this represents less than 0.3 per cent of all the comparisons between pairs that were made. Of these three pairs only one pair had its members coming from different sites. It seems therefore very likely that no. 3 and the Shernbourne bracelet came from the same workshop.

Nos. 4 to 12 are examples of the dominant fourth-century bracelet type which was a light, rectangular-sectioned bangle with simple overlap or drum perforate terminals. There are indications that the type was developed in the late-third century, but the majority of dated examples come from fourth-century contexts. It is possible to isolate individual groups within this general type on the grounds of decoration; all such groups appear to have been in use contemporaneously. All of the groups tend to be evenly spread throughout the civilian parts of Britain. This is best seen in the commonest groups such as the battlement pattern (no. 11) and the grooved decoration (nos. 4-7 and 12), but even the numerically much smaller groups such as the incised zig-zag (no. 8) show the same distribution patterns. An exception to this is the cross-hatched and plain unit group (nos. 9 and 10). Of the 14 other provenanced examples known to me, 11 came from Richborough (Cunliffe 1968, Pl. XLI, 157 and also Ancient Monument Laboratory nos. 7350123, 7351126/1128, 7350901, 7351125, Bushe-Fox nos. 2032 and 2002 and 4 unnumbered examples). The other examples came from Cirencester (Corinium Museum, no. A309), West Dean, Hampshire (Salisbury and South Wilts. Museum, no. 20-38/1950) and Silchester, Hampshire (Reading Museum, no. 03455). This concentration in north Kent, now strengthened by the Rochester examples, must indicate a local workshop producing the pattern.

Nos. 13-16 are very close in appearance to ribbed light bangles similar to nos. 4-7. The method of manufacture, however, is most unusual and these bracelets probably represent an experiment on the part of the bronze worker.

This group is a fairly typical cross-section of fourth-century bracelets. It is difficult to assign a more precise date to them, but the presence of no. 2 *might* suggest that the group was being worn in the middle of the century.

CATALOGUE

No. 6. Three strand penannular, cable twist bracelet with right-hand twist; strands pressed together and finished flat at terminals; hoop circular-sectioned, terminal oval-sectioned.
Diameter 6.2 x 6.4 cm. Section 0.7 cm.

No. 10. Massive D-sectioned band tapering to terminals; upper surface decorated by deep diagonal grooves; blocked hook and eye terminals with edge nicks on eye plate; both blocks and hook are separate drums inserted into perforations in the band.
Diameter 6.7 x 7.1 cm. Section 0.6 x 0.5 cm.

No. 7. Penannular D-sectioned band with rectangular-sectioned, tapering, 'vertical' snake's head terminals. Terminals have cast features of deeply cleft mouth and a triangular projecting block 'ear' on either side behind mouth. Rest of decoration punched and incised. Two parallel diagonal grooves with row of dots between them on either side of terminal between mouth and 'ear'. On top of terminal two vertical grooves across snout and two converging grooves with dots punched along their bases between the 'ears'. Hoop decoration arranged in three symmetrical zones — zones A and C nearest to terminals, zone B (largest) in centre. Zones A and C have central horizontal groove with flanking nicks. Zone B consists of three units, central one of diagonal grooves flanked on either side by unit with central horizontal groove having dots punched into its base, row of ring-and-dots on either side, faint groove parallel to edges and diagonal edge nicks. Four pairs of vertical grooves separate zones and units from each other.
Diameter 6.2 x 6.1 cm. Section 1.3 x 0.4 cm.

No. 9. Square-sectioned band; terminals taper diagonally to form a side-to-side overlap joint; band decorated by slightly diagonal chisel cuts forming a series of blocks; blocks over terminals produced by finer grooves. Broken in two pieces.
Diameter 6.2 x 6.1 cm. Section 0.2 cm.

Description as no. 4 above. Unbroken.
Diameter 6.1 x 6.2 cm. Section 0.2 cm.
Not drawn.

No. 8. Slightly oval-sectioned band with chipped penannular terminals now overlapping, one terminal cylindrical and flat-ended, other tapers slightly to rounded point; band decorated by deep vertical grooves forming small blocks.
Diameter 6.3 x 6.5 cm. Section c. 0.2 cm.

Rectangular-sectioned band with narrowest side by wrist, now broken into twelve pieces. At end of one piece a taper as if for side-to-side overlap joint; very faint traces of indentation along upper edge of band. Incomplete.

Extant length 18.3 cm. Section 0.25 x 0.1 cm.

Not drawn.

No. 11. Rectangular-sectioned band with widest side by wrist, now broken into five pieces. At end of one piece is lower terminal of a top-to-bottom overlap joint; upper side of band decorated by incised zig-zag formed by edge nicks and central zig-zag grooves. Not complete.

Diameter *c.* 6.3 x 6.8 cm. Section 0.4 x 0.15 cm.

No. 12. Rectangular-sectioned band with widest side by wrist, now broken into three pieces. At end of one piece an upper terminal of a top-to-bottom overlap joint. Upper side of band decorated by alternate short plain and long diagonally cross-hatched units, units separated from each other by two, occasionally one, vertical grooves. Not complete.

Diameter *c.* 5.5 x 5.8 cm. Section 0.5 x 0.15 cm.

No. 13. Rectangular-sectioned band with widest side by wrist, now broken into five pieces. At end of one piece has slight suggestion that it may have been from a top-to-bottom overlap joint; upper side of band has traces of alternate plain and diagonally cross-hatched units separated from each other by one vertical groove. Incomplete. Extant length 18.8 cm. Section 0.4 x 0.1 cm.

No. 14. Rectangular-sectioned band with narrowest side to wrist, side-to-side overlap joint. Upper edge of band has shallow battlement pattern with lower parts decorated by units of six to nine vertical grooves.

Diameter 6.4 x 6.9 cm. Section *c.* 0.25 x 0.1 cm.

No. 16. Rectangular-sectioned band with narrowest side to wrist; one end broken, other tapers to side-to-side overlap terminal with central perforation which would have fitted over drum projecting from missing terminal. Upper edge decorated by small semi-circular nicks giving a ribbed appearance. Broken into nine pieces, incomplete. Diameter *c.* 6.7 cm. Section 0.3 x 0.1 cm.

No. 15(?). Oval-sectioned hoop made of sheet of *c.* 0.1 cm. thickness bent round, central seam runs around inner side and there are traces of an inner hollow; side-to-side overlap joint of solid metal. Upper edge decorated by vertical grooves producing uneven ribbing. In centre of hoop opposite terminals are two plain solid

cylinders covered by different corrosion products which suggest that they were fitted into a sheet sheath.

Diameter 6 x 6.3 cm. Section 0.25 x 0.2 cm.

Eight fragments of hoop made in manner of no. 13 above, central hollow infilled by copper alloy corrosion products; no terminals remain. Upper edge decorated by uneven grooved ribbing; one piece has remains of sheet wrapping over top and sides. Not complete. Extant length 15 cm. Section 0.25 x 0.2 cm.

Not drawn.

Six fragments of circular-sectioned hoop made in the manner of no. 13 above; central hollow infilled with possible iron corrosion products. No terminals remain; upper edge decorated by uneven, grooved ribbing. Not complete.

Extant length 14 cm. Section 0.25 cm.

Not drawn.

REFERENCES

- Clarke 1979 G. Clarke, *The Roman Cemetery at Lankhills*, 1979.
 Cunliffe 1968 B.W. Cunliffe (ed.), *Fifth Report on the Excavations of the Roman Fort at Richborough, Kent*, Reports of the Research Committee of the Society of Antiquaries of London, xxiii, Oxford 1968.
 Cunliffe 1975 Barry Cunliffe, *Excavations at Portchester Castle. I. Roman*, Reports of the Research Committee of the Society of Antiquaries of London, xxxii, London 1975.
 Pirling 1966 R. Pirling, *Das römische-fränkische Gräberfeld von Krefeld Gellup*, Berlin 1966.
 Pirling 1974 R. Pirling, *Das römische-fränkische Gräberfeld von Krefeld Gellup (1960-63)*, Berlin 1974.

IV. LEATHERWORK FROM NORTHGATE

Michael Moad

The finds consist of eleven complete, or only slightly damaged, soles of shoes, together with six very substantial portions of other soles, a quantity of off-cuts and fragments of uppers.

The soles in this series may be dated by fashionable style to c. 1320/1450, a relatively wide dating range dictated primarily by the very slow rate of change in the fashions of the period.

Three soles may be selected as examples of the range under discussion. The first of these (and the specimen in the most perfect state of preservation) measures $9\frac{1}{4}$ in. overall. It is for the right foot and has an outward sweeping point at the toe, which may be estimated to be approximately 2 in. in length, or a little over a quarter of the total length of the shoe. This feature, when combined with the overall shape of the sole, would assign its date to the beginnings of the period under discussion, at which time the vogue for pointed footwear had established itself but had not yet produced any ridiculous extravagance of style.

The second sole which may be given special consideration has a usable foot area of some $6\frac{1}{2}$ in.—7 in. in length but an estimated total length of 1 ft., giving a toe length of some 5 in.— $5\frac{1}{2}$ in. (the end of the point on this sole has been cut off, but the line followed by the converging edges of the sole enables its original length to be plotted accurately). This marked increase in the length of toe eventually led to suppressive legislation during the reign of Edward III at which time toe points of six inches were the maximum allowed for a commoner, twelve inches for a gentleman and twenty-four inches or more for a nobleman. These long toes were usually stuffed with hair, wool or moss for support and this would undoubtedly have been the case with the example described above.

The third sole, representing the latter part of the period, is some 8 in. long and 3 in. wide. It does not possess a pointed toe; indeed, the toe of this specimen begins to exhibit that blunt roundness of form which was to culminate in the extremely wide 'bear paw' and 'duckbill' toes of the late fifteenth/early sixteenth centuries.

V. CLAY TOBACCO PIPEMAKER'S DEBRIS FROM GEORGE LANE

David Williams

Unfortunately only a minute amount of material, including seven pipe fragments, was recovered from the site. The site may have been the work-place of Joseph Anderson, *c.* 1816–1868; and/or of James Anderson, *c.* 1847; both resided on the Common, later to become Corporation St.¹⁹ Three of the pipes are marked on the stem, in large serif letters: J. ANDERSON/ROCHESTER. The one bowl fragment is decorated with an embossed eagle, and is probably connected with a public house.²⁰ A more complete

¹⁹ For Joseph Anderson see — Rochester Polls, June 21st, 1816, no. 482, and 18th November, 1868, no. 157. For James — Rochester Polls, July 31st 1847, no. 85.

²⁰ The long established Eagle Inn is situated just outside the east gate of the city.

example in my collection, together with the presence in the material of a farthing of William IV, suggests a date for these fragments of c. 1830-1850.²¹

Another Rochester pipemaker, Thomas Webb, c. 1774-1816, is represented by a single rubbish-survival.²² The remaining two identifiable pipes were made by members of the Birchall family of Chatham. A large bowl, decorated with masonic symbols; and marked around the rim with small serif letters: BIRCHALL/CHATHAM, is probably a pipe of Charles Birchall, c. 1822-1855.²³ The other Birchall pipe has a pointed spur marked: I.B.; an unidentified member of the family. Many pipes with identical initials and stamped on the back of the bowl: BIRCHALL, were recently found at a Birchall kiln site in Chatham, which probably dates from the 1840s.²⁴

One of two clay objects from the Rochester site is a crude, thick, bowl-shaped lump and is possibly a 'blank' for the bowl.

If the site is that of Joseph Anderson it was probably abandoned in 1869, and the pipes found are most likely rubbish-survivals from an earlier period. No post-1850/60 pipes were found in the small section excavated.

VI. SKELETON FROM GEORGE LANE

Dr. J.P. Hayes

The skull is lightly built with a lightly developed nuchal crest. The right temporal line is more obvious than the left. The supra orbital ridges are not present. The external occipital protuberance is small but the mastoid processes are relatively large. The superior orbital margins are straight. The posterior roots of the zygomatic processes blend with the upper borders of the external auditory meati. Since the ischial and pubic rami are absent from both halves of the pelvis the only significant feature was the sciatic notch which on both sides is characteristically female in shape. The above findings confirm the excavator's impression that the skeleton is female.

Since all the epiphyses are fused the age must be greater than 23 years. Since the wisdom teeth are either lost or incompletely

²¹ D.R. Atkinson, 'The Clay Tobacco Pipes; Excavations at the Royal Dockyard, Woolwich 1972-1973', *Post-Med. Arch.*, 9, (1975), 97.

²² Rochester Polls, 1774; and June 21st, 1816, no. 486.

²³ Chatham Poor-Rate Book, 1822; and Chatham Polls, 1854.

²⁴ Report in preparation for publication.

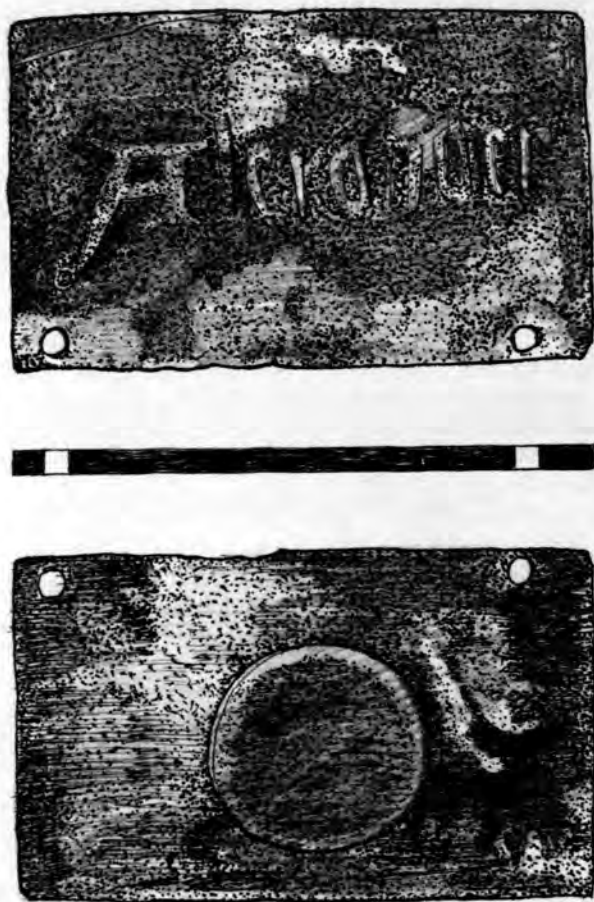


Fig. 11. Bone Plaque.

erupted, dental wear must be estimated from the first and second molars only. These give the following patterns:-

Molar	1st	2nd
R upper	5+	lost
L upper	5	3+
R lower	5++	4

This wear pattern lies exactly between the maximum expected age of 25-35 age group and the minimum for the 35-45 age group. An approximate age of 35 years can therefore be allotted. (D.R. Brothwell, *Digging up Bones*, London 1953, 69.) The face shows a significant degree of alveolar prognathism especially in the upper jaw pointing to possible negro race.

Summary

A partial skeleton of a woman aged around 35 years at death. The skull is mildly brachycephalic (Cephalic Index = 80.0) and shows alveolar prognathism suggestive of African race. The teeth show significant caries, including a notably large cavity in the left upper second molar associated with impaction of the third molar and an abscess around the posterior buccal root. If the skeleton is assumed to be that of a European woman the estimated height in life is 5 ft. 2 in., if from an African it would be 5 ft.

VIII. SMALL FINDS (Fig. 9)

Roman

1. Trench 4, wall-bank. Bronze pin.
2. Trench 6, unstratified. Bronze brooch, similar to no. 2, fig. 102, in R.G. Collingwood and I.A. Richmond, *The Archaeology of Roman Britain*, London 1969.
3. Trench 4, wall-bank. Bronze brooch with blue enamel decoration. Identified with no. 66, fig. 104 in Collingwood and Richmond 1969.
4. Trench 2, wall-bank. Spatula (incomplete) with silver in-lay.
5. Trench 2, wall-bank. Bronze ring.

Later (Fig. 11).

Northgate, Pit 2. Bone plaque.

ACKNOWLEDGEMENTS

Many volunteers took part in the work; space considerations alone prevent me from mentioning all of these individually. Thanks are due to the following of our members for their sustained support: Mrs. V. Smith, Messrs. R.J. Cruse, T. Ithell, R.J. Mills, D. Rouch and D.G. Thompson. I am most grateful also to Mr. I.J. Bissett, for

drawing the small finds, to Mr. P.J. Tester, F.S.A., for drawing the plans, and to Mr. R.J. Mills, for much of the photography. For the specialist reports, I am deeply indebted to Miss Hilary Cool for her most detailed account of the bracelets; to Mrs. K.F. Hartley, B.A., F.S.A., and Messrs. A.P. Detsicas, M.A., F.S.A., D.B. Kelly, B.A., F.S.A., A.M.A., R.J. Pollard, B.A., and P.J. Tester, F.S.A., for their respective sections of the pottery report; to Dr. J.P. Hayes, for reporting on the skeleton; to Mr. M. Moad, for reporting on the leather work; to Mr. E.H. Redfern, for reporting on the coins; and to Mr. D. Williams, for reporting on the pipes.