

EXCAVATIONS ON THE SITE OF ARUNDEL HOUSE IN THE STRAND, W.C.2., IN 1972

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SUMMARY:

The following article describes the findings of an excavation carried out in September 1972 on the site of the Medieval, Tudor and Renaissance palace of Bath Inn, later Arundel House. A trace of Roman, and a quantity of Saxon material were found. Structural fragments of the sixteenth and seventeenth century house survived, cut into levels containing material of the twelfth to sixteenth centuries. Two closely dated groups of pottery are described, one dateable to the third quarter of the sixteenth century and one to rather more than one hundred years later. Seven of the classical marble sculptures of the great seventeenth century Arundel collection were rediscovered and are fully reported on.

DISCOVERY OF THE SITE:

Within the area encompassed by Greater London outside the City, archaeological records, though sparse, indicate a wide spread of habitation of all periods. In 1972 the Society, conscious of the vast amount of unrecorded destruction occasioned by redevelopment within Greater London, formed an observation group to work within this area to keep a watch on building sites, to report their observations to the Society and, where necessary, to excavate. The excavation here recorded was the first to be carried out under the scheme, as a result of observations kept on the site of what is now the Arundel Great Court development, Strand, London WC2.

HISTORY OF THE SITE:¹

The site lies on the sloping ground which descends from the river-terrace now occupied by the Strand, 14.5 m above Ordnance Datum, to the Victoria Embankment at 4.5 m above O.D., prior to the building of which in the nineteenth century the site fronted and ran down to the shore of the River Thames. The structural remains on the site were dug into the river gravels (which in turn rested on the blue-grey London clay), which survived to a maximum thickness of approximately 2 m, and which had been removed entirely, by building operations of various periods, from the lower half of the site.

ROMAN SETTLEMENT:

The site is approximately 0.8 km east of Trafalgar Square and St. Giles' Circus, a similar distance west of New Bridge Street, following the line of the River Fleet, and approximately 0.55 km south of Holborn. Within this area a number of Roman finds have been recorded and to these may now be added the few from Arundel House, *i.e.* the sherd of pottery (Fig. 12: 10), the coin (coin report, No. 1), and a possible tile fragment. All came from medieval or later contexts and little useful comment can be made as to the actual date of their arrival at the site.

SAXON SETTLEMENT:

A quantity of eighth–ninth century Saxon pottery was recovered as debris from fifteenth and sixteenth century levels, and a “bun-shaped” clay loom-weight was recovered from the

late seventeenth–early eighteenth century dumping beneath Norfolk Street which post-dated the destruction of the palace. A discussion of the significance of the Saxon material from the Strand area will be found in the pottery report (p. 221).

THE PALACE PERIOD:

In 1232 the land was granted by the Bishop of London to the Bishops of Bath and Wells. The Palace built there, known as Bath Inn, had the largest site of all the Strand Palaces, with a river frontage of over 150 m, a depth of over 120 m and an area of 4–5 acres.

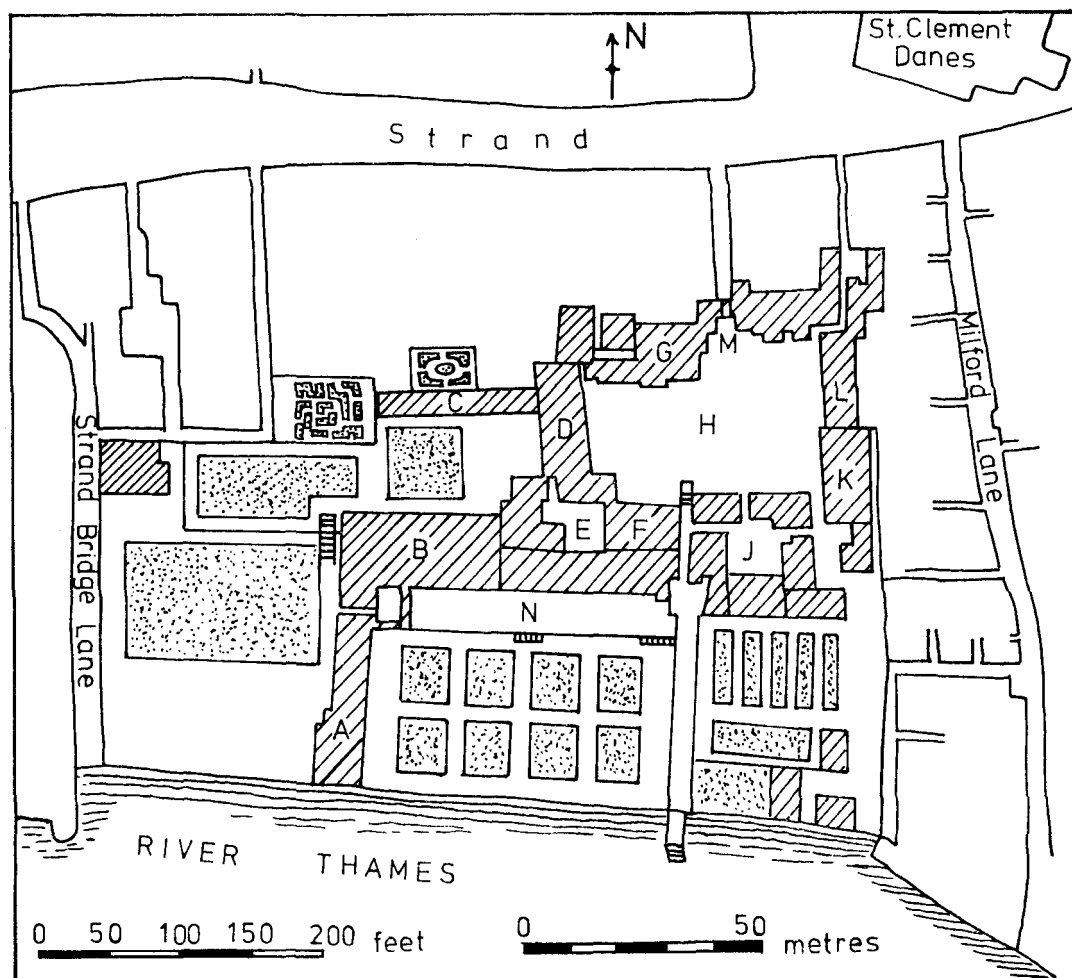
With the Reformation the palace was appropriated by Henry VIII and occupied by William, Earl of Southampton, Lord High Admiral, under whom it was known as Hampton Place. In 1545 the house was granted to Sir Thomas Seymour, who renamed it Seymour Place and largely rebuilt it. At the time that the Agas Map (Pl. 1) was surveyed, in about 1558, the crenellated east–west wing had already been added; the date of the building of the wing stretching to the river, later to be the Great Gallery, is not certain, but it was in existence by the time that John Norden's map of Westminster (Pl. 2) was published in 1593.

On Seymour's execution in 1549 the house was purchased by Henry Fitzalan, Earl of Arundel and, with the exception of a brief period, has remained in the possession of his descendants to the present day. In 1589 a survey of the building was made; this provides us with our main knowledge of it, and is examined in Kingsford's paper.² It was with the accession in 1607 of Thomas Howard, Earl of Arundel, Henry's great-grandson, that the house entered its greatest period, and became the home of the famous marbles which, with his paintings, were to form the first great art collection in England, comprising 37 statues, 128 busts, 250 inscribed marbles, sarcophagi, altars, gems and other fragments of ancient art. In addition the house and gardens were remodelled in the Italian style, the latter becoming the repository of many of the classical statues. Changes must have been necessary to provide a suitable setting for the collection, and Arundel's letters of 1618–19 mention works in progress.

Arundel died in Italy in 1646; the house was taken over by the Parliament and another survey undertaken. After the Restoration, the grandson of Earl Thomas was restored as Duke of Norfolk. Pepys, there in 1661, records the gardens with their flowers and statues, and "a blind dark cellar where we had two bottles of ale",³ possibly the same cellar the remains of which were found and are described below.

In 1667 the best of the marbles, now neglected and in many cases damaged, were donated to Oxford University. The house itself was in a serious state of disrepair, but plans for a new house, designed by Wren, were abandoned. It was demolished in 1680–82 and Morden and Lea's map of 1683⁴ shows a vacant plot. The gardens were retained for the building of the new Norfolk House and after the death of the owner, Lord Henry Howard, in 1684, the northern part of the site—that part north of what was later Howard Street—was redeveloped by Nicholas Barbon as good quality housing. Arundel Street and Surrey Street were now in existence, and when in the 1720s it was decided to redevelop the remainder of the site, the new Norfolk House, though a substantial building, was demolished, and its site redeveloped by 1734. The group of Delftware and Chinese porcelain described in the pottery report below is attributable to the early redevelopment period, *i.e.* 1680–1700.

Of the marbles that were not donated to Oxford, some were left on the garden terrace, where they were damaged during demolition work; others were left in the gardens, to become buried by building debris, and others were removed to Lambeth where Boydell





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|---|--|
| A - The Gallery | G - Storehouse |
| B - New West Wing | H - Entrance Court |
| C - Bowling Alley | J - Kitchen Court |
| D - Probable superstructure
of excavated vault | K - Stable |
| E - Courtyard | L - Barn |
| F - Hall | M - Main Entrance |
| | N - Garden Terrace |
|  Gardens |  Palace Buildings |

Fig. 1. Arundel House. The Palace buildings, based on Ogilby and Morgan's plan of 1677

Cuper, an old servant of the Howard family, had bought an inn set in ornamental gardens to be known in the next century as the famous Cuper's Gardens; the site now lies beneath the southern approach road to Waterloo Bridge. These mutilated specimens were illustrated by Aubrey and others;⁵ left in the open, they sustained even more damage and in 1717 were sold to residents of Buckinghamshire, where one was recently rediscovered.⁶

In this connection, mention should be made of the marble Roman tombstone with Greek inscription discovered in Drury Lane.⁷ It has long been doubted whether this is of Romano-British origin. Mr. Brian Cook, whose report on the Arundel Marbles appears below (p. 247), expressed the view that the architectural form of the tombstone and the position of the inscription suggest an eastern Mediterranean origin and that its importation as part of the Arundel or later collections was a strong possibility. Similar opinions have been expressed by other scholars about this and other marble *stelai* with Greek inscriptions found in Britain.⁸

THE LATER BUILDINGS (see plan, Fig. 1):

In the survey of 1589⁹ the house and garden were stated to cover 3.5 acres, and the dimensions given are: on the south, 522 ft; on the north, 612 ft; on the east, 335 ft; on the west, to the lane leading east from Strand Lane, 229 ft. The depth from the House proper to the Strand was about 100 ft.

The survey then went on to give details of the buildings and the repairs needed. Dimensions given are: Storehouse, 64 ft by 21 ft; lodging (north of the barn), 70 ft long; barn and stables, 135 ft by 20 ft; bakehouse and coalhouse, 90 ft long; storehouse on west side of the court, 105 ft long; the court itself was about 150 ft east-west and averaged 90 ft north-south; bowling alley, 138 ft by 18 ft; the kitchen court is next dealt with, and then a small paved court west of the Hall, with a vault in a cellar underneath (but see comments in excavation report of the cellar, below).

All these buildings needed repair, as they probably formed part of the original Bath Inn and were consequently old. The new additions are only briefly mentioned, and no dimensions are given; Hollar's view of 1656-66 (Pl. 3) shows them to comprise an L-shaped block extending westwards from the Hall about 200 ft and southwards to the river about 140 ft. The survey ends with a detailed description of the pipes and conduits for the supply of the house.

Kingsford illustrates Hollar's two views of the main courtyard made in 1646.¹⁰ Whilst these are described as, respectively, "facing north" and "facing south", these phrases have long been thought to refer to the prospect of the buildings themselves rather than to the observer's viewpoint; in the latter view the spires and other buildings in the background, obviously on higher ground, can only belong to buildings along, or north of, the Strand, whilst in the former view the low, distant horizon can only be of the low-lying area south of the river, and a hint of the river is seen between a gap in the courtyard buildings.

So far as concerns the buildings, Ogilby and Morgan's map of 1677 (Figs. 1, 2, superimposed on modern street plan) agrees generally with the survey and with earlier views. The bowling alley has disappeared and its site appears to be covered by houses and gardens, but it has here been included on Fig. 1 for purposes of location.

RELATION OF THE HOUSE TO LATER STREET LAYOUT (see Fig. 2):

Norfolk Street crossed the site of Arundel House towards the east end of the bowling alley and on the west of the buildings on the west side of the court, and Arundel Street marks the position of the gate-house and entrance. This left a large space to the east where

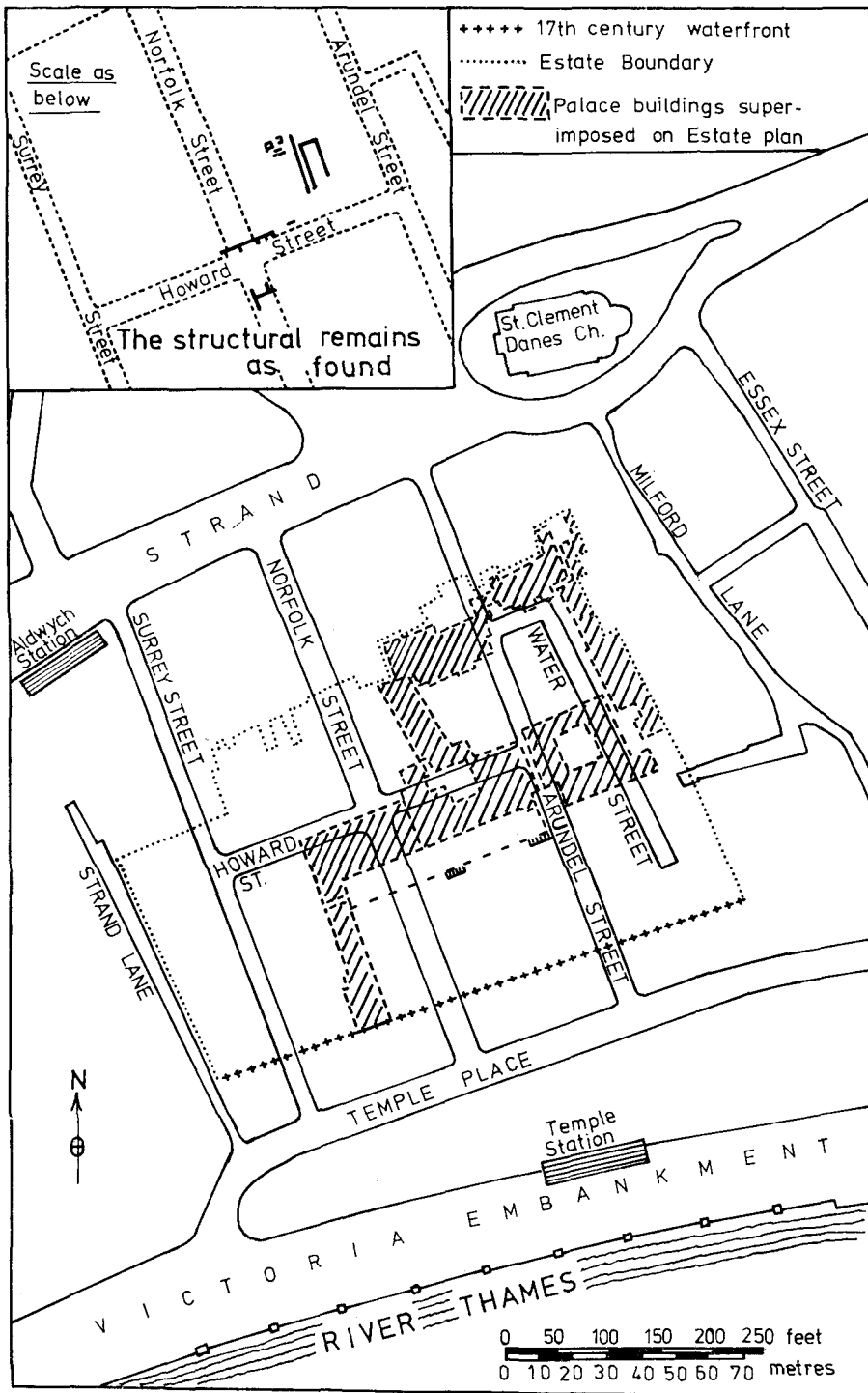


Fig. 2. Arundel House. Palace buildings superimposed on modern estate plan and (inset) location of structural remains found

Water Street was laid out; it marked the north-east corner and east side of the court, and in the 1920s the stables of Messrs W. H. Smith and Son stood there in part on the site of the stables of Bath Inn and Arundel House. The line of Howard Street seems to be on that of the galleries and hall. Strand Lane and Milford Lane still follow their ancient courses, though the former is now no more than a cul-de-sac. Two maps were useful in fixing the exact location of the palace buildings.¹¹ One, published by J. Thane in 1792¹² and, in effect, a reprint of Ogilby and Morgan's map, shows the house and estate boundary subsequent to the demolition of the bowling alley. The second map showed the same estate boundary superimposed on a modern street location map, and Fig. 2 is a superimposition of the two maps, which, in addition to fixing the position of the House, also show the positions of the old and modern river fronts.

It was discovered, however, that the structural remains revealed during excavations (Fig. 2 inset) do not, when superimposed on this plan, coincide exactly with the walls of buildings shown thereon. This discrepancy, though, is satisfactorily eliminated, and the structural remains consequently coincide with identifiable features, if the house-plan is plotted approximately 8 m north-east of the position shown, which suggests a slight error in the boundaries of the estate plan.

According to information from the contractors, a line of wooden piles was found near the southern end of the site and running parallel with it. This would have given valuable information as to the exact position of the seventeenth century river front. It was not possible to make an accurate record of their exact position.

EXTENT OF DESTRUCTION BY SUBSEQUENT BUILDING OPERATIONS:

The demolition of 1680–82, together with late Victorian redevelopment, resulted in very extensive destruction. Almost the only surviving remains, themselves in fragmentary condition, were found in an area of approximately 18 m by 26 m, located north-east of the junction of Howard Street and Norfolk Street. In addition, remains of substantial structures were found directly beneath the junction of Norfolk and Howard Streets, but these could only be observed during the process of their destruction. The 1972 site clearance works appear to have completely destroyed any remaining archaeological features on the site.

THE EXCAVATION OF THE STRUCTURAL REMAINS:

(Note: to avoid confusion, that the word "feature" is used below to describe remains in general, e.g. soil layers, pits, walls, etc—unless other descriptions are expressly used. Features are identified by numbers, those in the trench associated with the Tudor Cesspit being prefaced by the letter A.)

The structural remains discovered were, owing to seventeenth century and later disturbance, linked stratigraphically in very few instances, and no remains of the Bath Inn period survived. The Roman and Saxon finds came from medieval or later strata. With the exception of the chalk-built Tudor cesspit, no structural features were closely dateable by related finds, although those made suggest that the remaining structural features were of fifteenth or sixteenth century date.

THE TUDOR CESSPIT (Plate 4, Fig. 3: 1):

Not identifiable with any structure on the house plan, this appears to have virtually abutted the west side of the building to the west of the entrance courtyard, approximately 10 m south of its northern end. The closest-dated of the structures, it measured 2.50 m by 2 m externally, being chalk-built in random rubble walls 300 mm thick, and surviving for a height of 1 m. It contained a large group of pottery dateable to the third quarter of the sixteenth century (p.222 and Figs. 7–11) and fragments of Venetian lattimo glass goblets dated to the middle or later sixteenth century (Fig. 19: 1, 2).

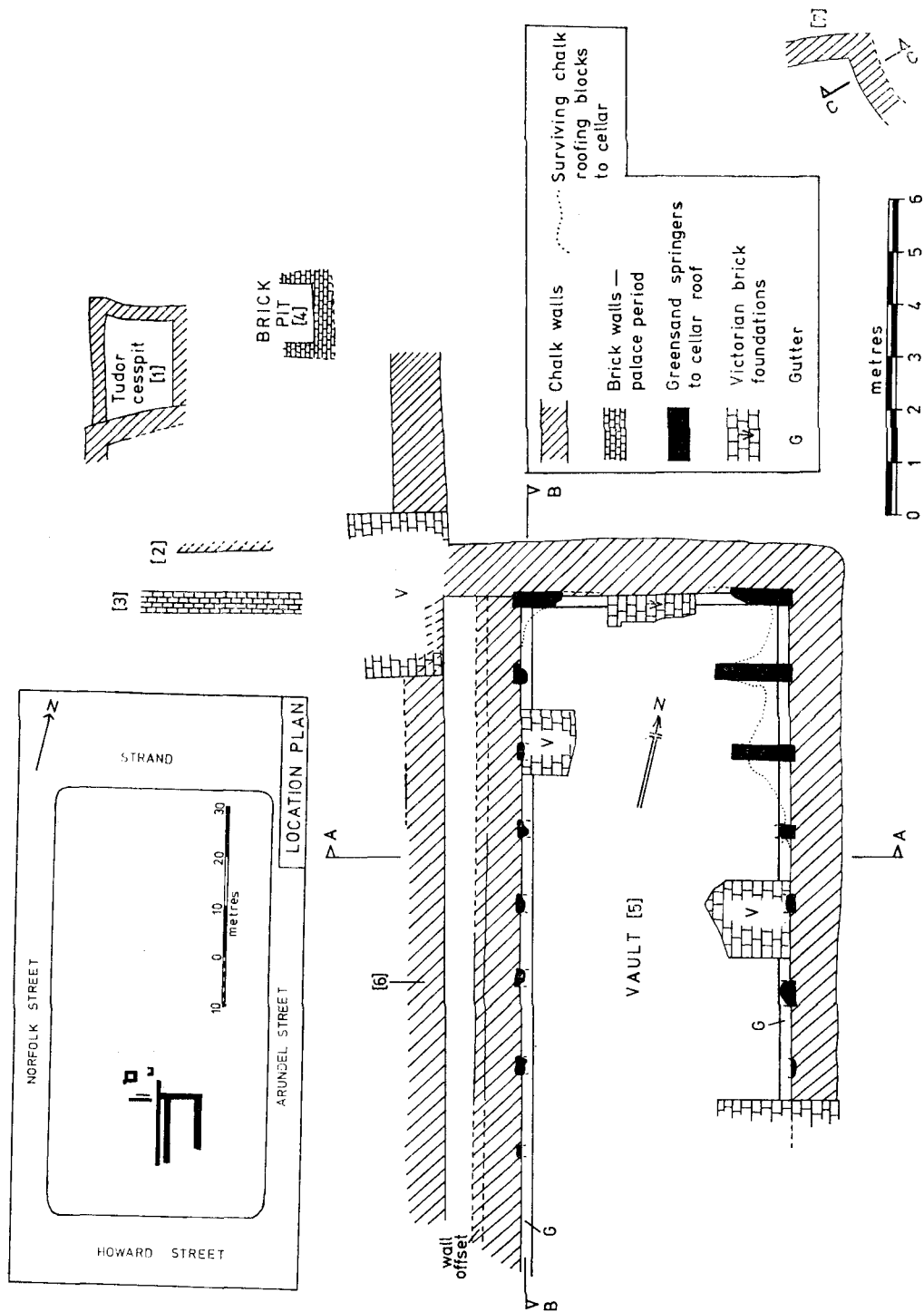


Fig. 3. Arundel House. Plan; The vault and associated remains

The pit rested on the natural gravel and was cut through features A-1 and A-6, soil levels later found to be identical (pottery, Fig. 12: 1-13) and feature A-7, below them and resting on the gravel also (pottery, Fig. 12: 16-18), all dateable to the late fifteenth or possibly early sixteenth centuries. The virtual lack of earlier material from the cesspit indicates either a scrupulous cleaning-out or, as is more likely, use for a short period only, after which it may have been filled and incorporated in the formal gardens north of the "new" wing extending west of the main courtyard. The pit also contained a large quantity of tiles and nails, and this lends support to the idea that it was open during some period of building activity; this is likely to be the building of the new west wing which, as mentioned above, was in existence by about 1558, and the evidence of the pottery from the pit does not conflict with this.

WALLS TO THE SOUTH OF THE CESSPIT (Fig. 3: 2 and 3):

Approximately 1.75 m and 3 m due south of the Tudor Cesspit, the stubs of, first, a badly damaged chalk wall of uncertain thickness, and second, a brick wall of about 400 mm thickness were found. Both were parallel to each other and to the southern wall of the cesspit and running at right angles to the north-south walls of the vault (see below), though in no discernible way connected with the latter. They rested on, and may originally have been cut into, natural gravel and had no dateable material associated with them, though the brick wall may, from the type of bricks in its construction, be placed in the sixteenth or seventeenth century. Neither wall coincided with any structural feature on the palace plan. The chalk wall survived for a length of 1.60 m, the brick wall for 3 m.

THE BRICK PIT (Fig. 3: 4):

Three sides of a (probably) rectangular brick pit, measuring 1.75 m by at least 1 m, and surviving for four courses, were found 1.75 m east of the Tudor cesspit. Its north-south walls were about 300 mm thick and its eastern wall about 450 mm thick. The west wall had been destroyed by later construction. The pit was isolated stratigraphically from all other features by later disturbance, but was cut into a layer of black soil (16) dated by pottery to the late fifteenth or early sixteenth century. Beneath (16) was (19), a layer containing pottery (Fig. 13: 1-13) of the twelfth to late fifteenth centuries, a jeton of 1400-10 (p. 242, No. 4), and a large quantity of roofing tiles; this layer was itself cut by (20), a feature also below (16) but containing material of similar date (Fig. 13: 14-21) and a large amount of roofing tile.

The little material from the pit included fragments of brown salt-glazed stoneware and clay pipe stems of the later seventeenth century. Again, the pit cannot be identified with any recorded structural features on the palace plan.

THE VAULT AND PARALLEL WEST WALL (Plates 5, 6; Fig. 3: 5, 6, Fig. 4, Sections AA and BB):

The main surviving structural feature of the palace was a vault, built of squared random chalk blocks with internally dressed faces; the blocks, though varying in size, generally averaged 200 mm by 170 mm. It was dug 2 m into the surviving clay and gravel and was trench-built against the natural subsoil; the outer face of the east wall, when exposed, thus presented a rough face of undressed stones. The internal width of the vault was 5 m, its maximum surviving north-south length was 13 m and the walls averaged 1 m in thickness.

The vault was roofed with chalk blocks, of which a very few survived *in situ*, supported on greensand arches arising from greensand springers spaced at 1.50 m intervals. The arches probably met at a point about 2 m above the base of the springers (Fig. 4, Section AA).

A floor level, much disturbed except at its edges, survived, though this was not the original floor of the vault but a much later addition. Below it, the following build-up of layers within the vault was found (see sections): resting on the London clay subsoil was a black clayey deposit (10) 70 mm thick, which contained material of the fourteenth-early sixteenth centuries. Above this was a hard white mortar deposit (9) 50 mm thick containing post-medieval tile but no dateable pottery, and it is conceivable that this could have constituted the original floor level, although its insubstantial nature argues against this—more likely it was a debris level associated with the construction of the vault. The next 450 mm to the latest "floor" level (mentioned above) consisted of four earthy and mortar levels containing tiles of uncertain date (8), clay pipes of the period 1690-1710 (7) and nineteenth century clay pipes, china and building debris (6, 5). The surface of (5) was compacted and flat and appeared to be the latest floor level of the vault.

Beneath this floor level, and cut into (6), (7) and (8) and resting on (9) was a brick-built feature. This was investigated where it abutted the west wall of the vault; against the east wall it appeared to be similar although here stratification was badly disturbed and time was not available for further study. It was not ascertained whether the feature existed abutting the north wall, although this is likely in view of its probable function (see below). The base of the feature was a single layer of tiles 10 mm thick, two tiles wide (350 mm) and resting on

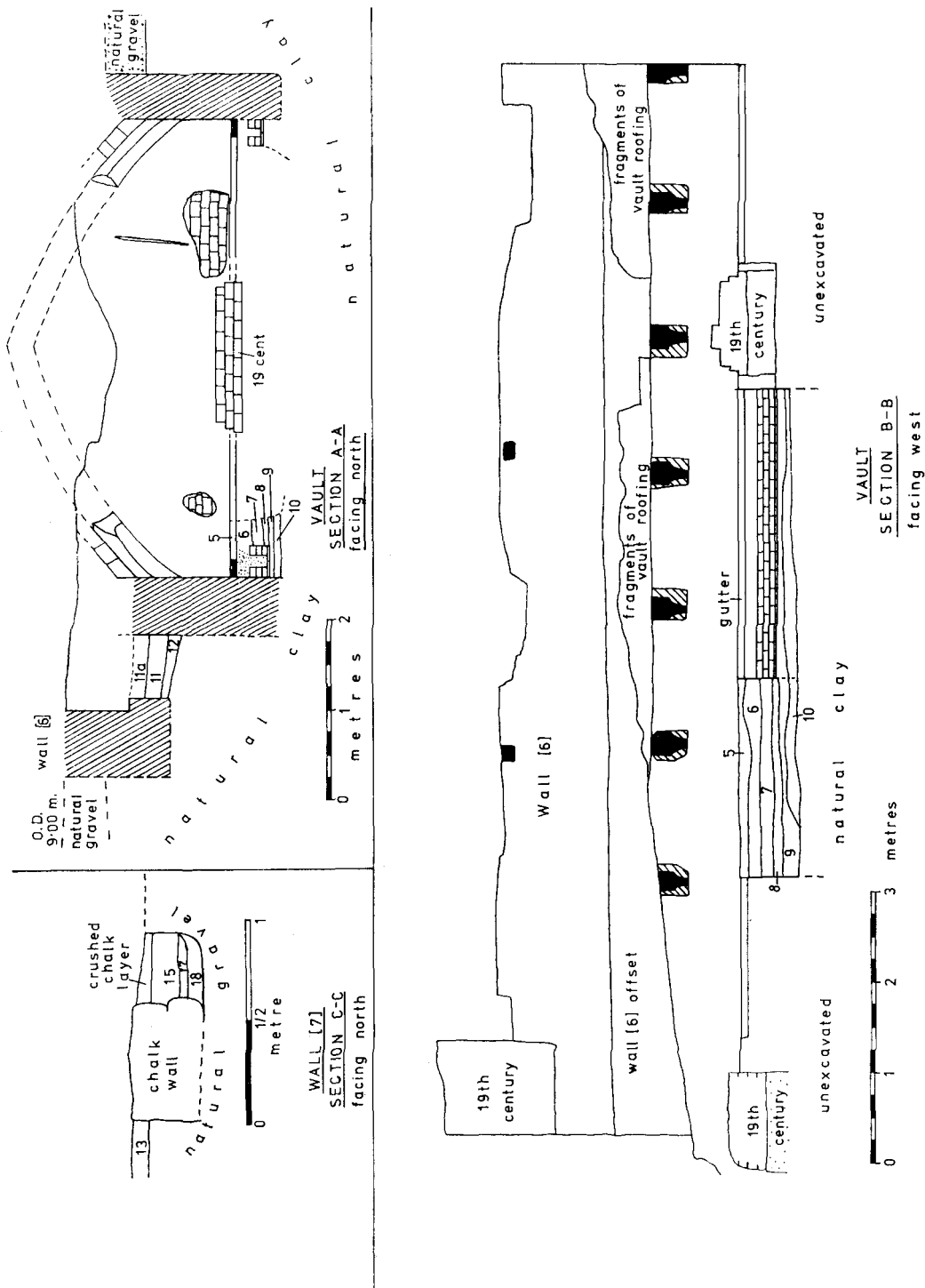


Fig. 4. Arundel House. Sections of vault and wall

(9). Resting in turn on this tile base were two parallel rows of bricks, each three courses deep, separated by a 130 mm cavity filled with earth and rubble containing late eighteenth–early nineteenth century china. Above this feature was a mortary rubble layer 140 mm thick, its surface level with, and perhaps identical with (5), though this was not clear. Set into this mortary layer, its top flush with the surface, was a gutter, rectangular in section, made of lengths of hard black brick-clay 75 mm thick, 190 mm wide and with a shallow U-shaped central channel running through its upper surface. This gutter ran around the entire surviving inner perimeter of the vault.

Investigation below the floor of the opposite (east) wall of the vault showed a similar arrangement, though with only two brick courses, resting on a grey mortary layer 60 mm thick over a firm, compact chalky mortar layer corresponding with (9) above.

Two irregular-shaped openings were cut through the north wall of the vault (Fig. 4, Section AA) and subsequently blocked with bricks of, probably, eighteenth century date. Through each of these openings a channel ran back through the wall. The above mentioned section (AA) shows that the vault was cut through the junction of the natural gravel and clay subsoils. Problems from ground water seeping along this line, over the impermeable clays and thence into the vault, must therefore have been encountered and these holes might have been a measure taken as an afterthought to channel the water away. Their functional relationship with the gutter and brick structure (or channel if that was in fact its function) is uncertain. The brick channel may have been built first to serve as a run-off for the water, being later superseded by the higher gutter following a raising of the floor level.

Immediately above the eastern opening in the north wall was a shallow vertical groove, 900 mm high, the purpose of which was not determined.

The north wall of the vault continued westwards beyond its west wall to meet another north–south wall, running parallel to the vault and continuing northwards for a further 3.75 m (Plate 6); this wall (Fig. 3: 6, Fig. 4, Sections AA, BB) was constructed at a higher level than the vault, of the same materials; for its full surviving height it was cut into the natural subsoil against which it was built on its western face. Ground level at the time of construction of this wall and of the vault appears therefore to have been at least as high as the surviving top of this wall, approximately 9 m above Ordnance Datum. This wall was 750 mm thick while parallel to the vault, but for its northern continuation its thickness was 950 mm. Unfortunately nineteenth century brick foundations had destroyed the junction of the two sections and the reason for the change in thickness (if it is the same wall, as seems likely) was therefore not clear. Two beam-holes (Fig. 4, Section BB) survived in this wall above the vault, suggesting that it was an internal wall face.

Dating of the structures by associated finds was based only on a few sherds of pottery. Whilst traces of soil levels against the top of the west side of the western wall produced a little pottery of the twelfth to fifteenth centuries (though no pottery was associated with its northern continuation) the three surviving layers (IIA, II, I2) between it and the west wall of the vault produced material of the thirteenth and fourteenth centuries (IIA), eleventh century (II) and fifteenth–early seventeenth centuries (I2), the last-mentioned being the lowest level. The middle stratum (II) was a layer of chalk dust and rubble; the layers dipped slightly towards the vault and seemed to be indicative of some construction activity—possibly the actual building of the structures, or alternatively repair work during the last 75 years of the palace's existence. Whilst no certainty can thus be attached to the building date of either of the structures, this must lie between the late fifteenth century and the end of the sixteenth or early seventeenth centuries; the palace was substantially completed by the latter dates, and pottery of the former date was associated with the construction levels between the west wall of the vault and the parallel western wall.

The northern part of the vault seems to have remained in use till the late nineteenth century. The southern part appears to have been in use at least until the date when the final floor level was constructed, when it then seems to have been demolished, fragments of the greensand vaulting being incorporated in the floor make-up (layer 5) which, as seen above, appears to have been of nineteenth century origin. That the northern part of the vault was still open at least until the erection, in the 1880s, of the buildings demolished in 1972 is shown by the fact that the foundations of these buildings were in five places built within and resting on the vault structure, the vault then being filled in with soil and rubble containing late nineteenth century material.

These features must now be identified, as far as possible, on the house plan (Figs. 1, 2). As has been seen above, if the vault is indeed the “blind dark cellar” where Pepys quaffed his ale, then it was not beneath the paved court but beneath the long north–south building to the north of it. If the wall to the west of the vault is thus taken to be part of the foundation of the western wall of this building, then the vault, being approximately 7 m in width externally, is considerably narrower than the building above (apparently 10 m wide) and, although built with substantial walls no doubt capable of bearing the load of upper stories, did not form the foundation of the

building. Possibly, then, it formed the foundation of an earlier, narrower, building and may thus be of mid-sixteenth century date, or possibly earlier. Beyond this, no further conjecture regarding its date would seem to be useful.

OTHER FEATURES:

Approximately 9 m north of the north-east corner of the vault an obtuse-angled fragment of a chalk wall (Fig. 3: 7), approximately 1 m thick, was discovered. The inner angle of the wall faced south-west, and the wall itself was cut a short way into the natural gravel (Fig. 4, Section CC). Within this angle was a surviving soil layer (13), comprising bands of clay and charcoal, containing a Flemish coin of *c.* 1390–1430, a leather shoe dated to the fourteenth or early fifteenth century (Fig. 20:1) and a quantity of pottery of the period 1300–1500 (Fig. 12: 20–27). In the foundation trench of the wall, on its northern and eastern sides, four layers of debris were identifiable, from the lowest upwards: (18) a dark soil containing fourteenth century pottery (Fig. 12: 28); (17) a layer of mortar and crushed chalk construction debris with no dateable finds; (15) a black soil with chalk fragments and fourteenth century pottery; and, on top, a layer of crushed chalk. The wall cut through layer (13) and may be tentatively identified with one of the angles on the southern side of the storehouse building situated on the north-western part of the main courtyard, which seems most likely to have been erected at some time during the sixteenth century.

The top surfaces of all the structural features so far described all survived to approximately the same level, with the exception of the vault, which survived to a somewhat lower level owing to the destruction of its vaulted roof.

A further short wall fragment (Fig. 2, inset, on the northern edge of, and parallel with, Howard Street and north of the "R" of "Street") was found, approximately 0.5 m north of the northern kerb of Howard Street and 5.20 m west of the west wall of the vault. Surviving to a height of 0.75 m and built against the natural gravel on its north side, with a backing of rubble, it was 0.5 m thick and constructed of ragstone blocks. It was supporting a late nineteenth century foundation and was virtually enveloped with modern demolition rubble, which made detailed investigation too hazardous to pursue.

THE WEST WING OF THE MAIN PALACE (See Fig. 2, inset, junction of Norfolk and Howard Streets, and Fig. 5):

All the maps and engravings of this part of the palace show it to be a substantial structure, in existence by 1558, of at least three storeys, with deep projecting buttresses and a crenellated roof. In no place, unfortunately, did the building survive except beneath the slightly less disturbed build-up of debris under Norfolk Street, where fragments of the front and rear walls of the building survived, respectively just south and just north of the junction of Howard Street with Norfolk Street, and covered with the thick artificially built up late seventeenth century levels which brought the ground surface virtually to its modern level.

Little reliable dating evidence for these buildings was found. However from the floors were recovered four yellow-glazed floor tiles; two measured 220 mm by 220 mm by 37 mm, the colour of the glaze tending to greenish in the centre, and two measured 225 mm by 225 mm by 30 mm, the glaze slightly mottled with green. Close parallels in the British Museum are from Placentia Palace, Greenwich, and are generally thought to be sixteenth century.¹⁸ In addition, a further tile measuring 230 mm by 227 mm by 30 mm, with a dark greenish-brown glaze, was found. This was similar to fragments found in the Tudor Cesspit, which has been dated to the period 1550–75, and this evidence is of course corroborated by the documentary evidence; a later sixteenth century date for this part of the building can therefore be postulated. The little material associated with the demolition levels of the building was of late seventeenth century date and accords well with the known destruction date of 1680–82.

A description of the observed remains follows. These were exposed during clearing operations by the building contractors; recordings and measurements of any detailed accuracy were rendered virtually impossible by the continuance of work. The following notes are therefore based on brief observations, and Fig. 5 is therefore a generalized plan showing the approximate location and appearance of the remains.

The structures coincided with the estimated position of the front and rear walls of the Great West Wing (here "frontage" refers to the face nearer the river, and "rear wall" is that nearer the Strand). The southern face of the wing formerly adjoined a raised garden terrace which stood considerably higher than the adjacent gardens, to which it was connected by a flight of steps; this is discernible on Plate 3. The frontage survived for a length of about 6 m and for a height of about 2 m above the sixteenth century garden terrace level. It consisted of a substantial brick wall somewhat over 1 m thick, decorated with a pattern of greensand blocks and resting on the natural gravels. The lower part of the wall was a wider projecting platform of brick, of uncertain width, on which rested a (probably) V-shaped projection, constructed of brick with greensand quoins, and presumably

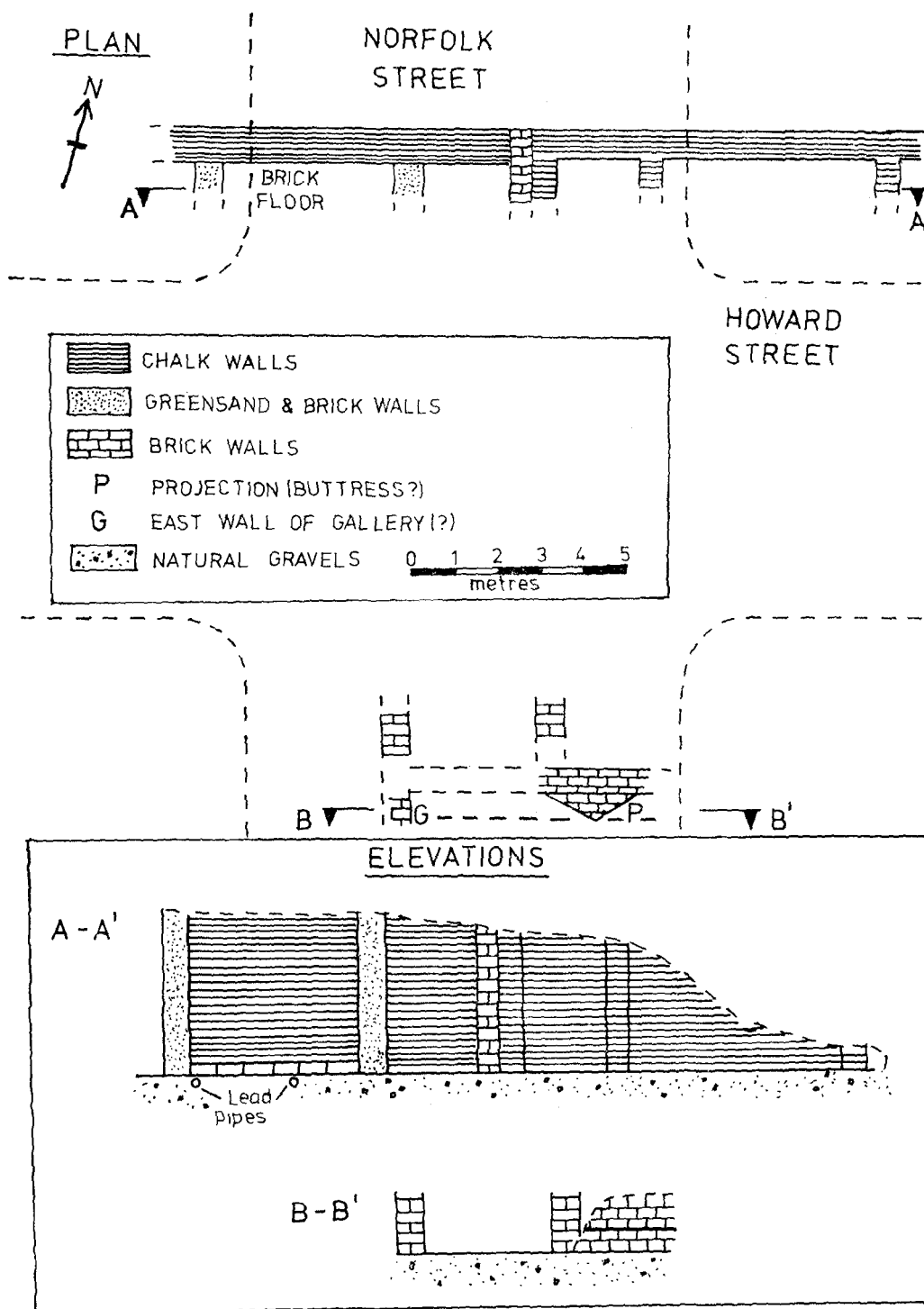


Fig. 5. Arundel House. Plan and elevation of structural remains of Great West Wing

one of the buttresses illustrated on the engravings. The top of this platform was at approximately +5 m O.D. At right angles to this wall, but substantially destroyed, was an internal brick wall somewhat less than 1 m thick; parallel to this, and running both north and south of the frontage wall, was a similar wall, probably the end wall of the wing which divided it from the gallery. This latter wall continued southward at a level similar to that of the terrace, and was then observed to drop away to a considerable depth, approximately 4 m to the garden level below the terrace. The foundations of this wall, observed to be substantial, continued for a further 1.50 m—2 m and this part of the wall doubtless belonged to the gallery itself.

Approximately 15 m north of this frontage the rear chalk wall was found. The western part was 800 mm thick. On the south (interior) side were the remains of two rooms 4 m and 2 m wide, the walls partitioning them built of greensand and brick; their thicknesses were, from west to east, 700 mm, 700 mm and 400 mm. The eastern part of the rear wall was approximately 700 mm thick, with three chalk partition walls joining its south side, the westernmost abutting the easternmost brick partition wall and being 500 mm thick. The other two partition walls divided this section into two rooms, 2 m and 5 m wide. The entire structure was resting on natural gravel. The internal faces of the second most westerly room were plastered; the westernmost room was floored with red brick, and from beneath this room were recovered 1.60 m of lead water piping, comprising two lengths of varying bore welded together; the junction of the two pipes is illustrated in Fig. 19: 7. In this same room traces of a vaulted ceiling remained.

The surviving level of natural gravel below the floor of the rooms abutting the rear wall was somewhat higher—about 1.50 m—than the equivalent level relating to the front wall. It did not prove possible, unfortunately, to observe any relation between the two walls and thus to examine how the differences in floor levels might have been accommodated structurally.

THE FINDS

THE SAXON POTTERY AND THE TUDOR POTTERY GROUP FROM THE CESSPIT

BY JEREMY HASLAM

SAXON POTTERY:

A total of 19 medium-sized sherds of pottery of Middle Saxon date were recovered from the site, from probably four different vessels, in addition to a complete loom weight. Of these, 17 sherds are of Ipswich type ware, one of chaff-tempered ware, and the other of an undefined fine sandy ware.

IPSWICH-TYPE WARE:¹⁴

16 of the 17 sherds are probably from one large storage vessel (Fig. 6, Nos. 1 and 2), all except two sherds coming from the base. The fabric is gritty, and varies in colour from dark or light brown to grey, the latter colour predominating, with usually dark grey surfaces. Tempering: numerous sub-rounded quartz sand of all sizes up to about 1 mm, with a few larger subangular grits, which give a rough texture to the surface. The fabric of the second vessel (Fig. 6, No. 3) is medium grey in colour, with only fine sand tempering. The diameters of the two shoulder sherds are approximate only.

SANDY WARE:

1 body sherd (not drawn): dark grey-brown fine sandy fabric with black surfaces.

CHAFF-TEMPERED WARE:

1 body sherd (not drawn): black-fired ware, tempered only with chaff, burnt out to form the characteristic cavities, and with impressions possibly of grass on the internal and external surfaces.

LOOM WEIGHT (Fig. 6, No. 4):

Brown-dark grey sandy and gritty fabric, with half a large flint pebble, and several large rounded red quartz grits, showing on the surface. Hand-made.

DATING AND CONCLUSIONS:

The dating of this pottery is not helped by the fact that none of it comes from its original archaeological context. However, a similar assemblage of associated pottery of the Middle Saxon period has been found in Whitehall, from several pits and the floor levels of a large timber structure.¹⁵ Here, Ipswich-type wares of very similar fabric, colour and tempering¹⁶ are also associated with chaff-tempered wares, 1 sherd of a rouletted Pingsdorf amphora, and 1 sherd of Tating ware. A similar association of Ipswich-type wares (of different types) and black chaff-tempered ware, with shelly wares and a Badorf amphora (without rouletting), have been recovered from excavations at Waltham Abbey, Essex,¹⁷ for which a date in the middle or later ninth century is suggested.

The parallels between the finds from Arundel House and those from these other sites, where the same middle Saxon wares are truly associated, suggests therefore that the former are derived from probably a single occupation site of the Middle Saxon period, for which a general date in possibly the later eighth or ninth century seems likely.

If those finds do indeed suggest occupation on the site of Arundel House in this period, then it provides an important addition to the firmer evidence of other habitation sites of the same period already discovered along the north bank of the Thames immediately west of the city—namely at the Savoy,¹⁸ and at Whitehall.¹⁹ A pattern emerges from this evidence, indecisive in its details, of a series of settlements or farms situated at intervals along the dry ridge forming the north bank of the river between the City and Westminster. The occupants of these settlements would have had easy access to the river for fishing, as well as to the already thriving city for markets for agricultural produce.

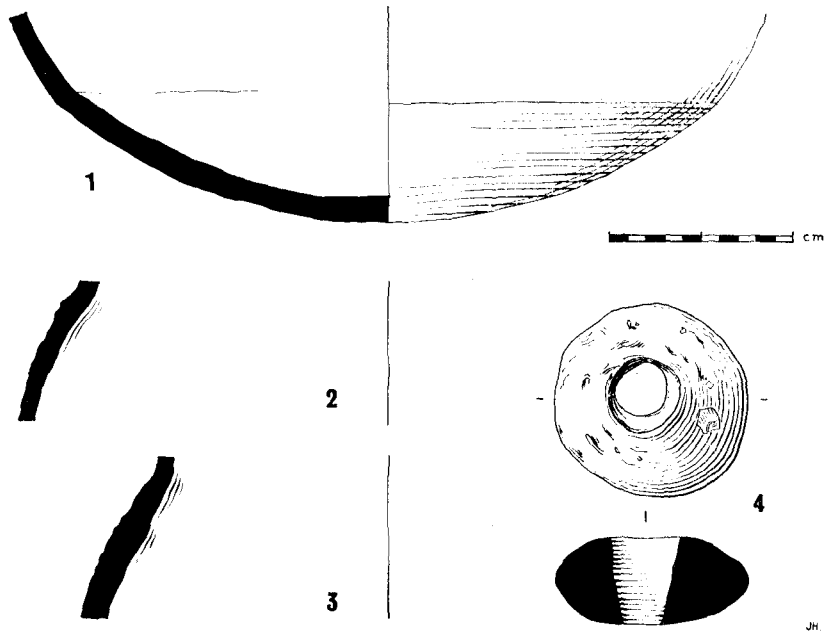


Fig. 6. Arundel House. The Saxon Finds ($\frac{1}{4}$)

The fact of these probable settlements also bears upon the early history of the Strand. The finding of several Roman cremation burials along the north side of Fleet Street,²⁰ and the excavation of a Roman structure under St. Brides Church,²¹ provides strong circumstantial evidence for suggesting that Fleet Street and the Strand are on or are very near the line of a Roman road, leading from a possible gate at Ludgate. In the Saxon period the Strand is referred to as Akeman Street in a charter of about A.D. 1000, a name which seems to imply a status as an important road to the west from the city.²² The archaeological evidence of the settlement sites of the eighth or ninth centuries along the Strand, as well as that at Westminster, helps to fill the gap in the history of the use of this road between the end of the Roman period and the later Saxon period, and could be taken as suggesting a continuity of use throughout the Saxon period. If this is so, then the strip of land along both sides of the Strand and Fleet Street becomes of some interest as being an area from which more important archaeological evidence of occupation in the Saxon and medieval periods might be expected to be obtained.

TUDOR POTTERY (Figs. 7-11):

The pottery from the large cesspit (p. 00, and plan, Fig. 3), described below, falls into seven main groups.

- I. Off-white or pale buff untempered wares, with yellow or green glaze.
- II. Brown-glazed "Cistercian" wares.
- III. Salt-glazed stonewares.

- IV. Tin-glazed earthenwares.
- V. Off-white sandy ("Surrey") wares, some with green glaze.
- VI. Red or grey wares decorated with white slip, with yellow or green glaze.
- VII. Plain red wares, some with clear yellow (orange) glaze.
- (VIII. Fragment of stove tile.)

I. OFF-WHITE TO PALE BUFF UNTEMPERED WARES:

These comprise a wide range of forms of vessel with either yellow or green glazes, all of them very finely potted, and with a fine off-white or buff fabric with very little sand tempering. These forms consist of the following types:

- chafing dishes
- costrels
- skillets
- bowl
- jugs
- dishes or plates
- ?pedestal dish or cup
- handled cup

(Fig. 7):

CHAFING DISHES (Nos. 1-3):

Represented by only three almost complete vessels, two glazed yellow and the other glazed green, mainly on the interior. These have two opposed vertical strap handles, three applied pulled lugs around the rims, and have three or four holes pierced through the rim of the vessel on either side of the handles. The vessels have been thrown as one from base to rim, with the inside base of the bowl closed with a separate piece of clay which has itself been thrown on a wheel. The bases have all been trimmed with a knife after removal from the wheel.

COSTRELS (Nos. 4-5):

One complete vessel and fragments of at least three others, two glazed green and two yellow. These are thrown on the wheel as a closed flattened globe, and have a tubular neck (which is itself thrown separately on a wheel) attached to one side, and against which are applied the two handles. They are glazed on the upper part only.

SKILLETS (No. 6):

Of two kinds, each represented by one complete vessel and fragments of one or two others. Both are almost exactly similar, and differ only in that one (No. 6) has three small applied feet. The latter is glazed green; the other (not illustrated) is glazed yellow—in both cases on the interior only. Both have elongated pulled handles applied to the rim.

BOWL (No. 7):

Fragment of a single vessel, with yellow glaze on the interior only.

JUGS (No. 8):

One complete vessel and small fragments of a few others. The complete vessel is of a type common in London, having a thin strap handle applied at both junctions, and with in this case a rather overfired and reduced speckled khaki-green glaze on the upper part of the vessel only.

DISHES (Nos. 9 and 10):

Sherds of three or four small dishes with flanged rims, glazed green on the upper side only. One has a kiln scar on the rim, showing it to have been fired on its side.

?PEDESTAL CUP (No. 11):

Base only of one vessel, glazed green on the exterior. The interior of the base has been pared with a knife.

CUPS (not illustrated):

Rims of one or two cups of typical early sixteenth century Tudor green type; fine off-white fabric with dark green glaze on the interior.

Also present: a body sherd with basal attachment of handle, of a jug (No. 12, diam. at girth approx. 140 mm). Fine white highly micaceous fabric with a thick lustrous dark green glaze on the exterior. Possibly French. Base of a pedestal cup (not drawn) in similar fabric, with green glaze on the interior only.

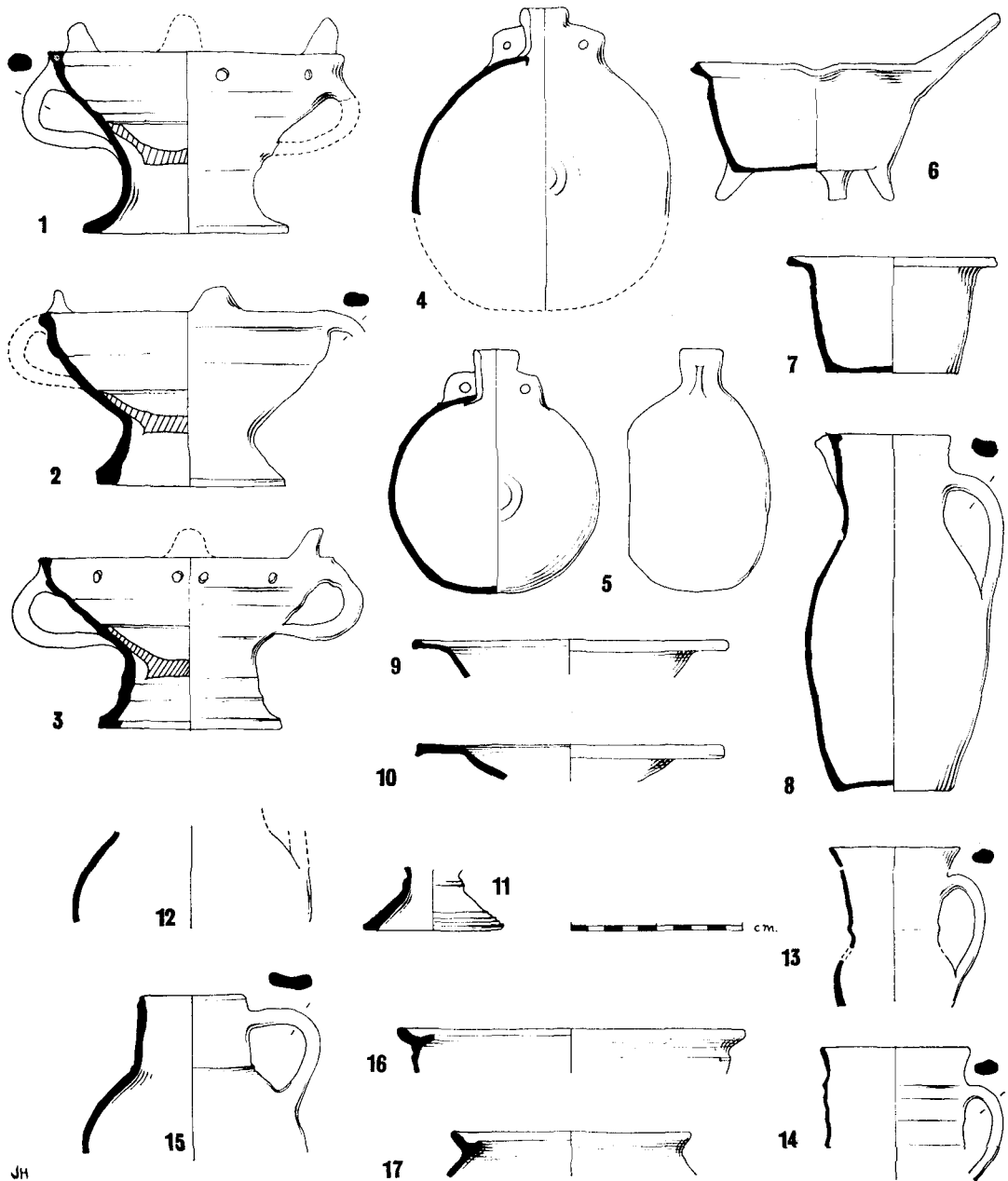


Fig. 7. Arundel House. Tudor Cesspit group. Nos. 1-17 ($\frac{1}{4}$)

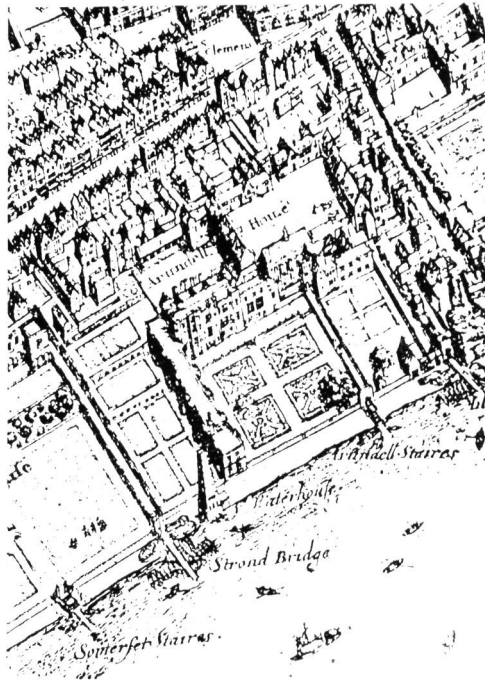


Plate 3. Arundel House. Hollar's general view printed between 1656–1666.
(*Photograph J. S. Earp*).



Plate 4. Arundel House. The Tudor cesspit (scale in 0.5 m).



Plate 5. Arundel House. The vault (scale in 0.5 m).



Plate 6. Arundel House. North-west corner of vault with parallel west wall in background.



Plate 7. Arundel House. The Medusa frieze (see text p. 247 for measurements) (Photograph London Museum).



Plate 8. Arundel House. The sandalled foot and altar
(see text p. 247 for measurements)
(*Photograph London Museum*).

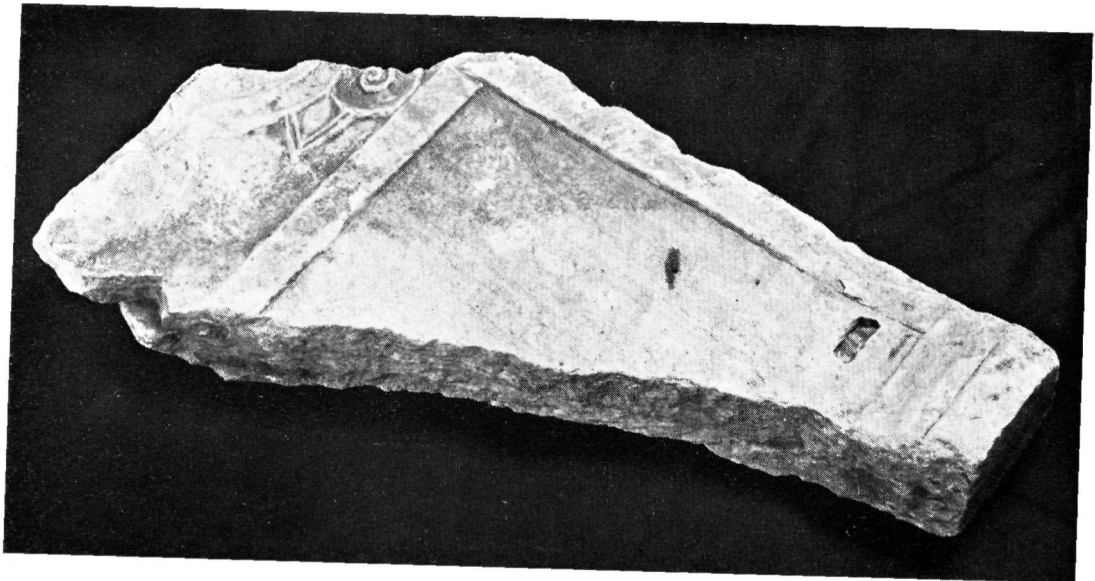


Plate 9. Arundel House. Fragment of table-support (see text p. 248 for measurements)
(*Photograph London Museum*).

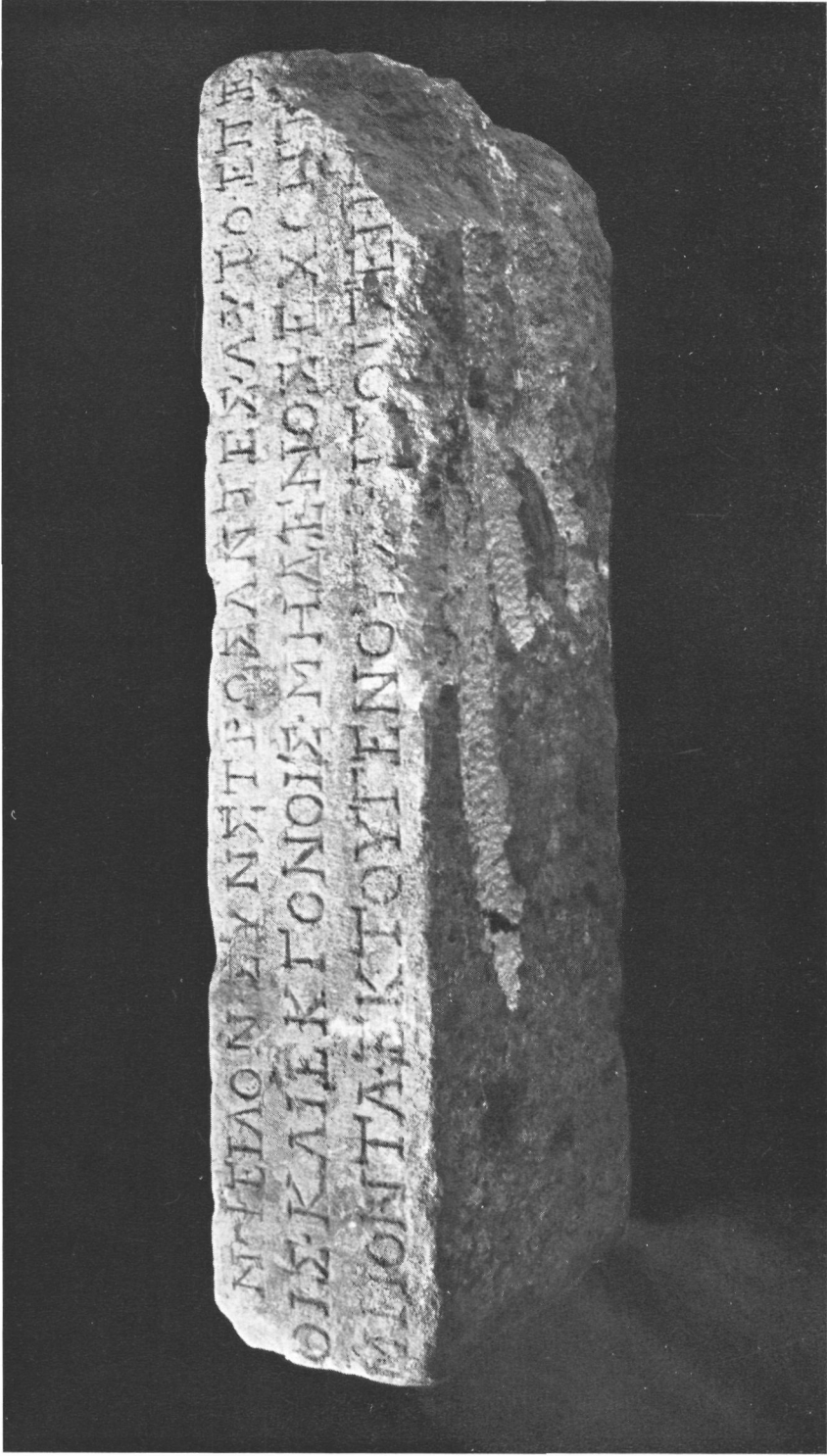


Plate 10. Arundel House. Greek funerary inscription (see text p. 248 for measurements) (Photograph London Museum).

II. CISTERCIAN WARE (Nos. 13 and 14):

Fragments of two cups, very thinly potted, with dark red-brown fabric and thick glossy dark brown glaze on both the interior and exterior.²³

III. SALT-GLAZED STONEWARES (No. 15):

The top and two fragments of the base of two undecorated Frechen-type drinking mugs, with speckled brown salt glaze on the exterior.

Also present: one very small body sherd only of a Cologne mug with part of a moulded leaf and a rose (too small to draw).²⁴

IV. TIN-GLAZED EARTHENWARES (not drawn):

Two very small body sherds, one from the side of probably an altar vase, with off-white fabric, white tin glaze on the interior and exterior, and painted decoration in dark blue on the exterior; the other of pale buff fabric with pale blue tin glaze on both the interior and exterior, and with painted decoration on the exterior of narrow horizontal stripes and other designs in white and dark blue (the latter probably from an albarello; possibly N. Italian).

V. OFF-WHITE SANDY WARES (MIEVEAL SURREY WARES) (Nos. 16-17):

Twelve small sherds of different vessels with off-white to buff fabric with red sand tempering: probably survivals from the fifteenth century. Recognizable sherds include two rims from bulbous Cheam-type jugs,²⁵ rim sherds of cooking pots with bifid rims (one, No. 17, with green glaze on the exterior), and several body sherds of jugs and/or cooking pots, some with green glaze on the exterior or interior respectively.

VI. RED WARES WITH WHITE SLIP AND YELLOW OR GREEN GLAZE (Nos. 18-34, Figs. 8 and 9):

About 15 vessels of this type are present. They are all of fine sandy red-firing fabric, usually with a grey core at the thickest points. The decoration of white or buff slip is usually applied either by dipping the vessel into the slip, or pouring the slip into the vessel and spreading it around by rotation. The following forms of this class of vessel are present in the group:

- chafing dishes
- jugs
- jars with hollow spouts
- wide bowls
- domestic vessel (chamber pot)
- ?condiment dish
- tripod cooking pot

(Fig. 8):

CHAFING DISHES (No. 18):

About three different vessels are represented by fragments only. All have sharply moulded rims, with applied pulled lugs on the outer edges. There are no recognizable bases. The vessel drawn is glazed green over the applied white slip on the interior, and is decorated with wavy lines incised through the slip under the glaze ("sgraffito" technique). Lugs from two other vessels are covered with slip and a bright yellow glaze.

JUGS (Nos. 19, 28-34):

The complete jug, No. 19, has been dipped in slip while held by the handle and then glazed with a speckled green glaze, probably applied with a brush, over the upper part of the body. The applied strap handle has a finger impression at the base, and the rim has a simple pulled spout opposite the handle. The foot is decorated with all round thumb impressions.

Also present: rim sherds of seven other vessels of similar type (Nos. 28-34), all with white slip and yellow glaze.

JARS WITH HOLLOW SPOUTS (Nos. 20-21):

Fragments of two of these vessels are present in the group. One, No. 20, has an out-turned rim, two vertical rod handles applied between the rim and the shoulder, and a hollow tubular spout applied to a hole in the shoulder pierced from the inside outwards, at right angles to the position of the handles. Not enough remains of the vessel, unfortunately, to indicate whether there was a similar spout on the opposite side. The vessel is decorated with an applied thumb impression around the base of the neck, and with wavy lines around the neck and shoulders incised through the slip. A thick speckled green glaze covers the white slip around the upper part of the body.

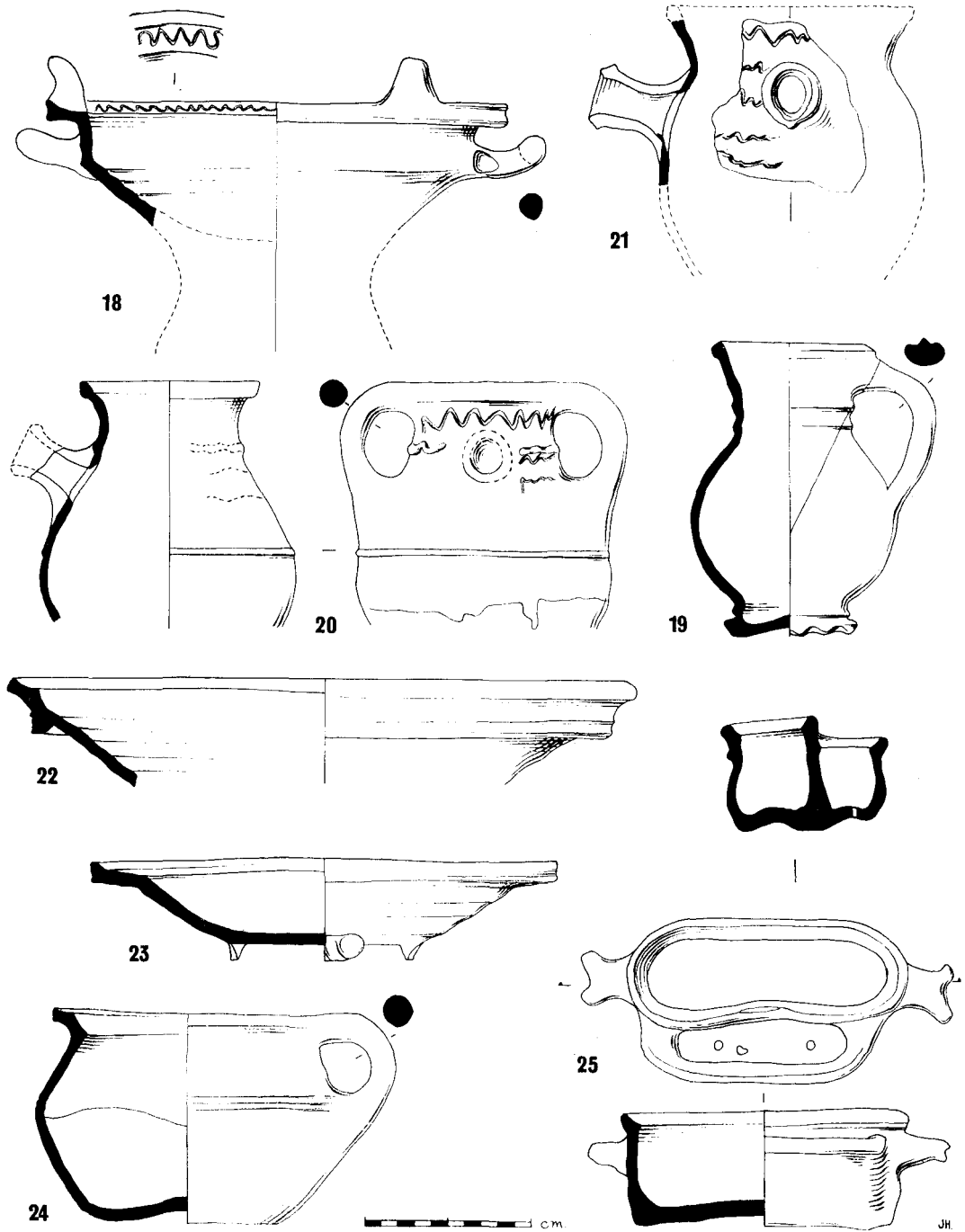


Fig. 8. Arundel House. Tudor Cesspit group. Nos. 18-25 ($\frac{1}{4}$)

Only enough remains of the second vessel of this type (No. 21), to show a large hollow spout, with the lower lip pulled downwards at the lower edge, which is applied to the shoulder in the same way. This is decorated and glazed in a similar fashion.

As far as the writer is aware, this vessel has no parallels with other finds in England. However, a recent series of finds from a medieval kiln at Utrecht, Holland, dateable on good stratigraphical evidence to *c.* 1400, includes complete examples of vessels of possibly similar type. These have two opposed spouts applied to the shoulder of the vessel, with two loop handles between rim and shoulder at right angles to the spouts. It seems likely that these vessels were suspended freely from the handles, allowing liquid to be poured in opposite directions from either of the spouts. The two vessels from the Arundel House group could well be very similar in type and function to the earlier Dutch examples, and if they are, provide one more instance of the undoubted influence during the later fifteenth and sixteenth centuries of the Dutch pottery industry on the English.

WIDE BOWLS (MILK PANS) (No. 22):

Rim sherds of three of these vessels and the handle of another are included in the group. These are only sparsely slipped on the interior and on the handle, and have yellow glaze on the interior only.

PLATES (No. 23):

Half of a complete example, and sherds of three or four others. These have wide-flanged rims with three pulled feet around the base. Decorated with white slip on the interior of the bowl, and with yellow glaze over the interior and in spots over the exterior.

These types of bowls and plates are paralleled by many examples from the early part of the sixteenth century,²⁸ but there is no reason to suppose that production of these vessels did not carry on throughout most of the sixteenth century.

DOMESTIC VESSEL (No. 24):

Single example only, complete. Flattened flanged rim with single vertical rod handle between the rim and the shoulder, with the top of the handle slightly pinched upwards. Decorated with white slip slopped around the interior, and with thin greenish-yellow glaze over most of the interior, rim and part of exterior.

CONDIMENT DISH (No. 25):

Single complete vessel only. Made in two unequally sized compartments from a cylinder of thrown clay cut from the wheel and attached to a moulded base. Two bifid lug handles are attached to the ends of the larger compartment; the base of the smaller compartment is pierced with three holes. The exterior of the vessel is covered with white slip and yellow glaze.

The exact function of these vessels, a number of which have been found in London, is problematical. It seems possible that they are of Dutch origin.

(Fig. 9):

COOKING POTS (Nos. 26 and 27):

Single complete vessel (No. 26); out-turned rim and bulbous body with sagging base with two applied vertical handles which are slightly pinched near the upper junction. Three short feet are applied to the base. Thick slip slopped around the interior, with a thin yellow glaze in patches over parts of the interior and exterior.

Also 1 sherd of another vessel (No. 27) with white slip on the interior.

VII. PLAIN RED WARES (Figs. 9, 10 and 11, Nos. 35-58):

About six nearly complete vessels of this type are present, with fragments of a few others of indeterminable form. These are all of fine sandy reddish-brown fabric, usually with a grey core in the thicker parts. Most are partially glazed with clear lead glaze only. The different vessels come probably from a number of different kiln sites in or around London, or are possibly imported from Holland. The vessels comprise large jugs, bowls and cooking pots.

JUGS (Nos. 35-40):

Two complete vessels from different kilns (Nos. 35 and 36). No. 35 is of bright red fabric, with a single applied rod handle, simple pulled spout and raised cordons around the neck, and decoration of wavy grooves incised around the shoulders; bright orange glaze around the front of the upper part of vessel. No. 36—of similar size and form, with grey-brown sandy fabric, but with only a few spots of glaze. Both jugs have three large pulled feet at the edge of the base.

Also present: the body and part of handle of one other smaller vessel, and the rims of three others (Nos. 37-40).

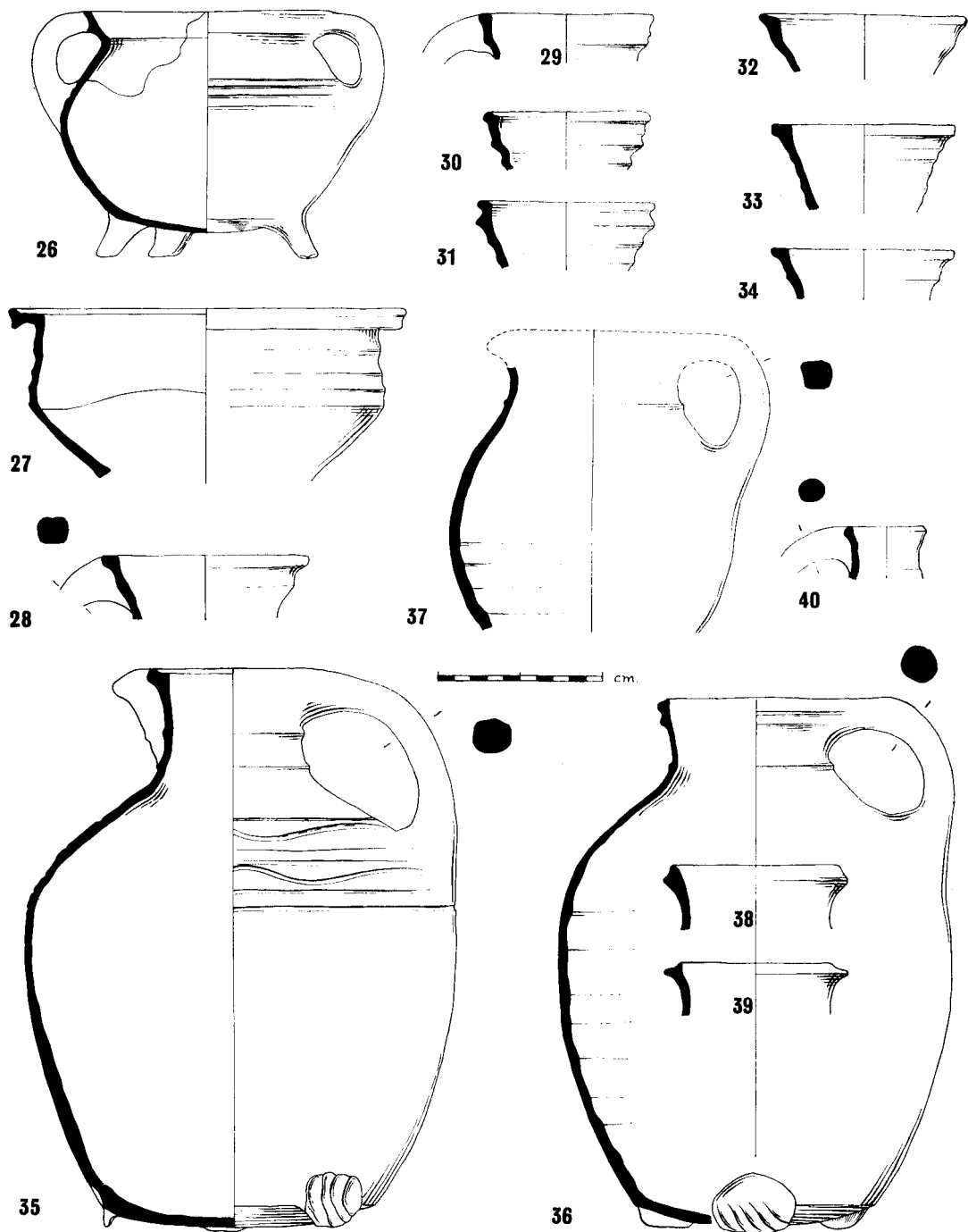


Fig. 9. Arundel House. Tudor Cesspit group. Nos. 26-39 ($\frac{1}{4}$)

BOWLS (Nos. 41 and 42):

No. 41 has two horizontal loop handles. Both are very similar to types which have white slip and yellow glaze on the interior.

COOKING VESSELS (Nos. 43–58):

Two large complete vessels (Nos. 44 and 46) from the same kiln, with everted moulded rim and two vertical rod handles, and three applied feet on the base of each vessel. Both are glazed with clear lead glaze over the interior base, and the exterior rim and shoulders. The rim of another larger vessel (No. 45) and several rims of smaller vessels (Nos. 48–57), all of the same type, are also drawn. The base (No. 58), is possibly from a jug, such as Nos. 30 and 36.

No. 43 (complete vessel) is a pipkin with an elongated pulled handle, and three small thumbled feet.

VIII. STOVE TILE (not drawn):

Small fragment only of a stove tile, probably imported. Fine sandy reddish brown fabric with grey core, with a thick coat of applied white slip over the externally facing surface, moulded into a form which it is not possible to interpret, and the slipped part covered with a dark lustrous green glaze.

DATING AND CONCLUSIONS:

The finds described above together form one of the largest associated groups of pottery of the later part of the sixteenth century so far recovered in London. No parallels to most of the types from this cesspit have yet been published,²⁷ and so it is difficult to fix the group in time with any degree of certainty. Most of the pottery finds are of types common in London, and all except groups II–IV are probably of local manufacture—*i.e.* in either London itself (Groups VI and VII) or Surrey (Groups I and V). The virtual absence of the finer tin-glazed earthenwares, as well as of stonewares and domestic glass, which are all comparatively common in the later sixteenth century, suggest that these finds are not representative of all the ceramic (and glass) types probably in use in Arundel House at this period. They seem therefore to be from a specialized context such as the pantry or buttery, the contents of which for some reason were completely cleared out at one time. The only residual sherds are those from Group V (sandy Surrey wares), which represent types common in the later fifteenth century.

Several facts point to a likely date of deposition of this group in the middle, or third quarter, of the sixteenth century. A number of the vessels of Group I, the fine untempered wares from the W. Surrey–E. Hants borders, are very similar to those from the late sixteenth century phase of a kiln site at Farnborough.²⁸ In particular the costrels (Nos. 4 and 5), the skillet (No. 6), the bowl (No. 7) and the dishes (Nos. 9 and 10) are similar to the types of products from this phase of the kiln. The jug (No. 8), while also being represented from this kiln, is, however, almost exactly the same as other vessels from a group from the Treasury site predating 1532,²⁹ and from a group of pottery at Farnham Castle, dated 1521.³⁰ The chafing dishes (Nos. 1–3), with their inner bases thrown separately, are of a type not represented in the products of the Farnborough kiln,³¹ and could well be products of another contemporary or earlier pottery-making site in the same area.

In his article cited above,³² Holling does not give any examples of pottery from the earlier or middle part of the sixteenth century. It is possible that the remarkable range of forms from the Arundel House group (Nos. 1–11) represent types of vessels which were indeed in production in the W. Surrey–E. Hants border area during this period. The use of both green and yellow glazes on different vessels of this group is also a feature of some interest at this early date.

Many of the types of slip-decorated red ware vessels (Group VI) are also represented in earlier sixteenth century groups of pottery in London, notably those from Guy's Hospital and the Treasury sites.³³ The type appears to have been introduced into the London area in the late fifteenth or early sixteenth century from Holland, where similar shapes of slip-decorated vessels were being produced from the early fifteenth century at least. The absence of the English slip-decorated vessels from places such as Norwich and Southampton, both of which ports were, like London, extensively served by Dutch ships, would seem to suggest that this type of pottery (as well as those red-ware types with no slip) were made in the London area from the late fifteenth century. Their similarities with Dutch prototypes would, however, suggest that they were manufactured possibly by or under the influence of immigrant Dutch potters. Their production evidently went on throughout the sixteenth and into the seventeenth century, but at present it is not possible to set up a chronological sequence of forms or to make any final comments on their development. Many of the forms of these vessels in this group, particularly the chafing dish (No. 18), plates and bowls (Nos. 22–23, and 41–42) and the condiment dish (No. 25) are however similar in many respects to some of the vessels from the early sixteenth century Guy's Hospital and Treasury groups, as well as from other unpublished groups of the same period in the Museum of London. The similarities suggest a date of

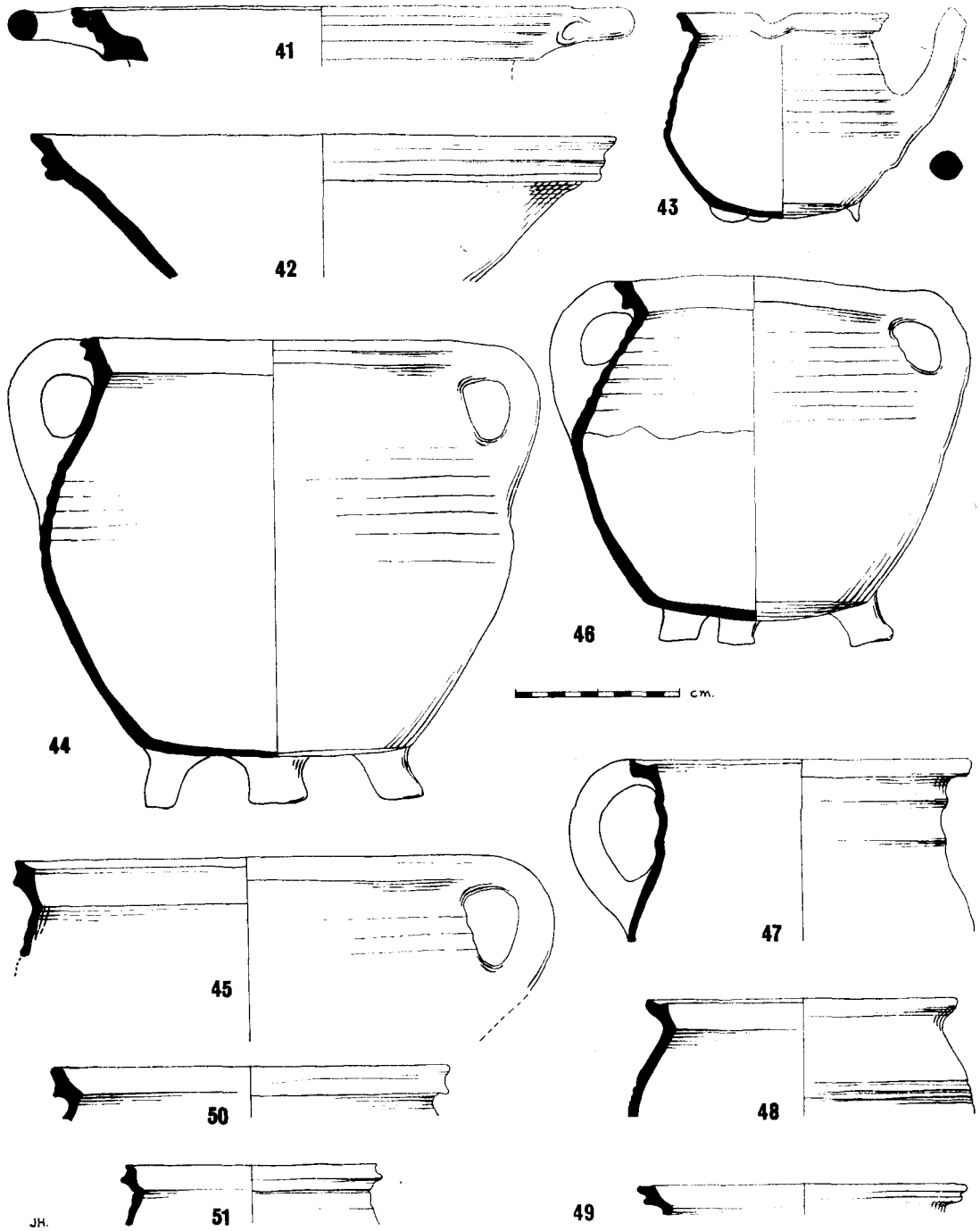


Fig. 10. Arundel House. Tudor Cesspit group. Nos. 41-51 ($\frac{1}{4}$)

production for the Arundel House vessels in the earlier or middle rather than the later sixteenth century. The use of green glazes on the yellow slip on some of these vessels (such as the jug, No. 19, and the pouring vessels, Nos. 20 and 21) might well, however, be indicative of a slightly later date, since green glazed slipped wares are most unusual in the Guy's Hospital and Treasury groups.³⁴

The presence of Frechen and decorated Cologne stoneware vessels is also not at variance with a date around the middle of the century. Although decorated Cologne stoneware vessels are found in the first quarter of the century, their period of use probably extends well on towards the end of the century.³⁵

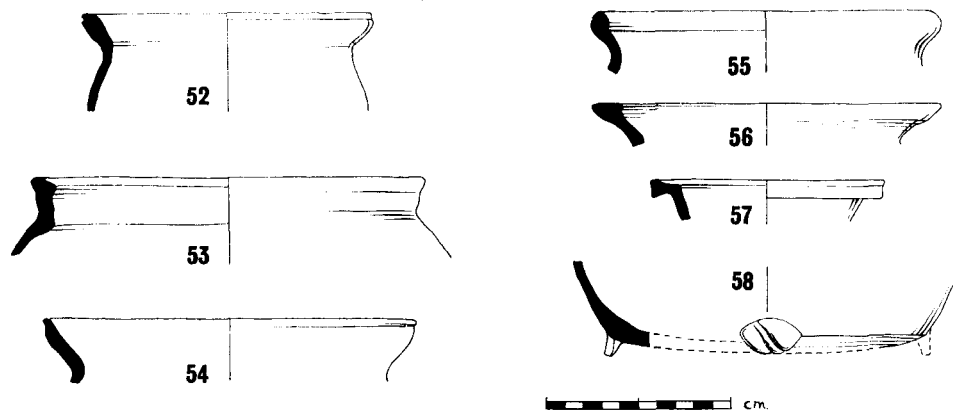


Fig. 11. Arundel House. Tudor Cesspit group. Nos. 52-58 ($\frac{1}{4}$)

OTHER POTTERY:

FIG. 12:

Feature A-1 (Highest surviving soil layer into which Tudor Cesspit was cut)

1. Bowl in buff Surrey ware, fifteenth century.
2. Wide-necked jar in buff Surrey ware.
3. Base of bowl in buff Surrey ware, interior coated with dark green glaze.
4. Base of bowl or pitcher in buff Surrey ware, with finger-impressed frilled decoration.
5. Pitcher in buff Surrey ware, with pierced handle, and (not shown) fragment of a similar rim with splashes of external green glaze.
6. Rim of pitcher in buff Surrey ware. External green glaze.
Buff Surrey ware, not shown:
1 sagging pitcher base with frilled decoration; 1 sagging bowl base with internal green glaze; 1 pitcher handle, similar to Fig. 12: 17, with green mottled glaze, decorated with three vertical V-sectioned slashes; 13 body sherds with external green glaze; 11 plain body sherds.
7. Bowl in off-white Surrey ware.
8. Similar. Surface abraded, but retaining traces of green glaze on inner surface below lip.
9. Foot of vessel in hard smooth slightly sandy light grey ware. Thirteenth century. Other medieval sherds, not shown:
Sandy buff ware with blob of green glaze and two vertical stripes of red (iron) slip; two sherds of similar ware with green glaze suffused with red mottling; hard grey shoulder sherd with diagonal painted yellow strip over khaki green glaze, fifteenth century; sherd hard, smooth, grey, early medieval ware.
10. Fragment of Roman everted-lipped jar in hard smooth black fabric; traces of burnishing on upper surface. Diameter uncertain.

11. Fragment of body and handle of sixteenth century cooking pot in hard sandy fabric with red surfaces sandwiching grey core.

Sixteenth century wares not illustrated:

Fragment of base with thick internal green-brown glaze; shoulder sherd in hard smooth pink fabric with internal green glaze, probably part of same vessel as Fig. 12: 18; 6 worn body sherds.

Feature A-6 (Identical with Feature A-1)

12. Neck and handle of stoneware jug in Siegburg ware, late fourteenth-early fifteenth century. Hard smooth creamy-grey fabric with traces of brown mottled glaze on upper surface.
13. Pitcher rim in hard smooth slightly sandy grey ware. Coated with white slip. Traces of external light green glaze. Diameter uncertain. Late fourteenth-early fifteenth century.
Not illustrated:
5 sherds buff Surrey ware, one with external green mottled glaze; 1 sherd off-white Surrey ware with internal green mottled glaze; small fragment of cooking-pot rim in hard, grey, sandy ware, surface layers fired dull chestnut, tempered with shell, twelfth-thirteenth century.

Feature A-5 (Dark clayey soil layer north of A-1 and A-6, resting on natural gravel. Isolated from other strata by late disturbance)

14. Base in hard, grey, sandy ware; interior surface dull grey-brown; exterior surface dull chestnut with splashes of translucent brown glaze. Late thirteenth century.
15. Base in hard, smooth, light grey fabric, approaching stoneware in texture. Surfaces fired grey-buff. Possibly a French import: ?late thirteenth century.

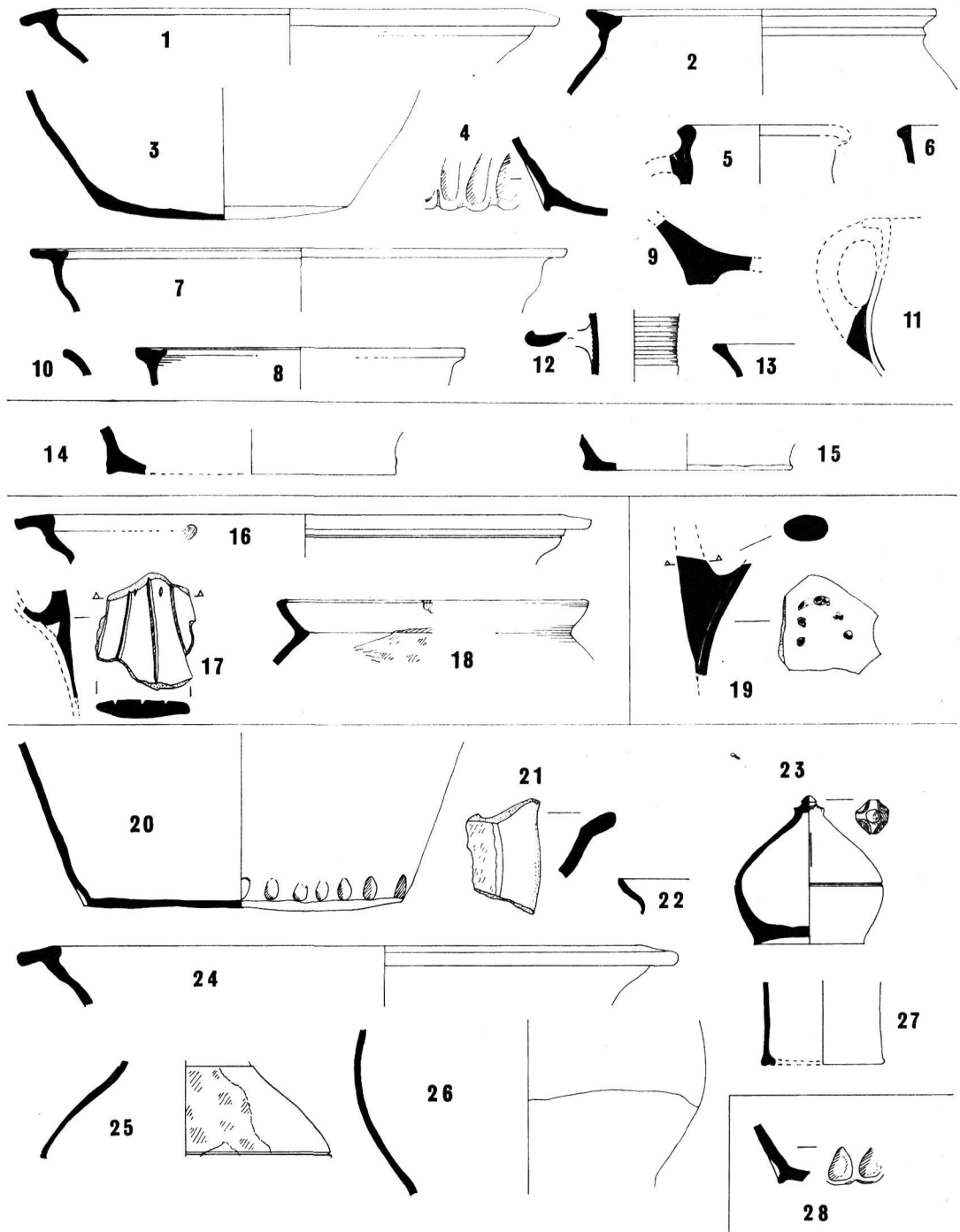


Fig. 12. Arundel House. Medieval Pottery. Nos. 1-28, pp. 231, 233 ($\frac{1}{4}$)

Not illustrated: small fragment, brittle grey-brown ware with corky texture and appearance, tempered densely with large black, pink and white grit.

Feature A-7 (Brown clayey soil below A-1 and A-6, resting on natural gravel. Also cut by Tudor Cesspit)

16. Bowl in buff Surrey ware. Blob of bright green glaze on interior surface.

17. Base of handle of off-white Surrey ware pitcher. Incised vertically with three deep V-section slashes. Two holes pierced in surface. Coated with mottled green glaze. Fourteenth century.

Not illustrated: 9 sherds buff Surrey ware, including fragment of pitcher base with finger-impressed frilling and two sherds with external green glaze.

18. Cooking jar in hard fine dull pink ware, with dark green glaze splashed over part of interior of rim and body.

Feature 12 (Lowest level of accumulated debris between west wall of vault and the parallel west wall)

19. Lower part of handle and fragment of body of pitcher in buff Surrey ware, third quarter fifteenth century. Inside of body beneath junction with handle has been pierced seven times with a pointed instrument, in a U-shaped pattern.

Not illustrated: 1 sherd buff Surrey ware with external green glaze; 2 plain sherds grey sandy medieval ware.

Feature 13 (Layer of charcoal and clay, resting on natural gravel, cut by wall fragment (Fig. 3: 7) to north-east of vault)

20. Base of pitcher in off-white Surrey ware with frilled finger-impressed decoration, fourteenth century, and (not shown) 5 fragments of similar vessels.

21. Rim and part of spout of dripping pan in hard, fine salmon-pink ware. Inner surface of dish coated with mottled green glaze over white slip. Late fifteenth century.

22. Rim of cooking pot, green glaze on both surfaces. Sixteenth century.

23. Money box of a type well known though infrequently found in a dateable context. Hard, creamy-white fabric, upper surface coated with mottled green glaze, which has run down body. Tip in form of stylized flower-bud with broad pointed calyx. Girth groove. Glaze has dripped through slot onto inner base of vessel, though not directly beneath slot; vessel was therefore resting at an angle during firing.

24. Large bowl in gritty pink-grey Surrey ware, fifteenth century, and (not shown), fragment of base of a buff Surrey ware pitcher with fingertip frilling and fragment of pierced handle from buff Surrey ware jug, about 35 mm wide and with deep incised groove.

25. Shoulder of jar in hard, gritty white ware with slightly offset neck and incised girth groove. Part of body coated with "bib" of mottled green and brown glaze.

26. Body of globular jar in hard, smooth, grey ware with dull orange surfaces. Upper part of body has been dipped in white slip and splashed with mottled green glaze.

27. Pedestal? base in hard pink-buff ware. Traces of translucent green glaze splashed over white slip.

Feature 18 (Lowest soil level in foundation trench of Fig. 3: 7 (Wall))

28. Base of pitcher in buff Surrey ware with fingertip frilling.

FIG. 13:

Feature 19 (Soil layer cut by brick pit to east of Tudor Cesspit)

1. Saucer in off-white Surrey ware with foot-ring base. Green glaze on lower half of inner face; also splashes of glaze on footring. Fourteenth century.

2. Body sherd of large pitcher in off-white Surrey ware with olive green glaze splashed down external surface. Fourteenth century.

Not illustrated: 1 small sherd similar to (2) above; 1 small sherd off-white Surrey ware with trace of red glaze; 5 plain body sherds off-white Surrey ware.

3. Tall-necked pitcher (spout missing) in buff Surrey ware. Fabric lightly tempered with pink sand. 1350-1425.

4. Flat-topped bowl rim in buff Surrey ware. 1350-1425.

5. Lid-seated jar in buff Surrey ware. Green glaze on exterior of body and part of exterior of rim. 1350-1425.

6. Spouted pitcher in buff Surrey ware. Handle decorated with stab marks and incised vertical groove down external surface. 1350-1425.

7. Shoulder of pitcher in buff Surrey ware, with vertical trail of olive-green glaze. 1350-1425.

8. Base of vessel of buff Surrey ware with frilled decoration. Bright green glaze splashed on underside of base, and traces of green glaze dripped down body, and (not shown) fragments of four similar bases. 1350-1425, and 22 plain body sherds of buff Surrey ware.

9. Shoulder of Cheam ware jug in hard buff fabric; exterior surface above girth coated with mottled green glaze. Similar in date to buff Surrey wares.

10. Base of Cheam ware vessel in hard, grey-buff fabric.

11. Tripod cooking pot in hard, smooth, grey ware, surfaces fired dull orange. Internal surface coated with mottled green glaze. Probably fifteenth century.

Not illustrated (mainly Surrey wares):

10 fragments bases in off-white wares with green glaze on interior, fifteenth century; 1 base fragment in orange ware with green glaze on white slip, fifteenth century; 21 sherds in grey or buff with external green or yellow glaze.

12. Lid in East Anglian red ware, decorated with irregular blobs of creamy slip. 1425-1500.³⁶

13. Everted rim cooking jar in rough hand-made dark grey shell-tempered ware; patches of exterior surface fired pink-brown. Twelfth century.

Feature 20 (Cutting 19, but itself cut by brick pit to east of Tudor Cesspit)

14. Rim of cooking jar in hard grey gritty ware, surfaces fired dull brown. Heavily tempered with crushed shell. Early thirteenth century, and (not shown) sherd of similar ware.

15. Bowl in buff Surrey ware. Splash of green glaze on underside of flange.

16. Bowl in buff Surrey ware. Internal green glaze commencing below inner lip.

17. Pitcher in buff Surrey ware. Traces of green glaze splashed on exterior.

18. Jar in buff Surrey ware, surfaces pinkish-buff in colour. Interior of rim from lip to point of narrowest diameter coated with mottled green slip.

19. Base of vessel in buff Surrey ware with internal mottled green glaze, and (not shown) a similar base, showing signs of burning on both surfaces.

20. Lid in buff Surrey ware.

Surrey wares not illustrated: 7 sherds with external green glaze; 3 sherds with external olive glaze; 1 sherd with external red slip trail decoration; 2 sherds with internal green glaze; 13 plain sherds.

21. Rim in grey-brown ware with red surfaces coated with dark green glaze. Late fifteenth-early sixteenth century. Sixteenth century wares not illustrated: 5 sherds grey ware with green glaze; 1 fragment late sixteenth century Westerwald ware.

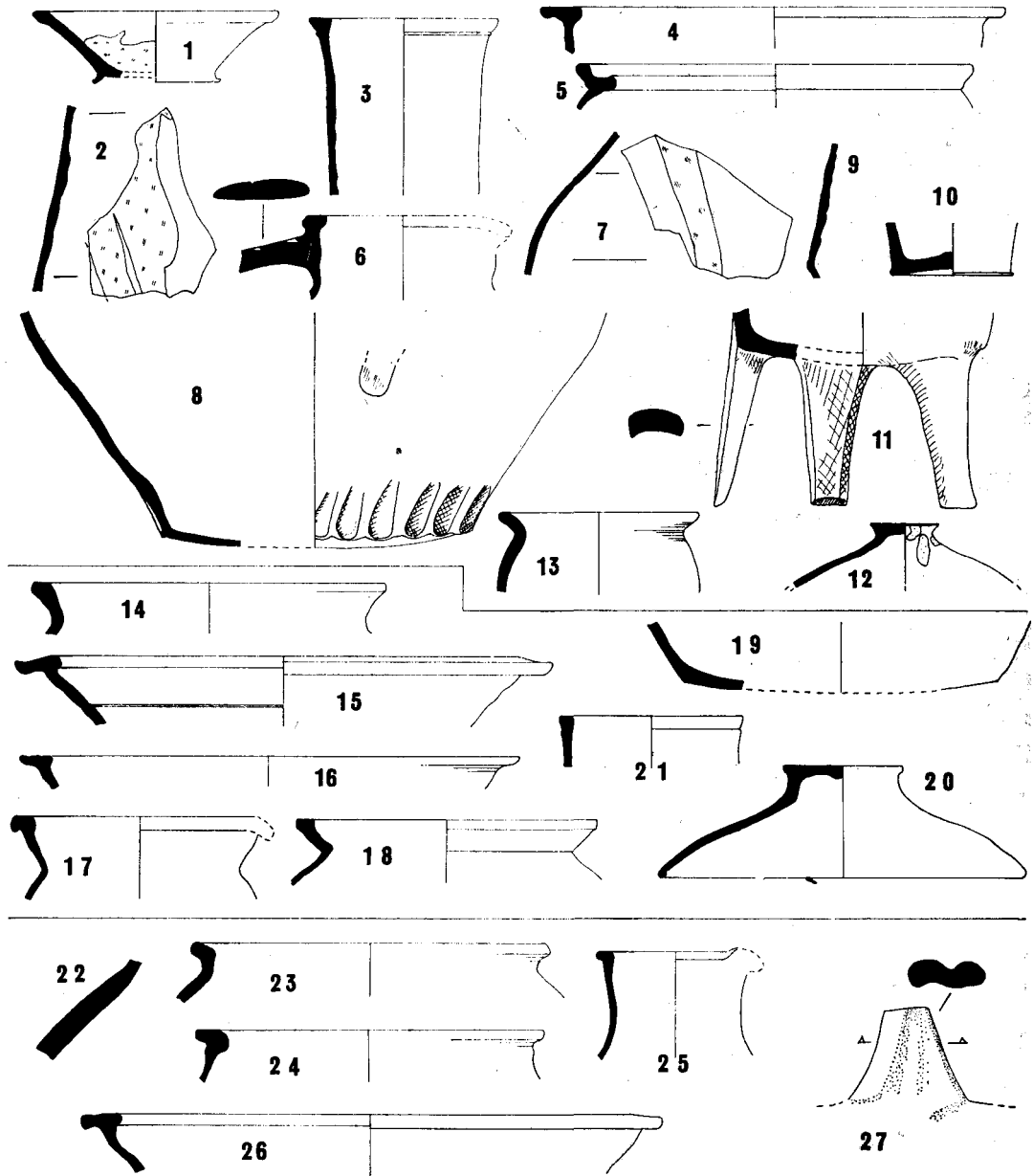


Fig. 13. Arundel House. Medieval Pottery. Nos. 1-27, pp. 233, 236 ($\frac{1}{4}$)

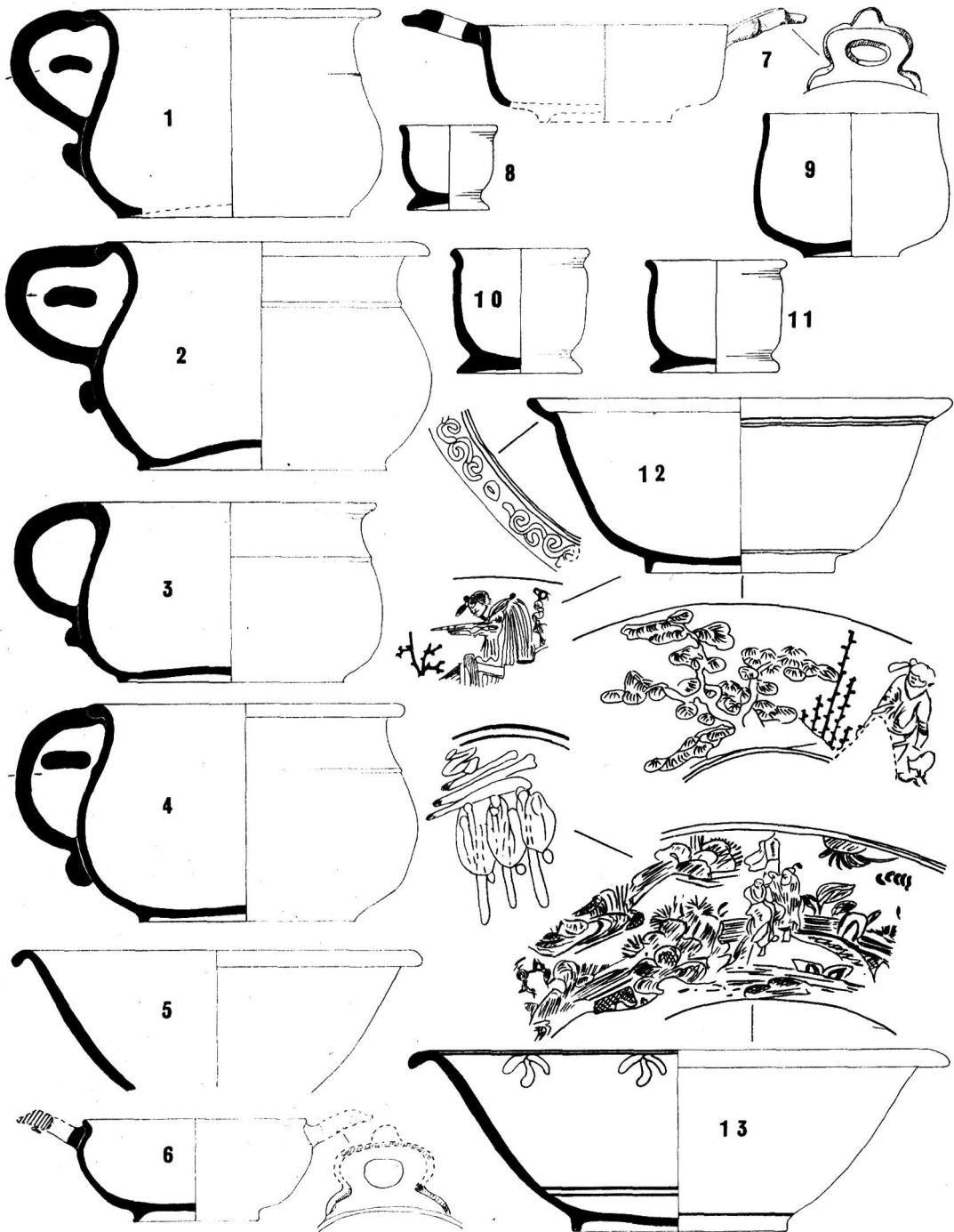


Fig. 14. Arundel House. Delft ware. Nos. 1-13, p. 236 ($\frac{1}{4}$)

Feature 23 (Dark soil on west side of and cut by northerly continuation of wall west of vault.)

22. Shoulder sherd of large cooking pot in hard fairly smooth dark grey fabric with brown surfaces. Exterior surface shows very light rilling; interior surface very rough and flaked. Possibly Middle Saxon (eighth-ninth century).

The collection of pottery described in the following section (Figs. 14–18), comprising English and Dutch Delftware and Chinese porcelain of the K'ang H'si dynasty, was not recovered under controlled excavation conditions. It was located during site works by the building contractors and set aside for our examination. In view of the very close dating obtained from parallel specimens—most pieces can be reasonably securely dated to the period 1680–1700—it may be assumed that the collection does form a group deposited together, and it has been felt that this, the interest attaching to several of the pieces, and the fact that this seems to be the first time that such a group from London has been published, has made the recording of the larger portion of the group worthwhile.

FIG. 14:

Plain Delftware Chamber-pots

1. White glaze with creamy-grey tinge.
2. White glaze with pink tinge.
3. Plain white glaze.
4. Plain white glaze, and (not shown) several incomplete examples of similar vessels.

Other Delftware

5. Bowl with plain white glaze.
6. Two-handled bowl with plain white glaze.
7. Two-handled bowl with plain white glaze.
8. Small drug jar with plain white glaze, and (not shown) fragments of a similar jar.
9. Pot with creamy glaze, covered with brown speckles.
10. Drug jar, white glazed with small blue speckles.
11. Drug jar with plain white glaze.
12. Bowl or chamber-pot with sky-blue glaze. If of English make, the shape is a rare type and the likelihood is that it is Dutch, later part of the seventeenth century. The decoration, on exterior only, is in monochrome dark blue. Under the everted rim is a cornice of crude whorls either side of a circle. The pattern is in solid blue, but for illustration here only the outlines have been shown. On the body, two panels of Chinese-style decoration survive; one shows a figure in a rocky landscape with a tree and plants, while the other shows another figure, possibly a servant.
13. Bowl or chamber-pot. Plain white glaze, with Chinese-style decoration in dark blue; on the exterior, a blue horizontal line above the foot-ring, and two further horizontal blue lines below the everted lip. On the body, two figures in a Chinese garden. On the interior, two horizontal lines immediately below the lip, with stylized flower-like motifs suspended from the lower at 70 mm intervals. On the interior of the base, within two concentric circles, a pattern of uncertain subject, possibly flower-buds. On the underside, a "maker's mark" consisting of one thick brush-stroke, and (not shown), base fragment of a similar vessel. Frankfurt, 1670–90.

FIG. 15:

1. Bowl. White glaze with internal band of geometric decoration in blue, between horizontal blue lines, one above and two below; and, on interior of base, within two concentric circles, a stylized floral design in blue (part only surviving). Intensity of blue indicated by density of shading. Probably English, late seventeenth century.

23. Cooking jar in hard, gritty, dirty-grey fabric. Twelfth century, and (not shown) one body sherd of similar fabric.

24. Wide-necked jar in buff Surrey ware.

25. Pitcher in buff Surrey ware (handle not surviving).

26. Bowl in buff Surrey ware.

Buff Surrey ware not illustrated: 8 sherds with external green glaze; 1 plain sherd.

27. Spout of dripping pan. Late fifteenth century.

2. Small bowl or cup. Eggshell blue glaze. Exterior decoration in monochrome dark and light blue, with Chinese style design, probably of two opposing medallions showing scenes, separated by panels of reticulated design. Probably Dutch, late seventeenth century.
3. Cup. Eggshell blue glaze with external dark blue decoration of flowers in foreground and landscape in distance, between two horizontal blue lines. Probably Dutch, late seventeenth century.
4. Cup with pale blue glaze. External decoration, in dark blue, of a dove in a floral landscape. Probably Dutch, late seventeenth century.
5. Bowl with pale blue glaze. Interior decoration in dark blue: upper panel, below and abutting horizontal blue line, of concentric semicircles; and below, five further horizontal blue lines; decoration on interior of base of stylized bunch of grapes; outline of grapes, and stems, in black, grapes filled-in in blue, with a central dark blue blob. Probably Dutch, late seventeenth century.
6. Shallow two-handled dish. Very pale blue glaze with external decoration, in dark blue, of insect approaching flowers. Blue blob decoration on handles. On underside, maker's mark, comprising spray of plants and ligatured letters of name De Pauw ("the Peacock") of Delft. (The factory was founded in 1651 and the piece is either somewhat earlier than 1674 or somewhat earlier than 1690.)

FIG. 16:

1. Bowl with pale blue glaze. External decoration, in dark blue, of alternating vertical streaks and facing crescents. Internal body decoration, in dark blue, of stylized patterns in panels. Internal base decoration too fragmentary for illustration. Dutch, second half seventeenth century.
2. Lid-seated vessel. Fine hard white glaze. External blue floral decoration with small leaves touched up in gold. Dutch, second half seventeenth century.
3. Handled lid with blue-tinged white glaze. Light and dark blue decoration of stylized flowers on upper surface. Two blue concentric circles around body, at junction of flange, and two blue circles around base of handle (only one shown, due to occlusion by expanding top of handle). Probably English, late seventeenth century.
4. Lid with pale blue glaze. Fragment of surviving leaf and floral decoration on upper surface. Probably English, late seventeenth century.

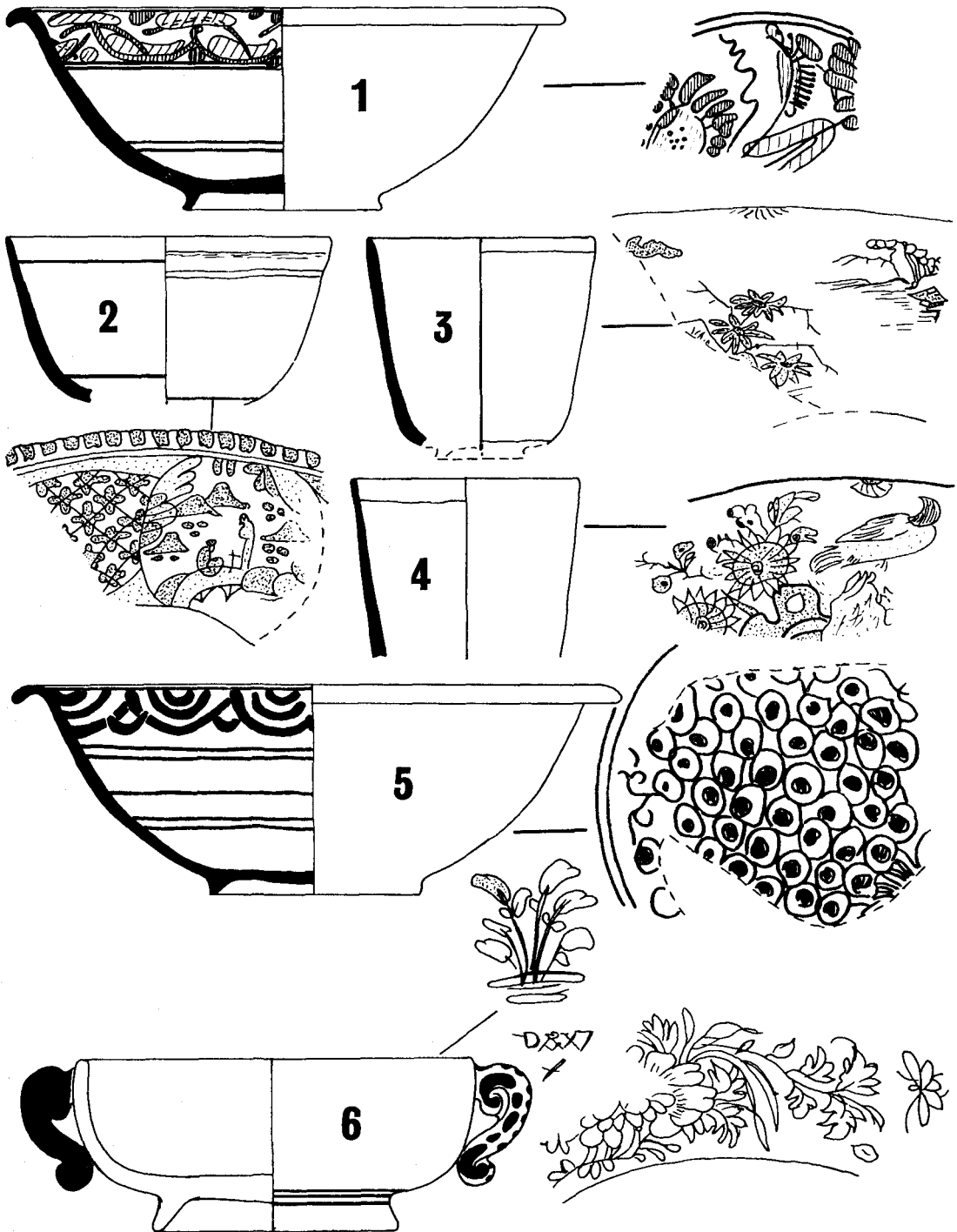


Fig. 15. Arundel House. Delft ware. Nos. 1-6, p. 236 ($\frac{1}{2}$)

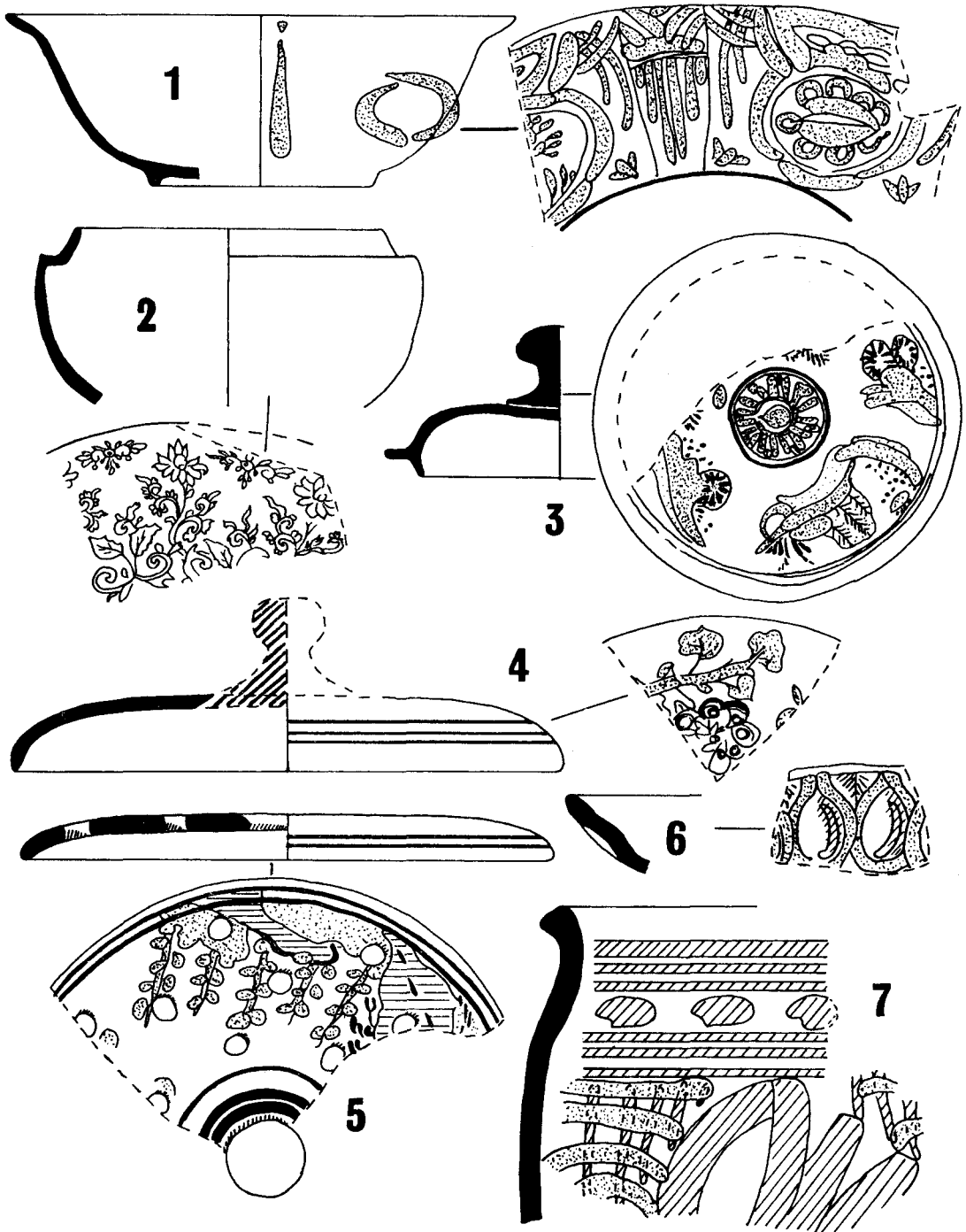


Fig. 16. Arundel House. Delft ware. Nos. 1-7, p. 237, 239 (1/2)

5. Flower-holder with large central hole and subsidiary holes on body. Pale blue glaze. Stylized plant decoration on upper surface between bands of concentric blue circles. Probably English, late seventeenth century. (Stippling — dull brown. Hatching — dark blue).
6. Rim fragment of bowl or dish. Indented bosses along rim with dark blue internal decoration, on pale blue glaze. Probably Dutch, late seventeenth century.
7. Drug or storage jar, diameter uncertain. White glaze with painted decoration of ochreous (stippled) and pale blue (hatched).

CHINESE PORCELAIN:

The first Chinese ware to reach European markets was popularly called "Kraak" ware after the Portuguese ship captured in 1603 by the Dutch bearing a cargo of the wares. These created a sensation in Europe, where the cargo was sold for 3,000,000 guilders, and the way was immediately opened for a huge trade between Europe and the Orient.

The porcelain from the Arundel House group comprised teacups, plates and bowls of the K'ang H'si Dynasty (1662-1722). These wares were imported into Britain in great quantity. The markings are well-known types of Chinese potters, comprising both writing and symbols. The pottery is contemporary with the Delftware described above, by which it is freely imitated. Generally, these wares reflect those to be found on high-class tables (tea was expensive at that time) in the late seventeenth century. M. Archer Esq., Ceramic Dept., Victoria and Albert Museum, considered that the group contained a larger proportion of Chinese Wares than normal.

The wares are made of a fine hard white paste, usually coated with a white glaze.

FIG. 17:

1. Teacup. White glaze with blue decoration. On exterior, eight panels (one shown) with repetitive floral design, rising from base ringed with sixteen ovals or stylized buds; on interior, below lip, a narrow hatched band between two horizontal lines; on bottom of interior, a plant with flower and leaves (shown on left half of cup); on underside, maker's mark of plant spray within two concentric circles (shown on right half of cup).
2. Teacup. White glaze with blue decoration. On exterior, two horizontal bands below lip, with below, on body, floral and leaf decoration; around the foot-ring, three horizontal bands; on the underside, a maker's mark of two fishes (symbol of conjugal harmony) within two concentric rings. On the interior, a narrow hatched band below the lip, and on the base, within two concentric circles, a flower.
3. Teacup. White glaze with blue decoration. Surviving panel on exterior shows fish between two geometric patterns, below two horizontal lines; on underside of base (shown at full size) maker's mark (Chinese characters *sheng yu ya chih*, "Elegantly made for holy friends"). On interior, two horizontal lines below lip; on bottom, geometric design similar to those on exterior, within two concentric circles.
4. Teacup. White glaze with blue decoration. On exterior, two horizontal lines below lip, and three around foot-ring. On body, flower design, fragmentary only and not shown. On interior, two horizontal lines below lip; on bottom, plants within two concentric circles. On underside, maker's mark in Chinese characters (shown at approximately three-quarters scale), also within two concentric circles.
5. Teacup. White glaze with blue decoration. On exterior, surviving fragment of flower and leaf design; on underside, Chinese characters (maker's mark) within two concentric circles. On interior, at lip, narrow horizontal hatched band with two horizontal lines below; on bottom, a small plant motif (shown in left half of cup).
6. Teacup. White glaze with blue decoration. External design of (probably) four figures; only two surviving, of a child or dwarf and a woman; on the underside, maker's mark in Chinese characters (shown at three-quarters scale). On the interior, a horizontal band of geometric design below the lip, and, on the bottom, within two concentric circles, a landscape with a pavilion, sea and distant mountains.

7. Teacup. White glaze with pale blue decoration. On exterior, a female figure, reclining or kneeling, holding a spray of flowers, and (not illustrated) an incompletely surviving floral panel and another fragmentary figure; other figures missing. On underside, maker's mark in Chinese characters, within two concentric circles. On the interior, below lip, three surviving motifs resembling knots or bows (probably six originally); on the bottom, a flower bud motif. And (not shown) fragments of four teacups of similar style.

FIG. 18:

1. Teacup of type known as "Batavian Ware", named after the Dutch trading station in Batavia. Chocolate-coloured exterior surface. Interior white-glazed, with two horizontal blue lines below lip and a blue stylized flower on the bottom.
2. Teacup in Batavian ware. White glazed, with exterior lip in chocolate (stippled). Remainder of interior (hatched band and two horizontal lines below lip) and exterior (horizontal hatched band and two lines below chocolate band, and diamond and leaf body decoration) in blue. Not illustrated: fragments of K'ang H'si bowl in "egg-and-spinach" ware, painted with blotches of green, brown and yellow.
3. Bowl. Very pale blue glaze with dark blue decoration. On exterior, two horizontal lines below lip; around base, stylized petals or blobs; round foot-ring, three horizontal lines. On interior, below lip, a narrow band of flower and leaf decoration edged by one horizontal line above and two below; on the bottom, a large flower with leaves and tendrils. This is typical of the wares which were extensively imitated by the Delftware factories, examples of which also appeared in this group (see above).
4. Bowl, exterior coated with mottled brown glaze. Interior glazed pale blue and decorated in darker blue with leaf and flower design below a rim-band of scalloped lines.
5. Shallow bowl, white glazed with two horizontal red lines on inner rim, below lip. Interior of body and dish decorated with a random scatter of five-petalled red flowers and small green leaves (the latter now almost all faded to brown). On underside, within two concentric blue circles, and itself in blue, maker's mark in Chinese characters.

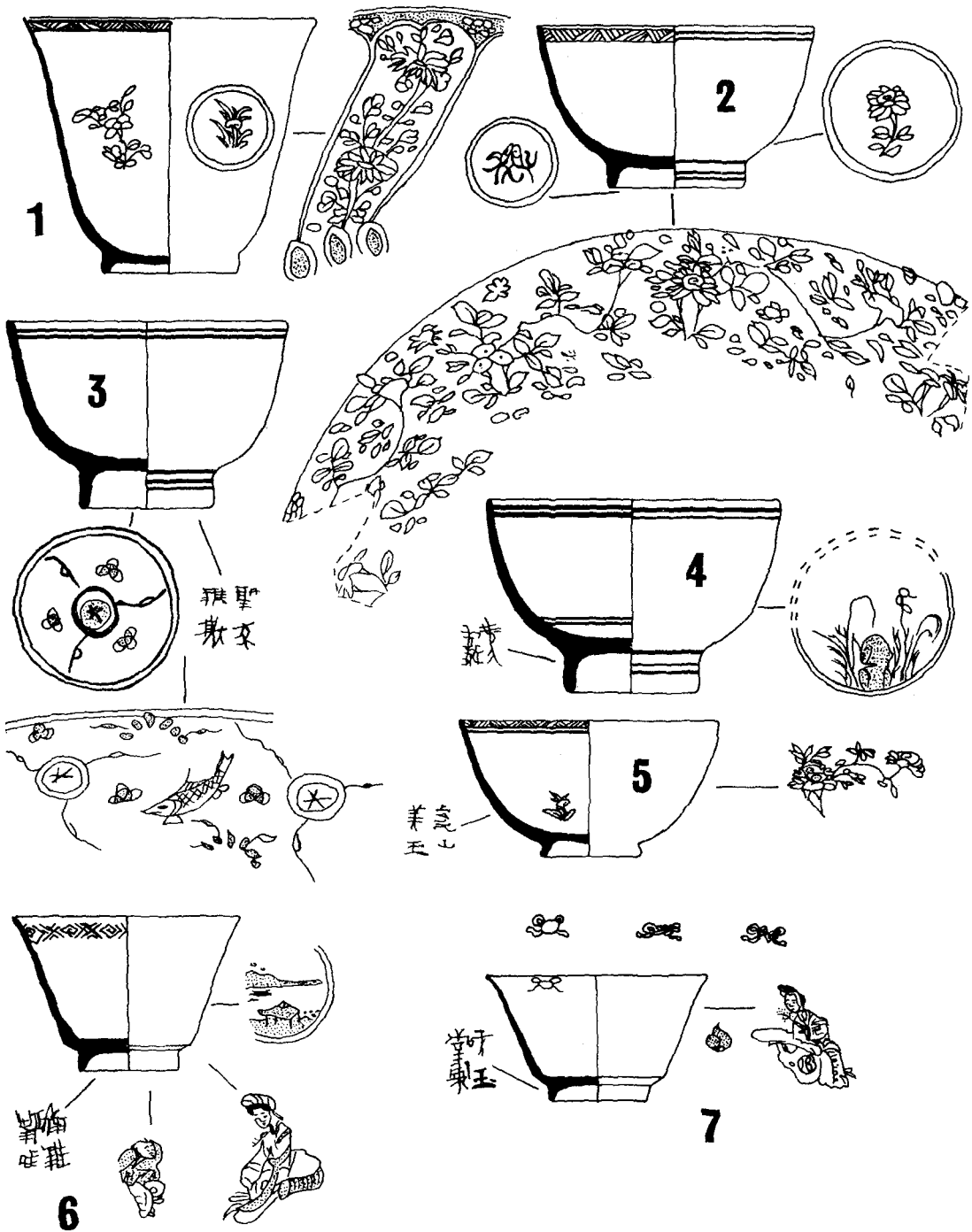


Fig. 17. Arundel House. Chinese Porcelain. Nos. 1-7, p. 239 (1/2)

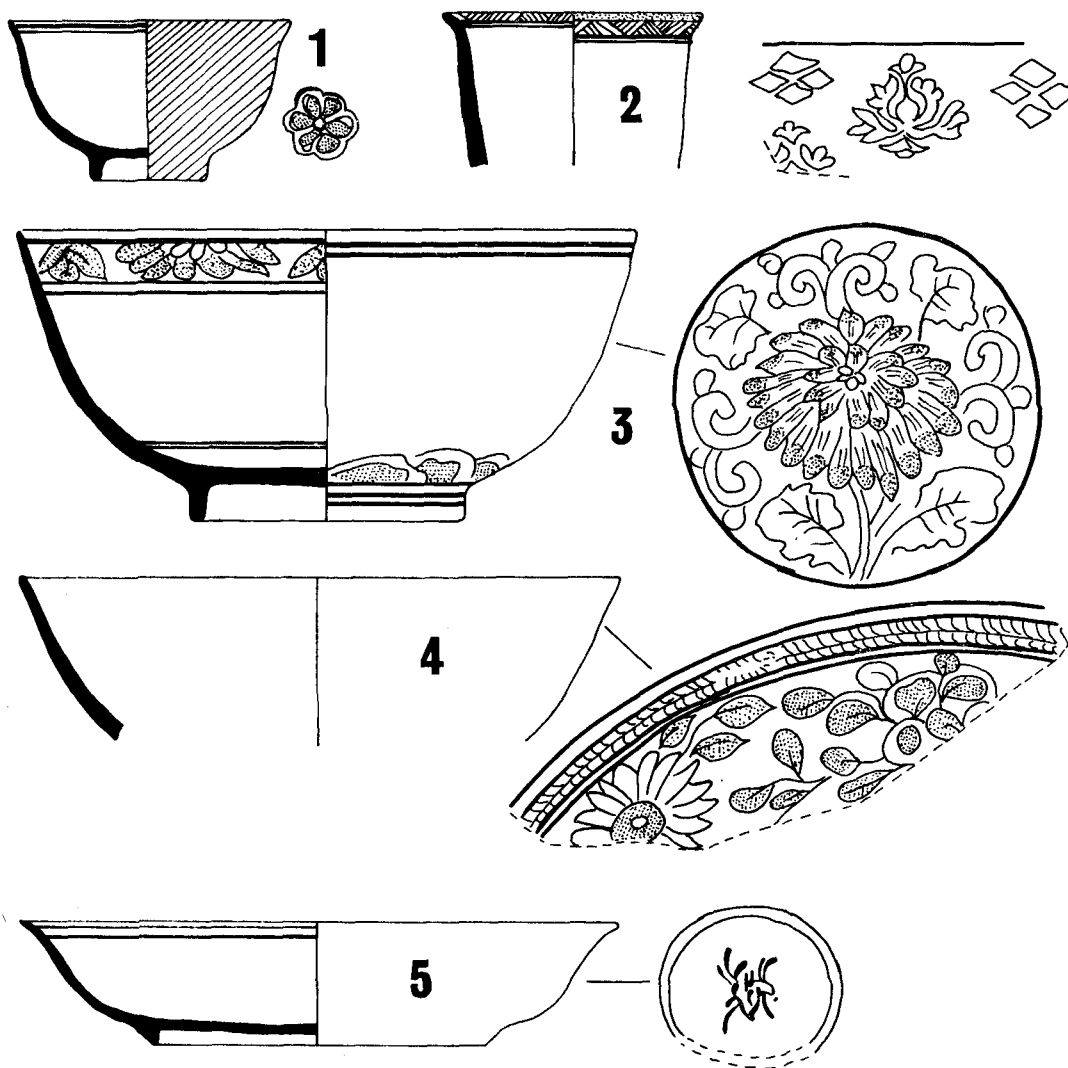


Fig. 18. Arundel House. Chinese Porcelain. Nos. 1-5, p. 239 ($\frac{1}{2}$)

SMALL FINDS

FIG. 19: Glass

1. Lattimo glass goblet. Colourless glass, with two external raised horizontal bands of milk-white decoration; each band edged with narrow strips and the space between cross-hatched with broad S-shaped markings, the upper layer comprising reversed S's and the lower layer normal S's; all these markings within the fabric, beneath the raised bands, as shown in section. Below these bands, a trace of colourless glass appliqué decoration. The slightly primitive character of the vessel indicates a date of mid to later sixteenth century. Probably Venetian. From the Tudor Cesspit.
2. A fragment of a similar Lattimo glass goblet, of colourless glass with milk-white surface decoration of two

horizontal bands overlying a pattern of diagonal bands, the latter coloured over a very pale pink. This could be a slightly later piece than (1) above. Probably Venetian. From the Tudor cesspit.

3. Rim of colourless glass jug or beaker. Second half sixteenth-early seventeenth century, most probably the former. Possibly Venetian. From the Tudor cesspit.
4. Neck and base (two found) of green glass urinal. Glass badly decayed. Similar vessels of Wealden glass date up to 1600. From the Tudor cesspit.

Not shown:

From the Tudor cesspit, 9 fragments of decayed window glass, thickness 2 mm or 3 mm, size varying from 30 mm × 25 mm to 60 mm × 55 mm.
From the Delftware and Chinese Porcelain group, remains of five English lead-glass wine glasses, c. 1690.

Iron

A number of iron objects were recovered from several of the levels and features, predominantly nails. Other objects were generally in such an advanced state of rust as to be unrecognizable. One half of a small broken horseshoe, 90 mm long and possibly a similar width, was identified from Feature 19, the fifteenth century level into which the brick pit was cut. The only objects worthy of illustration were the knife-blade and tang shown in Fig. 21: 6, and:

5. Fifteenth or sixteenth century double candle holder and pricket from Feature 13, dated by pottery to the late fifteenth or early sixteenth century.

Mason's Marks

6. Arrow-shaped. Engraved on the underside of the northernmost greensand springer on the west side of the Vault; and closed cross, engraved on the underside of the second greensand springer from the north of the east wall of the Vault.

Lead Piping

7. 1 m length, consisting of two soldered lengths of piping of different bore. Drawing shows the soldered joint, section through larger calibre pipe (smaller calibre pipe was simply round) and two seal-marks, on opposing sides of the smaller calibre pipe, but located further down the pipe than illustrated. From beneath floor of main east-west range beneath Norfolk Street. Probably contemporary with the main building (second half of sixteenth century) though of course could have been inserted at any time prior to the date of destruction.

FIG. 20:

1. Leather shoe

Dated to the fourteenth or early fifteenth century. From Feature 13, dated to about 1500.

Textiles

Several textile fragments were found in Feature 13, the fibres from the two largest pieces being identified as wool.

Other small finds

2. Bronze book-clasp. From Tudor cesspit.
3. Bronze dress-hook (*cf.* Museum of London Acc. 11121, sixteenth century, from Tabard Street, London). From Tudor cesspit.

4. Bronze pin, with thick shank, tapering slightly towards tip (missing). From Tudor cesspit.
5. Smaller bronze pin. From Tudor cesspit.
6. Bronze thimble. From Tudor cesspit.
7. Iron knife-blade and tang. From Feature A-1 (early sixteenth century layer cut by Tudor cesspit).

The coins

The report on coins 2-4 was kindly provided by S. E. Rigold Esq.

1. House of Constantine the Great, period A.D., 335-41 reverse type GLORIA EXERCITUS, soldiers with one standard. Poor condition. Unstratified, above Layers A-1/A-6.
2. Billon coin of Philip Duke of Burgundy—Philip "le Hardi" (1363-1404) or Philip "le Bon" (1418-67), but not Philip de Rouvre (1350-61). Dia. 19 mm, mint uncertain but it should, with title of Duke alone, and not Count, be of Burgundy proper (not Franche Comté) or, more probably, the Netherlands; the legend suggests Flanders. Obv. PHILIPP DVX BVRG, shield quartering "Burgundy Ancient" with one lys in each quarter for "Burgundy modern". Rev., cross paty, pellet in one quarter, legend unclear but hard to make into DIVIONE (Dijon); it may end (FLAN)DRIE. There seems to be some uncertainty about the attribution of such deniers, etc.; if Philip le Bon, certainly early in his reign, or else late in the reign of Philip le Hardi. From Feature 13.
3. Fragment of French official jeton, very corroded, but original diameter apparently about 24 mm which, with what remains of the type, rather suggests a date towards 1370. Obv. indecipherable. Rev., four-strand cross flory, quadrilobe in centre, rosettes in angles. Feature 13.
4. French official jeton, dia. 26 mm, segment deliberately cut out of edge, which is unusual. One of the series (without inner ring on reverse) common in England in the late fourteenth and early fifteenth centuries (*c.* 1375-1415?). The lettering suggests a late example, *c.* 1400-10. Obv. Crown, 3 pierced cinquefoils on band, pierced cinquefoil or quatrefoil stops. + AVE MARIA. GRACIA.PN. Rev. Elaborate cross flory in quadrilobe, A V E M between annulets in spandrels. From Feature 19.

THE ANIMAL BONES

BY JULIET CLUTTON-BROCK (British Museum, Natural History)

Feature 20 (late fifteenth century)

Oryctolagus cuniculus (rabbit)—2 bones.
Sus (domestic)—3 adult, 6 juvenile bones.
Capreolus capreolus (roe deer)—2 bones.
Dama dama (fallow deer)—1 bone.
Bos (domestic)—54 bones and teeth, mostly adult.
 Sheep/goat—50 bones and teeth, mostly adult.
 Tudor cesspit (*c.* 1550-75)
Sus (domestic)—2 adult, 6 juvenile teeth and bones.
Dama dama—3 adult bones.
Ovis (domestic)—1 part skull and one abnormal tibia.
 Sheep/goat—*c.* 70 bones and teeth.
Bos (domestic)—*c.* 50 bones and teeth, mostly adult.
Oryctolagus cuniculus—2 bones.
Rattus rattus—5 mandibular rami, 1 part skull and limb bones, some juvenile.

Feature A-6 (late fifteenth-early sixteenth century)

Sus (domestic)—7 adult bones and teeth, 1 juvenile.

Bos (domestic)—8 adult bones and teeth, 6 juvenile.

Sheep/goat—9 adult bones and teeth, 1 juvenile.

Feature A-1 (as A-6)

Sus (domestic)—8 adult bones, 5 juvenile.
Capreolus capreolus—1 proximal end of a metatarsal, adult.
Bos (domestic)—44 adult bones, 9 juvenile. 1 proximal end of a femur with exostosis of the bone around the head.
 Sheep/goat—*c.* 68 bones and teeth adult, 6 juvenile. Also 1 proximal end of a radius which is abnormal and has exostosis of the bone around the epiphysis.
Oryctolagus cuniculus—1 pelvic bone.
 Frog/toad—limb bones.

Feature 13 (fifteenth century)

Felis (domestic cat)—part of the skull, lower jaw, atlas and vertebrae of a small cat. Dentition complete. Adult.
Sus (domestic)—1 humerus.
Bos (domestic)—1 lower limb (articulating 1st, 2nd and 3rd phalanges).
Ovis (domestic)—part skull and teeth and bones.

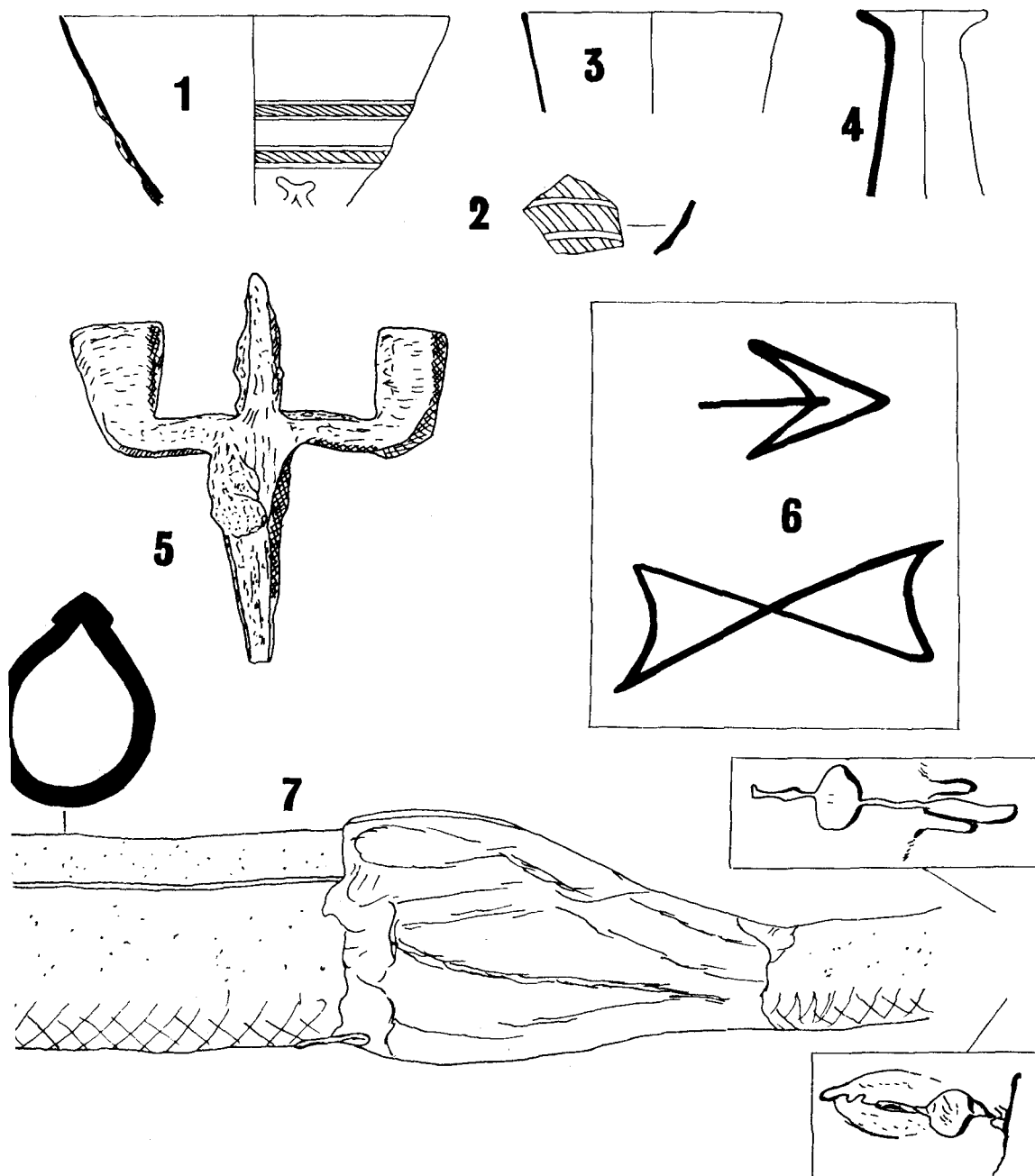


Fig. 19. Arundel House. Glass and small finds ($\frac{1}{2}$)

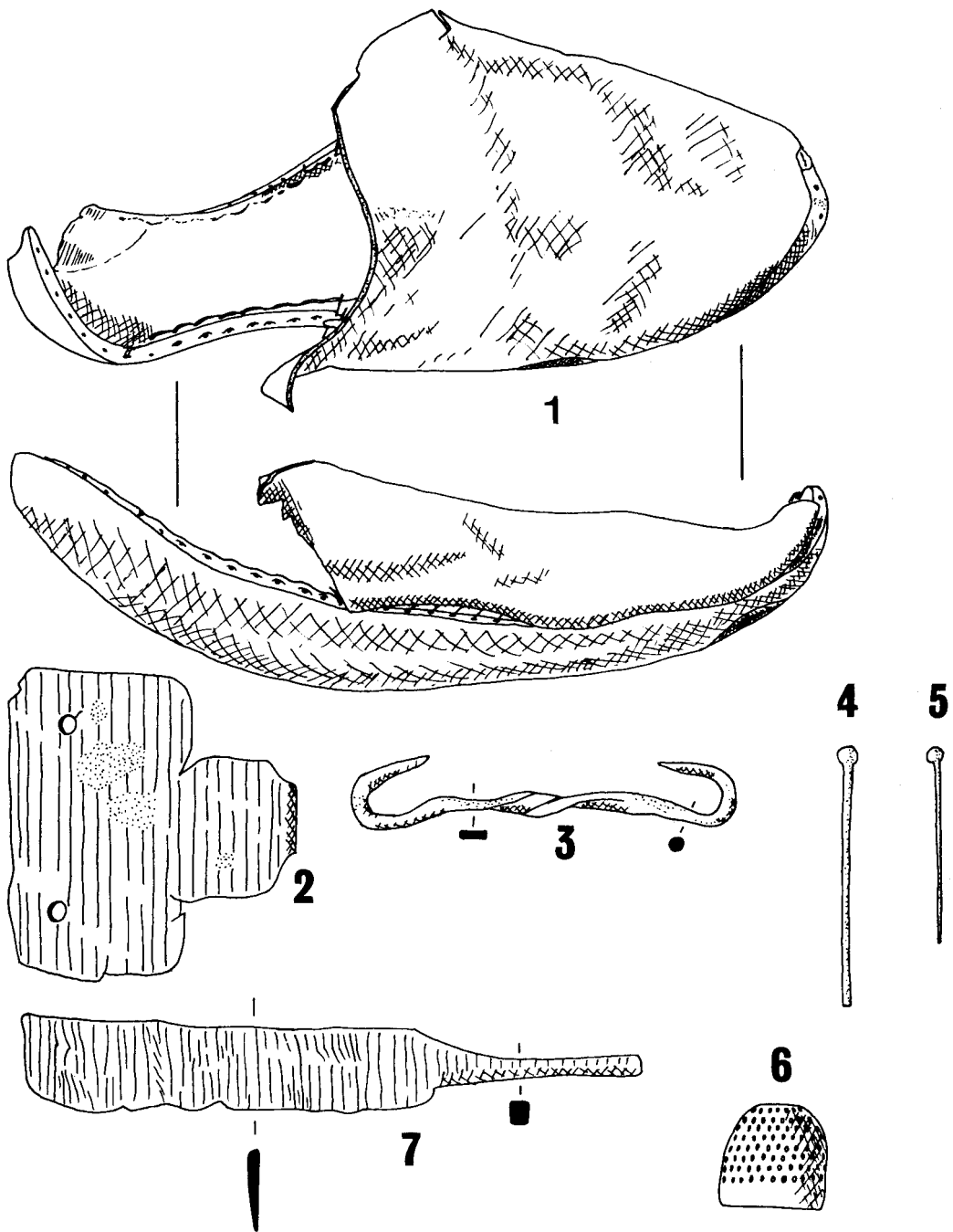


Fig. 20. Arundel House. Small finds all (1/1) except No. 1 (1/2)

Feature A-7 (late fifteenth–early sixteenth century)

Sus (domestic)—1 part mandible and maxilla, 9 adult bones, 3 juvenile.

Bos (domestic)—38 adult bones and teeth, 14 juvenile.

Sheep/goat—25 adult bones and teeth, 5 juvenile.

Feature 19 (late fifteenth century)

Sus (domestic)—1 tooth, 6 adult bones, 5 juvenile.

Bos (domestic)—c. 116 bones. Mostly fragments. Two bones were unusually large, 5 juvenile.

Oryctolagus cuniculus—1 mandible.

Human Remains—Identified by Miss R. Powers.

Feature 19

Distal end of the femur of a large adult male.

Shafts of right tibia and fibula of an adolescent, probably a male. Both the femur and the tibia are slightly pathological.

There is no positive evidence for goat in the collection whereas both horned and hornless sheep are present.

A count of the total number of animal bones shows that sheep and cattle bones are in the majority and nearly all these are from adult animals. Pigs were also extensively eaten and a greater proportion of these bones are from juvenile animals. It must be remembered, however, that pig meat would be eaten mostly as boneless bacon and salt pork so a count of pig bones is never a true reflection of the amount of meat eaten.

Roe and fallow deer were killed for food and kept in deer parks for this purpose. Rabbits were also bred extensively for food, during Tudor times.

The remains of the black rat are an interesting find. The black rat was introduced to Britain, probably during the twelfth century. (The brown rat was not brought in until the eighteenth century.) By Tudor times the black rat was well established and was of course responsible for the plague.

Measurements of a selection of the animal bones were also taken. They showed that the sheep and pigs still belonged to the small unimproved breeds that were common in medieval Britain. The cattle too, were mostly fairly small animals, but there were also some very large individuals. These were probably oxen.

In Tudor times the common practice was to use the cattle for milk and draught on the farms and then to drive them on the hoof to the markets when their useful life was nearly at an end.

The abnormal ox femur from Feature 1 suggests that this animal was used for draught and was perhaps overladen at too young an age. This resulted in an overgrowth of the bone around the head of the femur.

Sheep too were driven to market as adult animals. A review of husbandry practices in Tudor times is given by Trow-Smith.³⁷

(All animal remains brought to the Museum for identification from archaeological excavations are now included in a computer-based catalogue being compiled by the writer, and all details of the above, including measurements of bones may be found there.)

THE BIRD BONES

BY GRAHAM S. COWLES

(British Museum, Natural History)

Individuals represented:

Domestic Goose	<i>Anser anser</i>	2
Mallard	<i>Anas platyrhynchos</i>	1
Merlin or Kestrel	<i>Falco columbarius</i> or <i>F. tinnunculus</i>	1
Kestrel	<i>Falco tinnunculus</i>	1
Domestic Chicken	<i>Gallus gallus</i>	5
Partridge	<i>Perdix perdix</i>	1
Snipe	<i>Gallinago gallinago</i>	1
Song Thrush	<i>Turdus philomelos</i>	1
?Blackbird	<i>Turdus ? merula</i>	1
Raven	<i>Corvus corax</i>	1

Feature A-1

Domestic (Greylag) Goose *Anser anser*

Tibiotarsus, incomplete left.

Tibiotarsus, right from an immature bird.

Femur, incomplete right.

Clavicle, incomplete.

Carpometacarpus, incomplete right.

2, Phalanges from the toes.

Domestic Chicken *Gallus gallus*

Clavicle.

3 Scapulae, left.

Tarsometatarsus, left, a young bird most probably

Domestic Chicken.

Tarsometatarsus, right, a very young bird most probably

Domestic Chicken.

Tudor cresspit

Domestic (Greylag) Goose *Anser anser*

Humerus, left.

Domestic Chicken *Gallus gallus*

Femur, right.

Scapular incomplete left.

Ilium and ischium from right side of pelvis.

Ischium right.

Humerus, right.

Carpometacarpus, right.

Tarsometatarsus, incomplete left.

Synsacrum

Femur, incomplete and immature left, possible Domestic Chicken.

Partridge *Perdix perdix*

Coracoid, left.

Raven *Corvus corax*

Tarsometatarsus, right.

Feature A-6

Domestic (Greylag) Goose *Anser anser*

Tibiotarsus, right.

?Domestic Chicken ?*Gallus gallus*

Ilium, right.

Feature A-7

Domestic (Greylag) Goose *Anser anser*

Phalange from right wing.

THE CLASSICAL MARBLES FROM THE ARUNDEL HOUSE SITE

BY B. F. COOK, M.A., F.S.A.

Seven classical marbles were found during the excavations, but two of them, a rather battered altar and a fragment of sculpture, were subsequently lost. The five that were rescued are described below. All seven doubtless belonged to Thomas Howard (1585-1646), Earl of Arundel and Surrey, who assembled the first substantial collection of classical sculpture and inscriptions in England, the so-called Arundel Marbles. His passion for collecting ancient marbles was not shared by his heirs. During the second half of the seventeenth century some of the Arundel Marbles were damaged or destroyed, while others were dispersed. The most important surviving group of sculptures and inscriptions is now in the Ashmolean Museum, Oxford. Only the rump of the collection remained on the site of Arundel House, where individual pieces have come to light from time to time during building operations. Detailed accounts of the formation and dispersal of the collection have been published by A. Michaelis and D. E. L. Haynes.³⁸

1. A block of bluish grey coarse-grained marble from a frieze of alternating Medusa heads and consoles. Length, as preserved, 1.46 m; height, as preserved, 650 mm; thickness 600 mm.

The left side (with *anathyrosis*)³⁹ and the upper bed are preserved, at least in part, but the block is broken on the right and the lower bed has been extensively damaged (Plate 7).

Two Medusa heads survive, together with two consoles and traces of a third. The Medusas have snakes both in the hair and knotted below the chin, and the head on the left retains parts of the wings that crowned the coiffure. The consoles, which spring from acanthus leaves, have a volute at the top and in front are divided in three rather like triglyphs. A horizontal projection below them has a triple moulding on its lower surface. The carved ornament on the top row is damaged but was probably a kind of debased palmette frieze; the lower mouldings are an ovolo carved with egg-and-tongue and a half-round with bead-and-reel.

The block was originally part of a continuous frieze of a type found on second-century buildings in Asia Minor. The best known examples are those of the Trajaneum at Pergamum (c. A.D. 115-125) and the smaller temple at Side (c. A.D. 150),⁴⁰ but a similar frieze formed part of the entablature of the theatre at Side⁴¹ and another frieze is represented by heads in the British Museum and in Oslo.⁴² The latter is said to be from Smyrna.

As John Harris has recently discovered, the present block was also acquired at Smyrna, and in view of its size it may well have been found locally. Its source is known from a marginal note by Inigo Jones in his copy of Vitruvius, now at Chatsworth. The block was evidently well known in the seventeenth century: a drawing by John Webb, dated 1639, is in the Ashmolean Museum; Inigo Jones incorporated details from it in a design of about 1630; and it appears in *The Continnence of Scipio*, painted by Anthony van Dyck, probably late in 1620 or early in 1621. This painting, now in Christ Church, Oxford, once belonged to the Duke of Buckingham, Arundel's rival in collecting ancient marbles. The block must therefore have belonged at one time to Buckingham, and is unlikely to have come into Arundel's hands before Buckingham's death in 1628.⁴³

That such a celebrated piece was abandoned on the site of Arundel House is probably accounted for by its great weight. In the eighteenth century a "sarcophagus" was to be seen in the cellars of Mr. James Adamson in that area.⁴⁴ No sarcophagus has been found on the site, and it seems likely that the frieze block was simply mistaken for a Roman sarcophagus of a type contemporary with it, decorated with Medusa heads and floral festoons.⁴⁵ If the block were built into the walls of the cellar, it would not be evident that it was made of a solid piece of marble.

2. Cylindrical marble altar.

Height 660 mm. Surface abraded (Plate 8).

The altar was originally decorated in relief with four bulls' heads, of which one is now missing. Festoons of foliage and fruit are suspended between the bulls' heads and sacrificial fillets hang from them. Plain mouldings encircle the altar at the base and the top, the upper mouldings having in addition a row of dentils. Altars of this type were enumerated by C. G. Yavis,⁴⁶ but the development of the type has not been worked out in detail since external evidence for the chronology is lacking. Most of the known examples have been found on the Aegean islands, in particular Delos, Cos and Rhodes. Many have been found in controlled excavations, but not in closely stratified contexts. The series begins in the Hellenistic period and probably continues into Roman Imperial times.

The other altar from the Arundel House site, which was subsequently lost and which I know only from the photograph, was of the same basic type.

Five similar altars, three of them bearing short funerary inscriptions in Greek, are preserved at Arundel Park. Previously unknown to scholars, their existence was made known by the Duke of Norfolk when he saw the present example on the site. A separate publication by P. M. Fraser is in preparation.

3. A sandalled foot of fairly fine-grained white marble.

Length 565 mm (Plate 8).

The foot is broken at the ankle, and the ends of the first two toes are missing, together with a small part of the sole between them.

Sandals of this type might be better described as half-shoes, having sides made from a thin sheet of leather laid over the whole top surface of the sole and folded up to protect the heel and the sides of the foot. The division between the sole and the upper is clearly marked at the front of the sandal. Toes and instep are free, being covered only by the strapwork. The straps are threaded through holes near the edge of the upper and cross over a strip of leather, which runs up the instep and was folded down again to cover the straps. Below this tongue a thong runs between the first two toes to meet the sole. The tongue first appears in representations of Greek shoes of the third century B.C.,⁴⁷ and shoes of this type are shown throughout the Hellenistic period and into Roman times.

From heel to toe the underside of the sandal is slightly concave, and there is no trace of attachment to a plinth. The foot is therefore unlikely to have been broken from a statue and may have been dedicated as an offering in a sanctuary.⁴⁸

4. Greyish white coarse-grained marble fragment, probably of a table-support.

Height 760 mm; width, as preserved, 400 mm. Front section and upper rear corner missing (Plate 9).

On each face is a shallow rectangular recessed panel surmounted by a volute carved in low relief and having a stylised leaf in the axil. A small rectangular hole low down on one side was perhaps for an iron stretcher and presumably indicates the inner face. Below the recessed panel is a moulded base, preserved on the inner face only. The vertical end has been roughly finished with a claw chisel and lacks the base-moulding: it must therefore have been the back of the slab, set flush against another surface. The upper bed is similarly finished and must have been covered, probably by a table-top (supported at the other end by a matching support).

Table-supports of this type are known in Greece, especially on the island of Delos, from the fourth and third centuries B.C., but they became particularly frequent in Roman times. Decoration then tended to be more flamboyant, and this example should perhaps be dated in the Late Hellenistic period, second or first century B.C.⁴⁹

5. Block of coarse-grained white marble with part of a funerary inscription in Greek.

Length 1.03 m; height 225 mm; thickness 315 mm.

Upper left and lower right corners of the face damaged. Both ends have *anathyrosis*. The upper bed has clamp-holes at each end, and also a dowel-hole with a pouring channel for the lead ending 230 mm from the right edge (Plate 10).

The inscription is of a type that is quite common in the western coastal areas of Asia Minor during the Roman Empire. Local usage demanded that burials should take place in properly built tombs, and it was customary to make suitable provision during one's own lifetime. Inevitably there grew up an illicit practice of interring in other people's tombs those for whom such provision had not been made, and this in turn gave rise to a system of tomb-registry to protect the rights of owners. In addition to the entry in the register, a notice of registry was erected at the tomb itself. A considerable number of these notices, carved on stone, have survived. The exact wording of the inscriptions varies, but it usually includes the names of those entitled to be buried in the tomb, a prohibition of other burials, and a statement of the penalty to be paid by anyone who violated the owner's rights by introducing other bodies. These penalties sometimes include curses but more often simply specify a substantial fine to be paid either to the public treasury or to a local temple, where the tomb-register was presumably kept. A proportion of the fine may be allotted to the informer. The primary purpose is not protection from tomb robbers: the penalties are usually invoked only for unauthorized use of the tomb. The penalties are normally directed only against the living, provision being only rarely made for the removal of corpses illicitly interred.

The inscriptions vary in their wording, but certain standard formulae are found in various places. The formulae in this inscription seem to rule out several cities as possible sources. Among those that remain Smyrna is a likely candidate, but there can be no certainty failing the discovery of one of the missing parts of the inscription, which must originally have occupied at least one more block in the same course as well as other blocks above and below.

ΟΝ·ΨΕΙΛΟΝ·ΣΥΝΣΤΡΩΣΑΝΤΕΣ·ΑΥΤΟ·ΕΠΕ
 ΟΙΣ·ΚΑΙ·ΕΚΓΟΝΟΙΣ·ΜΗΔΕΝΟΣ·ΕΧΟΝΤ
 ΜΗΟΝΤΑ·ΕΚΤΟΥ·ΓΕΝΟΥΣ·ΕΙΣΟΪΣΕΙΝ

τὸν τόπ]ον ψειλὸν συνστρώσαντες αὐτοῖς?) ἐπε[σκεύασαν?
 καὶ τέκν]οις καὶ ἐγγόνοις μηδενὸς ἔχοντ[ος ἐξουσίαν πτώματα (vel sim.)
 μὴ ὄντα ἐκ τοῦ γένους εἰσοΐσειν

The beginning of the inscription (now missing) must have included the names of the owners. They had acquired it as a piece of "bare ground (*pseilon*: Ionic dialect form of *psilon*); having paved it [they prepared a tomb for themselves and their children] and their descendants; nobody having [a right other corpses] not of the family to introduce." The inscription presumably concluded with the usual penalties for violation of the tomb.

(I should like to thank His Grace The late Duke of Norfolk, E.M., K.C., for his kind permission to publish these items and the then London Museum for providing the photographs. I am indebted also to the following for help of various kinds: the late D. E. Strong, Mrs. P. Glanville and Miss Joyce Reynolds, and D. von Bothmer, J. Harris, D. E. L. Haynes, R. A. Higgins, R. Merrifield, G. Petzl, Francis Steer and V. M. Strocka.)

DISPOSITION OF THE FINDS FROM THE EXCAVATION:

The Medusa Frieze has kindly been placed on long term

loan by its owners to the Museum of London, where it will be displayed in the Stuart Gallery. The altar has gone to Arundel Castle, Sussex, and the remainder of the marbles will be displayed in the garden court of the Arundel Great Court Development. The animal and bird bones have been placed on permanent loan to the British Museum (Natural History). The best of the pottery specimens from the Tudor cesspit is intended to be placed on public view at Arundel Great Court. The remainder of the finds have been placed on long term loan with the Museum of London.

REFERENCES

- ¹ For full details of the history of Bath Inn and Arundel House, including the survey of 1589, see C. Lethbridge Kingsford, "Bath Inn or Arundel House", *Archaeologia* 72 (1921-22) 243-77.
- ² *Ibid.* 267-76.
- ³ R. Latham and W. Mathews ed. *The Diary of Samuel Pepys* 2 (London, 1970) 110 (30th May, 1661).
- ⁴ Kingsford, *op. cit.* Pl. L.
- ⁵ John Aubrey, *Natural History and Antiquities of the county of Surrey* (1718-19) Pl. 13a.
- ⁶ D. E. L. Haynes, *The Arundel Marbles* (Oxford, 1975) 16-18.
- ⁷ G. Home, *Roman London* (London, 1948) 253 and Frontispiece (top right).
- ⁸ J. M. C. Toynbee, *Art in Britain under the Romans* (Oxford, 1964) 209; also R. P. Wright, "A Greek inscription from the City of London" *Antiq. J.* 42 (1962) 247.
- ⁹ Kingsford, *op. cit.*
- ¹⁰ Kingsford, *op. cit.* Pl. LXVIII.
- ¹¹ Kindly provided by Francis Steer Esq., F.S.A., Archivist to His Grace the late Duke of Norfolk, K.C.
- ¹² J. Thane, *Views of Arundel House in the Strand* (1792).
- ¹³ Information from J. Cherry, Esq., who considered that the tiles could even be as early as fifteenth century. The British Museum specimens have no accession number.
- ¹⁴ For a discussion of Ipswich ware, see J. G. Hurst, "Saxo-Norman Pottery in East Anglia", *Proc. Cambridge Antiq. Soc.* 50 (1957) 29-60.
- ¹⁵ On the site of the Treasury, Whitehall, 1963, in an excavation by Michael Green (publication forthcoming). See the interim report in *The Illustrated London News* (June 29th, 1963), 1004-7. I am very grateful to Mr. Green for the opportunity to examine this material and to Mrs. Philippa Glanville for making this possible, as well as to John Hurst, Peter Addyman and Mrs. Rhona Huggins, who is working on the material, for helpful comments on the pottery.
- ¹⁶ Some of the Ipswich-type wares are tempered with fine rather than coarse sand.
- ¹⁷ I am grateful to Mrs. Rhona Huggins for this information.
- ¹⁸ See report in *London and the Saxons* (London Museum Cat. No. 6) (1935) 139-41.
- ¹⁹ See above note 15.
- ²⁰ Royal Commission on Historical Monuments (England). *An Inventory of the Historical Monuments in London, III, Roman London* (1928) 165 and plan, Pl. 55.
- ²¹ W. F. Grimes, *The Excavation of Roman and Medieval London* (London, 1968) 182-83.
- ²² M. Gelling, "The Boundaries of the Westminster Charters", *Trans. Middlesex Archaeol. Soc.* 2 (1953) 101-4. See also R. Merrifield, *Roman London* (London, 1969) 50-51 for a general discussion. I am grateful to Hugh Chapman and John Clark for help with these references.
- ²³ For Cistercian ware, see *Publications of the Thoresby Society* 49 (1962-64) No. 110, 116-19, and for a type series, P. Brears, *English Country Pottery* (Newton Abbot 1971), 18-23.
- ²⁴ For Cologne stoneware, see J. G. Hurst, "A Sixteenth Century Cologne Jug from Newcastle", *Archaeol.*

- Aeliana* 47 (1969), for a discussion of the type and a full bibliography.
- ²⁵ As illustrated in *Surrey Archaeol. Collect.* 68 (1971) 101, Fig. 3, No. 14.
- ²⁶ Especially from the two groups mentioned below in note 27.
- ²⁷ Large groups of pottery of slightly earlier date are currently being prepared for publication, namely that from Guy's Hospital, by Dr. G. Dawson, and those from the Treasury site by Mrs. Rhona Huggins. There are several parallels with finds from these groups, which are mentioned below. The only later sixteenth century group published from London is that from Lincoln's Inn, see J. Thorn, *London Archaeologist* 1, No. 6 (1970) 123-26. Another large group of the early sixteenth century from excavation at Baynard's Castle in 1972 is currently being analysed.
- ²⁸ Discussed and drawn in F. W. Holling, "A Preliminary note on the Pottery Industry of the Hampshire-Surrey Borders", *Surrey Archaeol. Collect.* 68 (1971) esp. 70 ff.
- ²⁹ Material being prepared for publication by Mrs. Rhona Huggins. I am grateful to the excavator, Mr. M. Green, for showing me the material from the site. See the interim report in *The Illustrated London News* (July 6th, 1963) 14-16. Similar vessels are also drawn in L. G. Matthews and H. M. Green, "Pottery from the Inns of Court", *Post-Medieval Archaeol.* 3 (1969) 1-17, esp. Fig. 1, No. 5.
- ³⁰ S. Moorhouse, "Two late and post-medieval pottery groups from Farnham Castle, Surrey", *Surrey Archaeol. Collect.* 68 (1971) 39-55.
- ³¹ Holling, *op. cit.*, 79, Fig. 4.
- ³² *Ibid.*
- ³³ See note 27 above.
- ³⁴ Information from Graham Dawson and Rhona Huggins.
- ³⁵ See note 24 above.
- ³⁶ Dating from J. G. Hurst, "The Kitchen Area of Northolt Manor, Middlesex", *Medie Archaeol.* 5 (1961 val) 259-63.
- ³⁷ R. Trow-Smith, *A History of British Livestock Husbandry to 1700* (London, 1957).
- ³⁸ A. Michaelis, *Ancient Marbles in Great Britain* (1882) 6 ff.; D. E. L. Haynes, "The Arundel Marbles", *Archaeology*, 21 (1968) 85 ff. and 206 ff., and *The Arundel Marbles* (Oxford, 1975).
- ³⁹ *Anathyrosis*: a structural technique employed in Greek and Roman buildings, whereby in the absence of mortar, adjacent blocks were held together by iron clamps and successive courses by iron dowels, held firmly in place by lead; in order to provide a tight joint between adjacent blocks, the greater part of the adjoining faces was recessed and roughly finished, while a narrow margin at the edges and across the top was carefully dressed. The term is derived from the resulting resemblance to a door (*thyra* in Greek).
- ⁴⁰ D. E. Strong, "Late Hadrianic Architectural Ornament in Rome", *Pap. Brit. School Rome* 21 (1953) 131 ff., and the references there cited, especially in notes 39 and 45. A. M. Mansel, *Die Ruinen von Side* (1963) 81, Fig. 61.
- ⁴¹ Mansel *op. cit.*, 135, Fig. 110; dramatic masks appropriately replace Medusa heads.
- ⁴² British Museum: A. H. Smith, *A Catalogue of Sculpture in the Department of Greek and Roman Antiquities* 3 (1904) 337, No. 2334, incorrectly catalogued as a fragment of a sarcophagus and said to be from Cydonia in Crete. Dr. R. A. Higgins has kindly pointed out to me that, being from the Strangford Collection, its reported provenance is likely to be incorrect. It must belong to the same group as the fragment in Oslo; S. Eitrem, *Griechische Reliefs und Inschriften im Kunstmuseum zu Kristiania* (1909) 14, No. 10, illustrated on p. 3.
- ⁴³ "The link between a Roman second-century sculptor, Van Dyck, Inigo Jones and Queen Henrietta Maria", *The Burlington Magazine* (August 1973) 527 ff. I should like to thank Mr. Harris for discussing his discoveries with me before the article was published.
- ⁴⁴ Haynes *op. cit.*, *Archaeology* 21 (1968) 208.
- ⁴⁵ The type is discussed by J. M. C. Toynbee, *The Hadrianic School* (1934) 202 ff., esp. Pl. XLIII, 1.
- ⁴⁶ *Greek Altars* (1949) 148 ff. (While this article was on the press, I was kindly allowed to see the manuscript of P. M. Fraser's forthcoming book on Rhodian Funerary Monuments, on which altars of this type are thoroughly discussed.)
- ⁴⁷ Mary Wallace, "Sutor supra crepidam", *Amer. J. Archaeol.* 44 (1940) 215.
- ⁴⁸ For other such feet in the British Museum, see Smith, *op. cit.*, 213 ff., esp. Nos. 2106 and 2107.
- ⁴⁹ For the type see W. Deonna, *Le mobilier délien (Exploration archéologique de Délos)* 18 (1938), 24 ff., and Pl. 12-15. See also G. Bakalakis, "Two More Trapezophora", *Essays in Memory of Karl Lehmann*, 27 ff.
- ⁵⁰ See note 39 above.
- ⁵¹ See also W. R. Paton and E. L. Hicks, *The Inscriptions of Cos* (1891), 337 ff.: Appendix D, "Sepulchral Inscriptions with Fines".
- ⁵² The word *pseilon* (*psilon*) is attested only for the funerary inscriptions of Smyrna, J. Kubinska, *Les monuments funéraires dans les inscriptions grecques de l'Asie Mineure* (1968), 132.

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