



## Excavations at Chester, 1939. The Princess Street Clearance Area.

(PLATES I—XVIII).

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### THE STRUCTURAL REMAINS OF THE ROMAN PERIOD.

**B**Y the kindness of the City Council of Chester the Chester and North Wales Archæological and Historic Society was given the opportunity of exploring two areas which had been cleared of houses in pursuance of the City's slum clearance programme. They lay to the west of the Town Hall (pl. i) and were separated the one from the other by the westward extension of the Public Market.

The Society was handicapped at first by lack of adequate funds. An appeal was issued and received generous support. The subscriptions received during the summer amounted to £481 12s. 9d. for which the excavators wish to express their warmest thanks to the donors.

The smallness of our resources when digging was begun on March 6th compelled us to restrict our operations, and in fact, as we were spending the money as it came in, we never thought it wise to employ more than eight men lest we should empty the till and be forced to an untimely closure.

In the southern area (site B) where we worked from the beginning of April onwards this had no particular importance since there was no time limit. But the regrettable blankness of the plan of the northern area (site A,

pl. ii) is in part due to the slowness with which we were forced to explore a piece of ground that was only available for digging and filling in for a month, since the work of making it into a car park ready for the Chester race week early in May was scheduled to begin on April 10th.

It should perhaps be explained that the uncertain amount of our resources was a handicap in another way, in the method of work that it imposed on us. We could not afford to strip the area or even those parts that seemed most to call for it. We had to proceed by cutting trenches eight or nine feet deep with the concomitant delays and difficulties of shoring them up with timber, the embarrassment, when the remains that we were following came to an abrupt end, of guessing in what direction we were most likely to pick them up again, and the ever-present doubt whether the areas left perforce undug might not conceal what would have been most worth finding.

Yet the blankness of the plan of site A is due perhaps in greater measure to the building activities of the last three centuries. Thus the known presence of deep cellars in the north-east part of the area made it inadvisable to waste our slender resources on it and similar unsuspected constructions in the south-west caused us to abandon our trenches in that direction.

### SITE A.

In the main our work on site A consisted of two trenches cut in a north-west—south-east direction so as to make sure so far as possible that we should not miss the walls of any Roman building there might be, on the assumption that these would probably be orientated like the fortress in a north—south, east—west direction.

All the interest proved to be concentrated in the more northerly of the two trenches. In this at the east end was found a pillar base rudely cut from the local sand-stone and bedded on the rock. The upper part was about fourteen inches square and had a chamfered base rising from a flat plinth about three inches thick. The base was orientated

roughly north and south but there was nothing to indicate whether its fellows, if it had any, should be sought on the east—west or north—south line. To the north and east there was very little space for investigation and our cut to the south shed no light on the question. In the end the time limit precluded a further cut along the western line, so that the base stands alone (pl. ii, sec. C—D). The datable sherds found packed against the footings of this structure consisted of two fragments of a Samian platter with a quarter round fillet (Form 15), a fair sized piece of form 30 with panel decoration, the central panel with Peleus alone (Déch. 510, Osw. 883) flanked on both sides with a cruciform ornament. Oswald gives the figure type as Flavian, and the provenance La Graufesenque and Banassac.

West of the base the northern trench revealed a rude pavement of cobbles in the neighbourhood of which were such plentiful remains of iron slag and waste bronze as to suggest that there had been a metal worker's shop close by.

Further west again was a mass of painted wall plaster but no trace of the building from which it came.

Next came a rubble pavement with a well defined eastern edge which however petered out to the west. This paving was at a level low enough for it to be associated with the much more important finds to the west: namely a substantial wall running east—west with part of a slighter wall joining it at a right angle on the south. A large stone about three feet square, the base of a substantial buttress, was built against the wall on the north. On the north side of the buttress its foundations projected about six inches (pl. ii, sec. A—B; pl. xviii, 1). A partial clearance was undertaken here and the wall was traced westwards for a length of fifteen feet at which point it proved to have been destroyed. The foundations of a second buttress were found and its base stone was also discovered turned over and out of place. On the south side of the wall remains of four parallel slighter walls were found running southwards for about nine feet. Beyond these limits English building had completely destroyed the Roman remains.

These walls were bedded on the rock and were associated with Flavian pottery (p. 22, text fig. 2, nos. 6-8), sherds of which were found among the rubble footings, making plain the first century date of the building which is shown by the external buttresses to the north wall and the parallel sleeper walls to be a part of the north end of a granary.

We hoped that our cut to the south would pick up a further stretch of the sleeper walls. This hope was vain, for the one wall found that appeared to be of the right width and in approximately the right line proved in the event to be of later date, as it did not go down to the rock but rested on a layer of black charred material. The second trench in fact found nothing worthy of note except a stretch of cobbles similar to those in the northern cut.

The small material finds from the primary occupation layer are described on pp. 18 and 38.

### **SITE B.**

The three months of April, May and June were devoted to the exploration of the southern area. The same method was performed pursued of cutting trenches which followed so far as possible the walls that were met with. The results are shown on pl. iii.

### **1st CENTURY REMAINS.**

The first century remains built on the rock and well certificated by deposits of pottery (text figs. 3, 4) of the same period consisted of a set of walls which constituted a rather unusual building.

A straight wall (A, pl. iii) ran east to west for a distance of one hundred and twenty feet and at the west end a return was traced by a series of crosscuts for about fifty feet northwards (B, pl. iii).

The bottom two feet of wall A (eight inches of rubble footings and sixteen inches of ashlar in three courses) had a width of three feet nine inches. The fourth course was set back ten inches on the north and four inches on the south, leaving a thickness of two feet seven inches. In places only the foundations remained, but at one point (see pls. iv, v, secs. on I<sup>1</sup>—J<sup>1</sup> and K<sup>1</sup>—L<sup>1</sup>) the wall was preserved to a



height of eleven courses, four feet nine and a half inches above the rock, and here it was found that above the ninth course, three feet ten and three-quarter inches from the rock, the wall was again set back four and a half inches on the north, two and a half inches on the south, leaving a thickness of two feet.

The wall was of the normal type of careful construction at this period with rubble centre faced with stones laid in mortar in courses of irregular thickness but averaging slightly under five inches, trimmed flat at top and bottom and on the outer face but with the edge laid inwards left irregular.

At a point sixty-six feet from the western end this straight wall was joined on the north side by a curved wall (C, pls. iii, xi, xii) which ran with a radius of approximately eighty feet towards the north-west. The foundations of this wall projected about eleven inches on the south side and coalesced with those of wall A, leaving no doubt that the constructions were contemporary. Wall C was built, too, in the same manner as wall A, its ashlar portion was twenty-four to twenty-five inches thick, and at the highest point preserved showed its fifth course one foot eight and a half inches above the footings, and approximately two feet five inches above the rock. Unfortunately English building had removed all the northern end of this wall, the last trace being a chase following its curve that was cut in the rock to receive its foundations.

For forty-six feet east of the junction the two walls were one, though for the greater part of this length only the footings remained. But at a point one hundred and twelve feet from the west end of wall A the curved wall (D, pls. iii, xiii, 2) diverged again northwards, following approximately the same curve. The impossibility of digging closer to a tall and heavy chimney stack prevented our attempting to trace its course beyond a drain which appeared to pass through it, but there is little doubt that the wall would have been found to continue.

The construction and thickness of this eastern arm (D, pl. xiv, 1) were the same as those of C. In places it stood to eight courses of ashlar, nearly four feet above the rock.

Just to the west of the eastern point of separation of wall D from wall A an interesting error in the construction came to light (pl. xiii, 2). At this point the northern face was already beginning to curve, and for about sixteen feet a second curved edge was found about eighteen inches south of the true edge. Clearly the edge had been begun on the wrong line, but a block from the north face a little further east on the true line shows that the error had been discovered before that point was reached, for it stretched southwards across and beyond the line which the wrong face would have followed. They had left the incorrect face *in situ* but added a new face to the north to bring the wall to the correct line.

Traces of four radial walls were found (pl. iii, E, G, H, and I) and we had an idea that there was probably a fifth just by the point where the section A—B (pl. iv) is shown on the plan. But as we could not find either edge of what we believed to be a wall it seemed safer not to show it on the plan. But it would agree well with the spacing of the other four which are about twenty-six feet apart.

Wall I was only fragmentary and it was not possible to follow up E. Of G only the footings remained except just at the point where it joined A, but at a distance eighteen feet from wall A a great slab was found seventy inches long by thirty-four inches wide by twelve inches thick bedded on eight and a half inches of rubble foundations above the rock (sec. M<sup>1</sup>—N<sup>1</sup>, pls. v, xvi, 1). This stone has the appearance of being the threshold of an entrance, but an entrance at that spot seems improbable.

H was the most complete of these walls (sec. O<sup>1</sup>—P<sup>1</sup>, pls. v, xv, 2, xvi, 2). At one place five courses of ashlar were preserved, and the wall came to a definite end at a point nineteen feet from the curved wall. Beyond this was a concrete floor nine and a half inches thick laid on the rock extending six feet northwards and ending in a channel seventeen inches wide at the top and ten inches wide at the bottom which was six to seven inches below

the floor. The south side was built up of concrete but the north side was cut out of the rock which rose at this point. This channel showed a fall of one in twenty to the east. It was not possible to trace its course but the probability is that it passed eastwards and joined the drain that runs out through wall D at the most easterly point of the excavations. It certainly did not run southwards. Along the concrete floor from the end of the radial wall in a line with its west edge a slight flange six inches wide and two and a half inches high ran to the edge of the channel in which flange about fifteen inches from the end of the radial wall was a gap about four inches wide. This floor looks like a drainage area or sink (pls. xv, 2; xvi, 2).

Further cuts to the northwards failed to find anything that could be connected with this building unless it were a piece of concrete flooring beneath flags  $\delta$  (pl. iii) which was of identical construction. The presence however of a flat surface to the rock north of it which ended in a low rise trimmed to a vertical edge, six inches high, suggests that this piece of concrete served the purpose of filling up a nine and a half inch depression in the rock to about the same level. Thus it would seem that a flat floor was needed at this point. No doubt it was of the same early date but it is not easy to bring it into the scheme of the building.

A wall K (sec. I<sup>1</sup>—J<sup>1</sup>, pls. iv, xiv, 2) joins walls C and A. The beginnings of two walls, O and P, running north from wall A and of two walls, M and N, running east from wall B were also found, and a piece of wall, U, of a character as substantial as that of wall A, to the east of the line of wall M. This would fall inside the line of the curved wall C if prolonged and one is tempted to guess that it formed perhaps part of the end of the hemi-cycle, if hemi-cycle it were.

An interesting feature is the drain (pl. xvii) that runs on the convex side of the wall D and then turns westwards along the south side of wall A. This was traced to a point eighty-four feet from the west end of wall A; but a trench

across its line at sixty-one feet from that point failed to find any trace of it, so that it would seem to have turned southwards somewhere between these two points. The drain was cut in the rock with a concave bottom, and, except at one point where on the north side the curved wall D served as lining, both sides were lined with three to four courses of ashlar blocks. This ashlar lining began about nine inches above the lowest point of the channel and varied in height from fourteen to eighteen inches. The thickness of the lining blocks was in places thirteen inches, elsewhere nine inches and elsewhere six inches. The drain was covered with a series of rough hewn blocks several of which were found *in situ* resting on the lining blocks. The normal width was eighteen inches which was increased to twenty-seven inches at the bend. This drain though of smaller dimensions was of exactly the same type as the drain found in the Deanery Field<sup>1</sup> between the barrack blocks and the road to the intervallum.

The fall from east to west was one foot three inches in a length of sixty feet, about one in fifty.

The lay-out of the drain was not very clear and it was much to be regretted that it was not possible to explore its junction with the wider drain which seemed to pass through the curved wall. Just before it bent west into its straight course it split into two, a branch of the same width running off in a southerly direction. This it was not possible to follow.

The drain was excavated at the point opposite wall G and its further course westwards to the point marked on the plan was traced by rods. The straight portion between wall G and the bend is conjectural, but the portion shown by broken line outside wall D was traced from both ends by the rods, though it was not possible to get them past the angle shown.

One peculiarity of this building should be set down. There is no symmetry in the plan. The curved wall instead of springing from the middle of the long wall A,

<sup>1</sup> *Liverpool Annals*, vol. xviii, p. 14, text fig. 37.

springs from one end of it. The long wall stops short. The area outside the curved wall in a line with the radial wall E was excavated as far as the point where the drain bifurcates without finding a trace of wall A though the cut crossed its line. Wall A must have come to an end just by the bend in the drain which thus seems to have been external to the building.

Another breach of symmetry is due to the excrescence formed by the wall L and its return eastwards. The failure to find any further remains of these walls leaves their function obscure but their presence possibly accounts for the deflection southwards of the drain.

Mention should also be made of an angle of narrow wall, Q, bounding a floor of plaster just south of the drain (sec. M<sup>1</sup>—N<sup>1</sup>). To the south it was destroyed.

Four post-holes were found sunk in the rock, doubtless used for scaffolding during construction. Two were between C and A just by the junction, one just west of wall B, and the fourth by wall U.

It must be confessed that the remains of this building that it was possible to uncover are not enough to make its nature obvious. On the view that it was a building of the nature of a theatre with radial walls supporting the upper tiers of seats (though it may be doubted whether they or the curved wall are substantial enough for such a function) the large slab might be thought to mark the position of an interior corridor, and the floor to the north might be deemed part of the orchestra. But the sink and the drainage channel north of wall H would seem to dispose of such an interpretation. In any case a theatre built within an oblong structure would hardly find a parallel, for the suggested parallel at Epidauros does not hold good, for there the Roman round building was built inside an already existing Greek rectangular structure. It seems perhaps more probable that this odd building flanked an open space or forum. The divisions made by the radial walls may have served different purposes as to which the only hint is provided by the concrete floor and drain, which suggest stabling.

A trench just south-west of the west end of wall A found a narrow channel cut in the rock and so doubtless of first century date. But further exploration of the building was not possible.

### LATER ROMAN REMAINS.

It was not possible to arrive at an accurate date either for the destruction of the first-century building or for the later Roman structures that were found at higher levels.

In various places were found parts of a pavement of large flagstones from six to nine inches thick, for the most part irregularly cut and roughly laid down (pl. iii,  $\alpha$   $\beta$   $\gamma$   $\delta$   $\epsilon$  and pl. xv, 1). These were found bedded on a thin black layer of domestic refuse resting on about a foot of clean rubble. It would seem that the refuse was used to smooth irregularities in the rubble and to make a better bed. The rubble in one or two places contained a little first or early second century pottery, demolition material from an early building.

The area marked  $\alpha$  extended not only over the large slab (sec. M<sup>1</sup>—N<sup>1</sup>) but over part of the concrete floor and drain (pl. v, sec. O<sup>1</sup>—P<sup>1</sup>).

Some parts of this paving were taken up, but the closest scrutiny failed to reveal any datable object beneath it until the lifting of a slab of the stretch marked  $\beta$  showed two coins resting immediately underneath it in such a position that it was impossible for them to have found their way there after the slab had been laid down. One of these was a coin of Elagabalus<sup>2</sup>, thus giving the beginning of the third century as a *terminus post quem* for this pavement. The section M<sup>1</sup>—N<sup>1</sup> shows indeed a coin of Tetricus at a lower level than the flags, but this coin was just on the edge, not actually beneath the flags, and thus carried no weight for dating purposes.

Traces of a stretch of plaster floor, three feet five inches long, were found above wall H just south of the southern edge of pavement  $\alpha$ . Its level was one foot above the surface

<sup>2</sup> Mattingly and Sydenham, *Roman Imperial Coinage*, vol. iv-ii, 32, no. 63.

of these flags, but since it was higher than the bottom of the rubble foundations of the flags it would appear that these did not extend so far, though we found no certain edge to them at that point.

Pavement  $\gamma$  and pavement  $\beta$  on the other hand did show a finished edge at their southern ends, that of  $\gamma$  being very well built of slabs nine inches thick, cut in a regular curve. The edge of  $\beta$  was not so well achieved and included a slab with a small channel apparently re-used, but seemed nevertheless to be an intended edge, and one was tempted to think that a continuous edge might have been found to run between  $\gamma$  and  $\beta$  if it had been possible to follow it up. Yet neither wall nor traces of a road were found here, though one might reasonably expect to meet with either of these next to the edge of a pavement.

In the section O<sup>1</sup>—P<sup>1</sup> (pl. v) at about the same level as the flags but south of them, and south too of the stretch of floor, was a thickly packed layer of broken roof-tiles of the usual type. Its average thickness was about six inches.

In tracing both the curved wall C and the long wall A the sides of the trenches showed a thickly packed layer of burnt bones of an average thickness of six inches. The level of this is about that of the paving further north but its origin is obscure. The section here (X on pl. iii) was rather interesting. The bone layer lay above about 1 foot of rubble containing first century pottery, demolition material from a first century building. At about two feet below the bones came about nine inches of black deposit which was above a layer of building rubble about one foot thick. This lay over about four inches of black deposit above the rock. This might be read as an occupation layer during the temporary occupation before the building of the fortress, followed by the deposit of rubble during the building of the first century structure, a second occupation layer during the life of the building and finally, after the destruction of the building, levelling operations, first rubble and then bones.

A short way north of the eastern divergence of the curved wall were the remains of a hearth formed of a disused mill-

stone and three and half inches of baked clay. This fireplace was a few inches lower than the pavements, but above it was another mass of broken tiles.

These layers of tiles are evidence of fairly extensive building on the site destroyed before the levelling operations, but it is only an inference that they reflect the first century construction that we have described.

Just to the east of the bend in the drain was a late building which was built down on to the remains of the first century building. Two parallel walls (S, pl. iii) running east to west were joined by a cross-wall, R, on both sides of which was a plaster floor. The stones of which these walls were constructed were larger and ruder than those of the first century buildings. The foundations of the southern wall, S, were built right down on to the side walls of the eastern drain, while those of the north end of the cross-wall, R, rested on the curved wall D which at that point is standing to the fourth course of ashlar (sec. C<sup>1</sup>—D<sup>1</sup>). The northern floors were supported by rubble resting on the curved wall. There was similar support for the southern floors, but where the south-west floor passed over the east branch of the drain remains were found of a broken down arch constructed of tiles (pl. xvii). It is to be presumed that at this point the stones of the drain were missing. These tiles were of a peculiar type with bevelled instead of rectangular flanges (see p. 36). At about the level of the spring of the tile arch was found a fourth century coin, which suggests a late date for this building (see pl. iv, sec. G<sup>1</sup>—H<sup>1</sup>).

We know that the paving is not earlier than the reign of Elagabalus but it may well be very much later. At any rate it is not probable that one part of this area should have been reconstructed and paved while leaving untouched the ruined walls a little further east. Yet they were lying there uncovered to serve as foundations for this building so that one would be disposed to think that building and paving belong to a reconstruction of the same date.



Another late wall, T, running north to south with a corner at the south-east end was found just to the south-east of wall S but it was not possible to work out its connection with the rest of this late building.

Beyond the west end of wall A part of a drain (pl. xviii, 2) was found running north to south. The bottom was formed of complete roofing tiles of the normal type, sixteen inches in width, laid with the flange upwards. The sides were of stone blocks mortar faced, one course on the east and two on the west, reaching a height of ten inches above the bottom of the tiles, but the bottom of these side blocks only came down to the level of the top of the tile flanges and rested on mortar packed on either side of the tiles. The drain showed a very slight fall from north to south, about one in forty. The surface of this drain was about two feet above the soft sandy "roach" and eighteen inches above the first ashlar course of wall A. It rested on a thin layer of humus showing traces of mortar, beneath which was a mass of soft rock rubble and sand interspersed with two thin layers of charcoal. No trace of this drain was found further north and it did not prove possible to investigate its course southwards. Thus it remains a mystery. It lies too high to have any reasonable connection with the first century building, while the use of the normal type of tile would seem to disconnect it from the period of the late building to the east, which used a different type for the arch to support its floor.

The upper layers on this site produced remains, chiefly crockery fragments of the nineteenth, eighteenth, seventeenth and sixteenth centuries in decreasing quantities and a very little mediæval pottery. In the north-west corner large lumps of pipe clay, and quantities of broken unused clay pipes of the smaller variety associated with pottery, bore witness to the presence of a pipe factory during the late seventeenth and early eighteenth centuries.

It is impossible to deny that the results of the work are tantalizingly incomplete. It is possible of course that had our resources allowed of the complete stripping of the site

more might have been recovered, but on the other hand the evidence which the trenches provided of wholesale destruction here and there by later building makes it not improbable that to strip the site would have proved on the whole a waste of money, producing no results commensurate with the cost.

In conclusion the excavators wish to express their thanks to the City Council not only for permission to excavate but for the loan of timber for shoring up and of four wheelbarrows for use in filling in.

## SITE A.

### THE FINDS.

#### *The Primary occupation layer.*

(Pl. vi, and text figs. 1—2).

This layer was intersected in a portion of two parallel cuts made forty feet apart. The stratification, though confined to relatively small sections in both cuts, was clearly defined, and in places interstratified with a thin section of clean rock-rubble and sand. It consisted largely of charcoal, a fair amount of pottery, numerous nodules of iron slag, quantities of waste bronze: consisting largely of small nodules and snips from thin sheets; and several interesting objects of bronze (pls. ix, x). But much of this material was very badly corroded. The presence of waste metals in such unusual quantities points to the existence of a metal-workers' shop close by.

The deposit in both cuts seems to have been laid down at one period, since fragments of one Samian vessel (No. 3) occurred in both sections. In it also were two coins of Domitian (as Cæsar, cos. v), A.D. 71, which, although badly corroded, were unworn when lost. The pottery is also consistent with a date in the Flavian period, c. A.D. 74-96; and the forms here illustrated have been selected in part for their individual interest and in part also as evidence of the early occupation of Deva.

1. Form 29. Stamped **OF SILVAN**. Upper frieze a continuous festoon the tendrils ending in a large rosette. There are several fragments of this frieze, but unfortunately they do not conjoin. Lower frieze: panel decoration divided by wavy lines ending in large blurred rosettes. (1) enclosing a large medallion, and within it a griffin (Déch. 504; Osw. 882; Walters, M.353); the corner tendrils ending in a cordate bud. (2), a cruciform ornament, the upper portion of it badly blurred. (3), medallion, enclosing a small bear (not in Osw.) with indications of hair on legs and cheek; corner tendrils as in (1). (4=2). (5=1). There are fragments of four griffins, three bears, and five of the cruciform ornament. Six panels are conjoined, proving that the *motifs* were arranged in the order here illustrated.

Silvanus was a potter of La Graufesenque and the glaze on our vessel is typical of the fabric from that province. Oswald (*Stamps*) gives **OF CELADI**, and **OF FRONTIN**, both on form 29 from London, as having used the griffin *motif*, and the period Vespasian. For a facsimile of the potter's stamp see text fig. 1 (no. 6).

Four additional vessels of this form were also represented; but the fragments did not exhibit any unusual type of decoration.

2. Form 37. Decoration in two zones: upper zones in panels divided vertically by triple and single chevron wreaths arranged alternately; the former bordered by wavy lines. (1) stag (Déch. 845; Osw. 1700) in the style of Germanus of La Graufesenque; with conventional tufts of grass below. (2) dog (not in Oswald) with a curiously conventional tree or the like in the background, and a small plant below: all three *motifs* seem to have been impressed by one stamp; group of conventional tufts of grass as in 1. (3), deer to left (not in Oswald), over tufts of grass. (4), part of dog as in 2. Lower frieze of continuous foliate festoons, enclosing a vine leaf, and a pair of dolphins entwined (Déch. 1061, Osw. 2407), alternately. Ovolo badly blurred, but the tongue is definitely tridentate.

3. Form 30. Decoration a large compound stalked scroll, the tendrils ending in spiral buds ("catkins") and large leaves (K. 1919, fig. 12), and palmate leaves; the tendril bindings bifid. The central space enclosing Nile goose to r. A detached fragment with tendrils from another portion of the scroll has the *motif* of a goose with the primary feathers of the wing partly displayed which seems to be unrecorded. For a similar scroll *cf.* O. & P., pl. ix, 5.

Fragments of this vessel occurred in both cuts (1 & 2).

### POTTERS' STAMPS ON SAMIAN WARE.

(Text fig. 1)

1. C. VAL. ALBANI. On 27 (large). Foot-ring grooved. Oswald (*Stamps*) states that C. Valerius and Albanus were potters of La Graufesenque, of the Flavian period, and gives eleven records of this somewhat rare stamp.

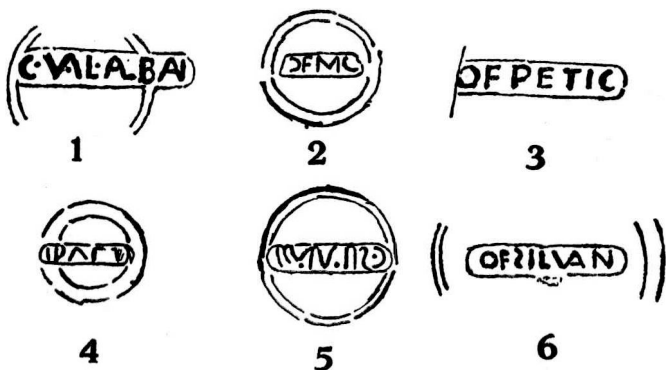


Fig. 1. Potters' stamps from the primary occupation layer. (1:1).

2. OF MO. Mommo of La Graufesenque. On 27, with a well-marked foot-ring. A large X is cut on the under-side of the base. Period: Claudius-Vespasian. In the primary occupation layer, site A, with the stamp of C. Silvanus.

3. **OF RETIO**. On 18. The stamp of Petionis is not recorded by Oswald and is probably new or unrecorded. Unfortunately this stamp has mysteriously disappeared; and the illustration here given is from a sketch made in the field at the time of its discovery and must not be taken as a very exact reproduction.

4. This is not at all clear, but may be a blurred impression of **RATR**. On 27 (small, with dark glaze). Period: Flavian.

Site A. In the primary layer, with **OF MO**, etc.

5. **C. SILVANI** (Retro). C. Silvanus of La Graufesenque. On 14/15. Period: Nero-Vespasian.

6. **OF SILVAN**. By the same potter as the preceding. On 29. (See pl. vi, no. 1).

### COARSE POTTERY.

(Text fig. 2, nos. 1-5).

1. Cooking pot of fine hard slaty grey clay. Rim beaded and slightly oblique; a girth-groove at the shoulder and below it, large rings of applied grey clay and between them slender vertical ridges. For a precisely similar vessel found in the Deanery Field in association with a coin of Domitian (cos. xiii), cf. *Liverpool Annals*, vol. xxiii, p. 25, pl. xvi, no. 74.

2. Cooking pot of grey clay like that of the preceding. Rim beaded and oblique. Girth groove at shoulder; the surface below it very strongly rugose. The term "rustic" is usually applied to vessels with this type of barbotine decoration. Fragments of cooking pots of this class of ware occurred in greater quantities in the primary layer on this site than has been noted elsewhere in Chester.

3. Small bowl with a relatively flat reeded rim, a well-formed foot-ring, and a high, conical kick-up. Fine, dusky, orange-red clay with a greyish core; the interior and upper surface of the rim mica coated.

This small vessel is of excellent workmanship and is probably derived from the Samian forms 35/36; but in this case so modified as to have produced an entirely new form, and.

although it is not represented in the Holt collection, its fabric is precisely similar to that which is characteristic of so many vessels found there; and also of various small vessels found in the early deposits at Chester.

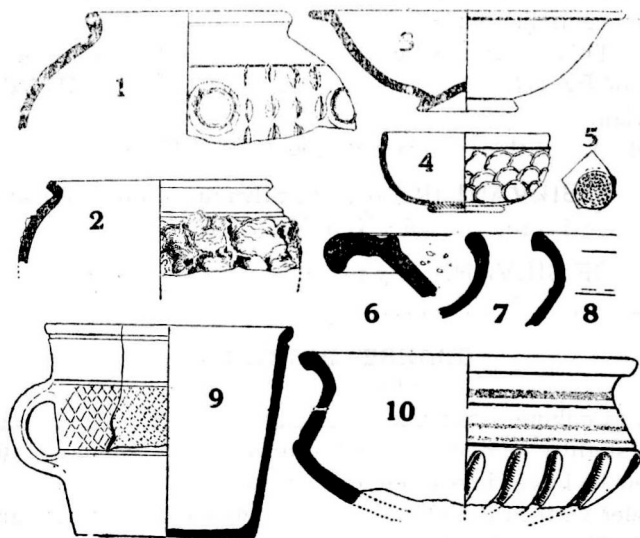


Fig. 2. Pottery from site A. Nos. 1—5 from the primary occupation layer. Nos. 6—8 from the footings of the granary. Nos. 9, 10, unstratified. ( $\frac{1}{4}$ )

4. Small thin-walled cup of buff-white clay coated with faintly metallic brown glaze, shading to pale orange-brown. Interior rough cast; the exterior with applied squamiform decoration.

Bushe-Fox<sup>3</sup> records precisely similar cups from Wroxeter, and states that "they belong to a class that is very uncommon after the middle of the first century." . . . . "have strong affinities with pre-Roman Late Celtic types, but are debased and later." His examples, however did not admit of close dating.

5. Fragment from a small cup belonging to the same class as the preceding, but decorated with studded discs.

<sup>3</sup> *Wroxeter*, 1914, p. 62, pl. xxvii, nos. 73, 74.

**COARSE POTTERY FROM THE CRANARY.**

Text fig. 2, nos. 6—10).

In the footings beneath the disturbed buttress, fragments of half-a-dozen vessels were found, including the upper portion of a large ring-necked flagon, the rim of a cooking pot and the three vessels described below :—

6. *Mortarium* of hard red clay, coated with cream coloured slip. The rim is rather strongly hooked, and the bead slightly below its upper surface. The interior with white quartzite grit.

7. Portions of the necks of two large flagons or the like; one with a shallow cordon at the junction of the neck with the shoulder, the other plain. Clay in both examples of a pale dusky orange-red, coated inside and out with mica. Period : Domitian-Trajan.

A fair amount of coarse pottery was also found between the sleeper-walls attributable chiefly to the late first and second centuries, and a single example of a hammer-head type of *mortarium* datable to the third or fourth century. The deposit in which the sherds were found had all the appearance of having been disturbed in Roman times; at what period, however, was not at all clear. Two vessels found in this mixed deposit seem worthy of note.

9. Mug of cylindrical form, with a stout two-ribbed handle. The decoration consists of three grooves: one below the rim, the others bordering the broad central zone of burnished lattice lines. Clay finely elutriated and dull orange-red, the surface of the exterior above and below the decorated zone finely burnished. Under surface of the base with a sub-marginal groove. Period: probably Antonine.

10. Upper portion of a bowl of somewhat singular form resembling, in a small measure, the Belgic vessel figured by May<sup>4</sup>, but it is doubtful if our example had a pedestal foot as in the Silchester example. Clay very pale grey or pale drab; the exterior thinly coated with dark grey to blackish slip. Neck and shoulder with burnished zones which are much darker than the sur-

<sup>4</sup> *Silchester*, p. 172 pl. lxxi, 167.

face elsewhere. There is a narrow groove just below the upper burnished zone, and a much deeper one at the shoulder. The decoration of the lower half of the vessel consists of a somewhat irregular series of broad, deep grooves, which appear to have been scooped out with a gouge or similar implement.

In an unstratified deposit near the face of the outer wall of the granary.

Period: probably late Flavian.

### SITE B.

#### THE FINDS.

(Text fig. 3, nos. 1 and 2).

Fragments of two vessels were found embedded in the walls of the semi-circular building, and may be ascribed to the first century. They are described below:—

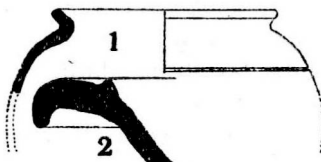


Fig. 3. Nos. 1, 2. Pottery embedded in the rubble core of walls A and C. ( $\frac{1}{4}$ )

1. A fragment of a cooking pot in pale brick-red clay, with a squat oblique rim, and a girth groove at the shoulder. This example was built into the core of the footings of the curved wall C, and was well coated with mortar. It is obviously an early type and agrees with similar examples found in late Flavian deposits in the Deanery Field, and is also a close parallel to the three examples from the Roman ditch in Love Street<sup>5</sup>, nos. 7-9.

2. *Mortarium*. Clay brick-red, coated with cream-coloured slip. The rim belongs to the relatively flat-topped series, and Bushe-Fox's no. 18<sup>6</sup> is a close parallel; this and his nos. 10 and 14, are types which hardly appear to last

<sup>5</sup> Newstead, R., *Chester Journal*, vol. xxxiii, (N.S.), pl. xxvi, p. 89.

<sup>6</sup> *Wroxeter*, 1912, p. 76.



into the second century. No. 2 from the Roman ditch in Love Street<sup>7</sup> is also a close parallel, and belongs to the period A.D. c. 80-110.

This example was built into the core of the long straight wall (A) and was thickly coated with mortar.

### COARSE POTTERY FROM THE CURVED WALL.

(Text fig. 4)

Much domestic refuse was found packed against the southern face of the footings of the curved wall C. In it was a fair amount of coarse pottery, and two coins of Nero—one in fair condition when lost, the other (*det.* Mattingly, *M. & S.*, i, p. 167, no. 329) much worn and badly corroded. This group of pottery is consistent with a date in the last quarter of the first century, and seems to be contemporary with the two sherds found built into the walls of the building.

1. Cooking pot of coarse pale pinkish-red clay, smoked in places outside. Shape broadly pyriform, with the fluted rim incurved. Between the latter and the girth groove is a wavy line. In its completeness this form may have resembled that of the vessel found in a Flavian deposit in the Deanery Field in 1924.<sup>8</sup> Three incomplete vessels of this form were also found on the site of the old Hop-pole Hotel, near the Eastgate in 1923. They were also associated with late Flavian pottery—the stamp of **M CRESTIO** on form 29, etc. Curle<sup>9</sup> records the rim-fragment of a similar vessel from the ditch of the early fort, and notes that similar urns occur sporadically at Hofheim towards the end of the first century. A vessel belonging to the same class is also recorded from Brough, Yorkshire.<sup>10</sup> Taken collectively these vessels show strong Belgic features, more especially so in their broadly pyriform outline.

2. Small beaker of hard fumed grey ware with everted rim.

<sup>7</sup> *Chester Journal*, vol. xxxiii (N.S.), pl. xxvi, p. 89.

<sup>8</sup> *Liverpool Annals*, vol. xv, p. 26, pl. xiii, 4.

<sup>9</sup> *Fort of Newstead*, p. 245, fig. 23.

<sup>10</sup> *Excavations, Roman Town at Brough, E. Yorkshire, 1936*, fig. 14, no. 98.

3. Indented or fluted beaker of fine, hard, orange-red clay, but of a brighter colour inside, and mica coated externally. The oblique rim and the sharply grooved shoulder are characteristic of this type of vessel. The foot-ring is well formed, and there is a groove in the interior of the base well within the circumference of the former.

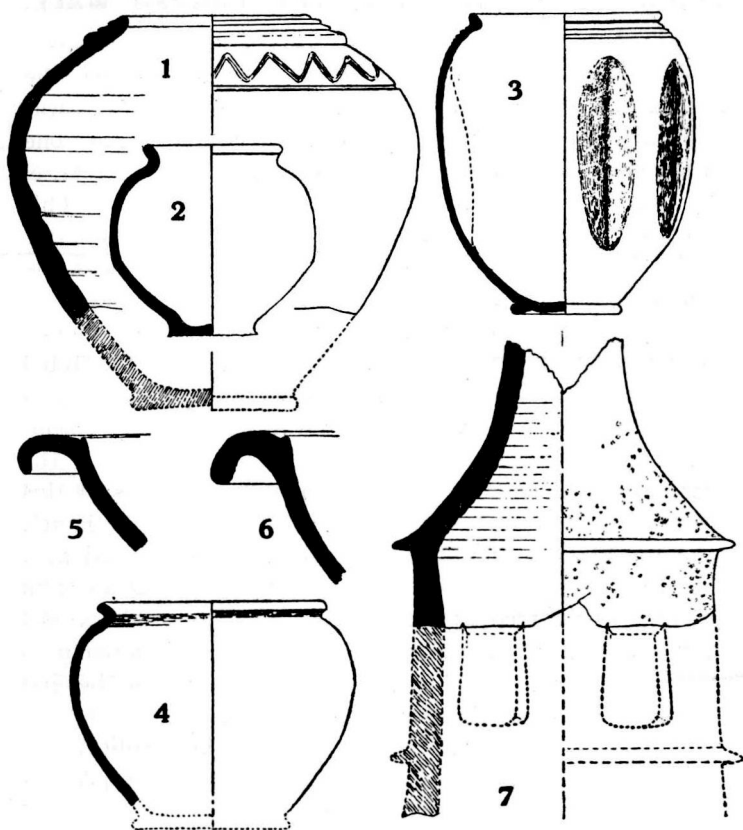


Fig 4. Pottery from the southern face of the footings of wall C. (4)

4. Cooking pot of somewhat bulbous form resembling very closely the examples from the Flavian deposit in the Deanery Field. Fine brick-red clay; the rim squat and oblique.

5. *Mortarium* of the flat topped type. Clay dark grey, very hard and overbaked; coated with hæmatite slip, and horizontally streaked as if the slip had been applied with a brush when the vessel was rotating on the potters' wheel.

A typical early type, and of same period as no. 6.



Fig. 5. (4).

6. *Mortarium*. Very fine gritty buff-white clay with a pale red core, and very scanty traces of grit on the interior. Stamp on rim. — . **ORICAM**, probably part of **MORICAM**<sup>11</sup> the initial letter wanting owing to the narrowness of the rim.

There are three segments of this vessel—that bearing the stamp came from the footings of the wall, the others were in the demolition layer over the structural remains.

Period: A.D. 80—100. Cf. Bushe-Fox's type (*Wroxeter* 1912) no. 38.

7. A mutilated fragment from the upper portion of a "Lamp-chimney," formed of coarse brick-red clay and sparingly coated externally with particles of grit. There are traces of mortar also attached to the external surface near the apex of the fragment. The only horizontal band preserved in this example is in the form of a narrow, obtusely pointed flange. At 1.5in. below it are three straight horizontal cuts, varying from 2.5in. to 2in. apart, evidently cut with a knife before the clay was fired, and these are all that are left of "windows," or openings, which seem to have been rectangular in shape.

In their description of the Lamp-chimney found at *Verulamium*<sup>12</sup>, R.E.M. and T. V. Wheeler give an interesting and informative account of these rather rare terra-cotta funnels found in Britain and elsewhere within the Roman Empire.

<sup>11</sup> May, *Colchester*, no. 16, p. 240, type 2 b.

<sup>12</sup> *Verulamium*, Rep. Soc. Ant. Lond., 1936, p. 190, pl. lvi, and text fig. 32.

**POTTERY FROM THE RUBBLE (DEMOLITION?) LAYER.**

(Pl. vii, nos. 1—4).

This layer was encountered in many of our cuts and in places formed an almost continuous stratum immediately over the structural remains. It consisted for the most part of broken sandstone with scrappy pieces of ashlar, and some lime rubble. Here and there it was interstratified with thin seams and small pockets of charcoal containing scanty remains of pottery. The last-named was more frequent over walls C, H and K (see pl. ii), and covered a wide period. It consisted of late first—early second century sherds, with a relatively much smaller number of sherds which may be attributed to the Antonine period—such as Collingwood's types 23, 44 and 65. The Samian ware here illustrated, although not substantially of one date, represents the main range of the decorated types.

1. Form 37, the decoration in three zones divided by wavy lines: upper with continuous winding scroll, the first of the lower cavities with portion of a rabbit and below it a wavy line tied with a rosette, below the latter a row of arrowheads; the second with a rabbit facing in the opposite direction to the first, with the wavy line and arrowheads as in the other concavity. Middle zone a straight wreath. Lowest zone divided into panels: the first with a stag (Osw. 1738), and three pellets in the field: the other with blurred arrowheads.

Period: Flavian, probably Domitian.

Rubble layer over footings of curved wall C.

2. Form 30. The orange-red glaze of this example has a finely matted surface, and the decoration appears to be of a rather interesting character. Furthermore the eagle *motif* seems to be an hitherto unrecorded decorative element. Six panels are represented, and they are divided by strong wavy lines tied at the angles with large seven-beaded rosettes. The first panel is narrow enclosing a series of double trifid bindings or "butterflies;" 2, a large panel

with Diana (Osw. 109), two peltæ and an astragalus in the field; 3, the butterfly panel repeated; 4, an arcade, the upper portions of the capitals terminating with an astragalus, and within the arch a large eagle (not in Osw.) with the plumage clearly indicated, and its right foot resting on an astragalus; 5, narrow panel with a vertical series of astragali; 6, a dancer (Osw. 354), and two astragali in the field. The ovolo though badly blurred and irregular, has a tongue ending with a small rosette.

Broadly the decorative elements of this bowl are closely similar to those so ably discussed by Birley (*Birrens*, 1936, pp. 310—313) who states there is "good evidence that the potter of the Birrens fragment, the initial letter of whose name was **D**, was a Trajanic potter, perhaps directly associated with **MEDETVS** and **RANTO**. The date of the Birrens piece . . . say c. A.D. 110—115."

3. Form 37. Fine orange-red glaze; the decoration in two zones, divided by wavy lines. The upper zone in the free style decoration consisting of the following *motifs*: sea-horse (Osw. 34); and parts of another of a similar type (not in Osw.); a leopard (Osw. 1518); and a crested crane (Osw. 2196). Lower frieze a continuous festoon tied together with astragali and each enclosing a bifid acanthus leaf.

Period: Trajan—Antonine, probably the former.

4. Form 37 with dark cherry-red glaze. Panel decoration divided by heavy blurred wavy lines, tied at the angles with an astragalus. Small bead and reel below the imperfectly preserved ovolo. The first panel divided horizontally; the upper with a pair of birds resting on the tips of a bifid acanthus leaf; the latter arising from the centre of a foliate festoon. The lower division with a straight wreath, below it the upper portion of a triton (Osw. 21). In the remaining panel part of a nude man.

Period: Trajan—Hadrian, probably the borderland between the two reigns.

### SAMIAN FROM NORTH EASTERN ARM OF THE CURVED WALL D.

(Pl. viii, Nos. 5—7)

5. Form 37. The decoration of this large fragment consists of part of a large continuous scroll with moniliform bindings. The ornamental elements in the lower concavities are divided by a blurred horizontal line: 1, upper enclosure a conventional plant with bilateral voluted tendrils; lower enclosure with rabbit (Osw. 2075), and beneath it six conventional plants; 2, dog (Osw. 1927) in lower space; the plant *motifs* as in 1. Lower zone with a straight chevron wreath bordered above with a plain moulding.

Period: Late Flavian.

The stratum over the curved wall D (the eastern arm) contained a mixed assortment of Roman sherds dating from the late first to the third or fourth centuries, those attributable to the Antonine period predominating. But the layer had all the appearance of having been disturbed from time to time, and it differed materially in its composition from the rubble layer explored on other parts of the site. The two fragments of decorated Samian ware from this layer seem worthy of illustration.

6. Form 37, in free style decoration of animals and warriors, with a bead row below the ovolo, which seemed to be characteristic of the work of the potter Cinnamus. There are three warriors (Osw. 198, 207A and 1059); a lion (Osw. 1497 J), a wild boar (not in Osw.), and part of a wild boar attacked by a lion (Osw. 1491). The interspaces between the figure subjects with a small palmate leaf, in most cases badly blurred.

Period: Antonine; and the general style of the decoration resembles very closely that of the potter Cinnamus.

7. Form 37. Panel decoration divided by wavy lines and tied at the angles with small rosettes: 1, part of Eros (or warrior?) (Osw. 441A) with a bluntly spiked shield at his back. Unfortunately the upper portion of the Chester example is badly blurred with the exception of the lower

part of the crested helmet. On the other hand the strongly spiked umbo to the shield is very distinctly impressed, but this strikingly characteristic feature is missing from Oswald's figure and in its place a few meaningless strokes. It is highly probable, however, that the original figure by Hermets was taken from an incomplete impression. 2, divided, the upper division with a bird; the lower one with a Satyr (Osw. 597).

Period: Late Flavian.

### DECORATED CASTOR WARE.

(Text fig. 6)

Castor ware decorated in barbotine is so very rare in Chester that it seems desirable to include an illustration of the fragments of a small beaker (fig. 6) which were found in close association with the fragments of a Samian bowl in a stratum just above the demolition layer over wall N joining the western side of the semi-circular building.

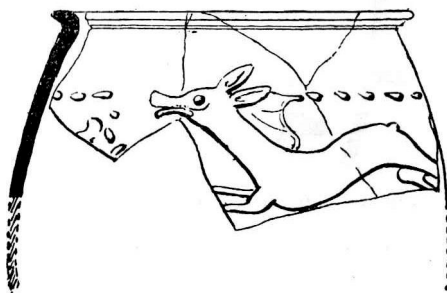


Fig. 6. Beaker of Castor ware. ( $\frac{1}{2}$ )

The fabric is typical of its kind and is coated with a dull coffee-brown glaze. The decoration consists of the major portion of a running stag and is a fine example of the Keltic potter's skill.

In his *Archæology of Roman Britain* (p. 240) Collingwood says the production in the Castor district seems to have begun in the late second century. Our example seems therefore to belong to the early period in the manufacture

of this ware, as the decoration of the Samian bowl found with the beaker bears salient characteristics<sup>13</sup> of that prolific potter Cinnamus, whose period of greatest activity may be given as the middle of the second century.

### POTTERY FROM THE UPPER ROMAN STRATUM.

(Text fig. 7, nos. 1—4)

1. Cooking pot of calcited ware. Clay heavily charged with fragments of shell (? *Helix*), grey-black outside, buff inside.

Two examples from the top of the bone layer, and one with a coin of Constantine II (A.D. 324—361).

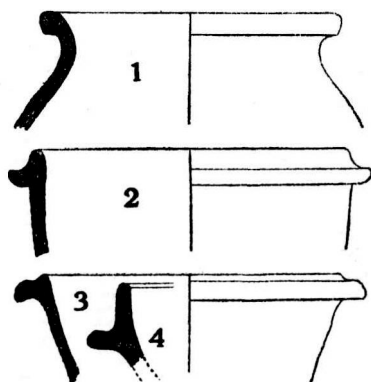


Fig. 7. Fourth century pottery. (4)

2. Flanged bowl of the same kind of ware as the preceding. For a similar late form *cf. Arch. Camb.* 1938, p. 182, no. 8.

From the top of the bone layer with no. 1.

Period: fourth century.

3. Flanged bowl of coarse Castor ware. Clay buff-white, coated with coffee-brown slip.

Top of bone layer with nos. 1 and 2. For a similar type *cf. Arch. Camb.* 1938, p. 181, no. 14.

Period: fourth century.

<sup>13</sup> Ovolo (O. and P. no. 92); Victory holding wreath and palm branch (Osw. 809).



4. Flanged bowl of coarse Castor ware. Clay and slip like that of the preceeding vessel.

Period : third—fourth century.

### STAMPS ON AMPHORAE.

(Text fig. 8)

1. Site B. "below *op. sig.*" floor=rubble layer over footings. Wall C. On handle.

2. Site B. Over rubble layer. On handle, downwards.

3. Site B. Wall C. Unstratified. Downwards on handle.

4. Site B. Wall C. Over rubble layer. On base just above the "toe" of the vessel.

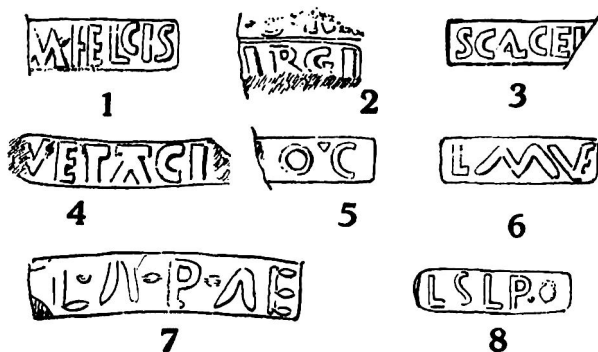


Fig. 8. Stamps on amphoræ. (4)

5. Site B. Wall C. Bone layer.

6. Site B. Wall C. In bone layer. On handle downwards.

7. **L.A.R.A.E.** This seems to be a rather striking variant of the stamp recorded by Bushe-Fox from Wroxeter (*Report*, 1913, no. 13), who states that it occurs in the *Monte Testaccio* at Rome and in other places on the Continent, and dates his find A.D. 80—120. Bone layer; wall C.

8. Site B. Wall C. Bone layer.

**GLASS.**

(Text fig. 9)

*Window Glass.*—Odd fragments occurred at all levels on both sites. But the most important find of this material came from the upper Roman stratum over wall N on the western limits of the great semi-circular building. It was lying in a compact mass, and the fragments collectively weighed nearly 7 lbs. Of the clear type there were three small pieces: one with a definitely pinkish tint and two with a very faint tint of yellow. The remainder was of the usual blue or blue-green tint. Three pieces exhibit unmistakable signs of having been trimmed into shape on two sides by the process of groozing, thereby leaving an irregular chamfered edge. The chamfer in all three examples slopes away from the polished surface so that the glass-cutter trimmed the piece into shape by holding the mat surface uppermost. The groozed edges of all three pieces, are at approximately right angles. Fragments of two Antonine vessels were found in association with the glass: a cooking pot of fumed grey clay and a Samian bowl form 37, with decoration resembling very closely the work of the potter Cinnamus.



Fig. 9. Fragment of decorated glass. ( $\frac{1}{2}$ )

Fragment of a thick-walled glass vessel (text fig. 9). On the concave surface or interior is a large ring with portions of a concentric foliate wreath. The design is slightly raised and has all the appearance of having been cast in a mould. Period uncertain.

Other glass vessels represented are:—(a) part of a large reeded handle, and (b) the massive rim of a vessel with a diameter of five inches.

**LEGIONARY STAMPS.**

(Text fig. 10)

Six official stamps of the Twentieth Legion were found on site B. Holt types nos. 1 and 2 came from the make-up just under the stone flags (a), in which a barbarous sester-tius of Antoninus Pius, and a denarius of Elagabalus (M. and S., iv—ii, 32, no. 63), A.D. 218—222, were found. Holt types nos. 8 and 13 (two) from the tile layer immediately over the stone flags (a) laid down therefore at a later period than the former. Holt type No. 12 or a variant of that form (see below) was used in the construction of the tiled arch which covered the drain and supported the floor of the third century building (see p. 14).

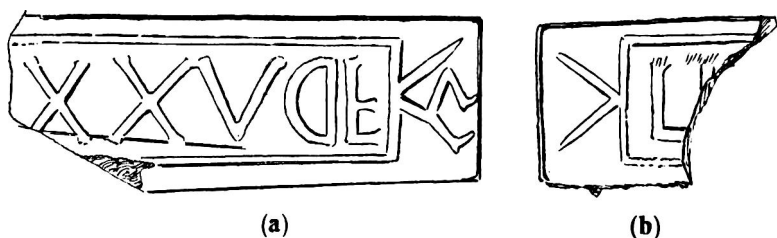


Fig. 10. Legionary stamps on tiles. (½)

a The *Devæ* or *Devensis* stamp of Haverfield (*Eph. Ep.* ix, 1247), Holt type 13, is here illustrated (text fig. 10), as it has a much more perfect impression of the ansate border than those found hitherto either at Holt or Chester. In it the lower limb of the V-like design is strongly bifurcated and somewhat resembles the lower portion of a nude figure walking up the vertical side of the margin of the stamp, but its resemblances to human legs is probably quite fortuitous. The other stamp shows the same peculiarities.

b This appears to belong to the Holt type no. 12. But the V-shaped design does not reach the border of the stamp.

For the evidence of date for these and other stamps found in stratified deposits in the Deanery Field, cf. *Liverpool Annals*, xxiii, p. 40, pl. xxi.

Since the excavations were closed down two additional stamps on roof tiles were found on site B when making A.R.P. shelters. Both examples came from the upper mixed deposit above the 4ft. 6in. level. One the Holt type no. 7, the other Chester type 8 (*cf. Liverpool Annals*, xxiii, p. 42).

The upper half of an Antefix of Holt type no. 1 came from a layer of refuse on site A. The deposit did not admit of close dating.

### BUILDING MATERIALS.

(Text fig. 11)

*Roof-tiles with rectangular flanges.* Complete examples of these were used to form the bottom of the drain at the west end of wall A. Four examples were secured. These were of the usual normal type and size, such as those manufactured at Holt and met with in abundance at Chester, though generally in a more or less fragmentary condition.

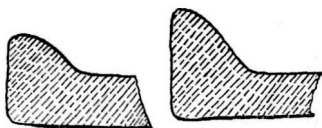


Fig. 11. Sections of the flanges of a new type of roof-tile. (4)

*Roof-tiles with bevelled flanges* (text fig. 11). These differ from the normal type in having bevelled flanges and also in being longer and narrower. They were used to form the arch over the drain (pl. xvii, figs. 1, 2) at the east end of the building leading under wall S (pl. iv, section G<sup>1</sup>—H<sup>1</sup>). In order to form an arch one flange had been broken off, and the remaining flange placed uppermost, thus serving as a substitute for voussoir-bricks. None was complete, but the total length of four examples gave the following dimensions: 27, 26 and 25.5 (two) in. respectively. The total width of two examples was 15.5 in. (top), and

14 in. (bottom). This type is not recorded from Holt, and it has not hitherto been found in Chester. Its provenance therefore, is unknown.

Period: Probably post Antonine; and contemporary with the later building whose floor it supported.

A fragment of brick eight in. wide bearing the incomplete stamp shown in text fig 10b was also used in the construction of the tiled arch.

*Imbrices.* One complete example (unstratified) and many fragments scattered over the whole site chiefly in the tile layers.

*Box-tiles.* Numerous fragments were found chiefly in the early deposits, more especially so over the curved wall C. Mortar was found adhering to many pieces; and two large fragments of wall plaster from the stratum between walls A and C bear perfect impressions characteristic of the scoring made on these tiles. The impressions on one piece of plaster show that two box-tiles had been placed side-by-side.

*Bricks.* One complete example was found. This measured  $7.8 \times 7.7 \times 2.1$  in. Fragments of other bricks were found, but on the whole they were scantily represented.

*Wall plaster.* Quantities of plain thick plaster occurred against the east face of wall T; and a large lenticular patch of decorated plaster extended from near the south end of the radial wall K across wall C up to wall A. In it was a plated denarius of Caracalla (M. and S., iv-i, p. 237, No. 178). The decoration consisted chiefly of plain bands and lines in red and yellow; there were also a few fragments with parts of a floral design in blue-green, and yellow. Mixed with this plaster were bits of box-tiles, and roof-tiles.

*Tile-mortar flooring (opus signinum).* Fragments of this type of flooring occurred in quantities in the cut by wall T at the eastern end of our dig. It was composed of finely broken tiles and mortar, the upper surface being smoothed off or ground so that the angular pieces of tile had the appearance of mosaic. Some pieces of this were found also inside the drain with the tiled arch.

**SMALL OBJECTS OF BRONZE, Etc.**

(Pl. ix)

1. One-piece fibula of bronze. The bow is strongly arched and rod-like; the open catch-plate is flattened above and below, the lower portion extended and terminating in a spiral twist round the arched portion of the bow. The spring composed of four coils held together by an iron pin, the outer coil forming a large loop. The example found in the Deanery Field<sup>14</sup> is a close parallel but this example came from a Flavian deposit. Found in the layer of tiles (site B).

Period: Not later than the closing years of the second century—probably Antonine.

2. "Trumpet-shaped" brooch of bronze; the moulding at the waist of the bow carried all round. The coils of the bilateral spring are held in position with a bronze pin, which passes through a relatively thick extension of the bow below the trumpet-shaped head. This example belongs to Collingwood's group R (iii); but differs in having no head-loop.

From the unsealed upper Roman level on the east side of the stone flags (a), and nearby were a coin of Carausius (A.D. 287—93) and one of Constantine I (A.D. 306—37). But the brooch seems to belong to an earlier period than the coins and is probably not later than the closing years of the second century.

3. Brooch of bronze, with the mouldings at the waist of the bow carried all round. This may be taken as a degraded example of the trumpet-shaped type characterized by the rudimentary dilation of the bow with a marked constriction below it terminating in a broad expansion for the accommodation of the spiral spring.

In the rubble layer over the footings of the radial wall G.

Period: probably Antonine.

4. Brooch of bronze; the bow with a central disc, and between it and the head is a lozenge-shaped design bearing traces of red enamel.

<sup>14</sup> *Liverpool Annals*, vol. xi, p. 79, pl. vi, 5, 5a, 5b.

A casual find from site B, and does not admit of close dating.

5. Penannular brooch of bronze, in a poor state of preservation.

From the bone layer, and may be dated to the late third or to the fourth centuries.

6. Combined finger-ring and key of bronze.

From the rubble layer over the curved wall (C) and not later than the closing years of the second century.

7. Bell or Crotol of bronze of the spherical type, still in use by Morris dancers in this country and in other parts of Europe as sleigh-bells, etc. A type that evidently had a long life extending from Roman times well into the twentieth century.

From the primary occupation layer, site A.

Period : Late first century and probably Domitianic.

8. Terminal pendant to a strap or the like, and used; it may be, for decorating harness. It is of gilded brass and is decorated with graduated bifid leaves. The terminal end of the broader portion is missing.

Primary occupation layer, site A, cut no. 1.

Period : Flavian.

9. Similar to no. 8, and also of gilded brass. The decoration in this example consists of a graduated series of acanthus leaves. Found in the primary occupation layer, site A, cut no. 2.

Period : Flavian.

(Pl. x)

10. Pin of bronze, the head decorated with concentric rings—a slight variant of the dot and ring ornament.

Site B, unstratified.

Three additional examples of these small objects of the toilet were also found on the same site, but these are not illustrated:—

- (a) Of silvered bronze, with a faintly moulded head. From the layer of rubble. Period : probably Antonine.

- (b) Of bone with a large spheroid head. In a mixed deposit (chiefly Antonine), south face of curved wall D.
- (c) Of bone with a thin flat and roughly circular head, the edge deeply notched. Found in association with (b).

11. Lug for attachment to a camp kettle or the like. This is of bronze and the heads of the rivets are still intact. Site B, unstratified.

12. Steelyard weight of lead with stout bronze wire for attachment. Lowest Roman level together with the mirror handle (19). Weight, 10oz.

Period : Late first—early second century.

13. Spoon of bronze, the handle tapering to a blunt point. The bowl is sadly incomplete and it is otherwise in poor condition owing to corrosion.

Site B, unstratified and period uncertain.

14. Strip of bronze cut into shape with a sharp instrument. It probably represents an early phase in the manufacture of an object of some kind, but seems to have been thrown out by the artificer together with other scrappy pieces of bronze, and bits of pottery datable to the late first—early second century.

15. Ferrule of bronze, from the layer of rubble over the curved wall C, with pottery of the first and second centuries.

16. Terminal of solid bronze, attached to an iron rod. From the rubble layer over the curved wall C.

Period : As No. 15.

17. Torque of lead. Both ends are fractured and therefore the object is sadly incomplete. From the primary occupation layer, site A.

Period : Flavian.

18. Finger ring of iron attached to a fragment of a mica coated vessel. It is so badly oxidized that its true form is obscured, but it seemed to have had a fairly large bezel. Found packed against the footings of the curved wall C with late Flavian pottery.



19. Mirror handle of bronze. When found it had a small segment of the mirror attached to the V-shaped support, but this dissolved out in the cleaning process with zinc and potash. From the lowest Roman level, wall M.

Period: Somewhat doubtful, but probably late first—early second century.

20. Leaf-shaped pendant of bronze. A not uncommon form, similar examples have occurred in the Deanery Field. (*Cf. Liverpool Annals*, vol. xv, p. 18, pl. vii, 7-10).

Primary occupation layer site A.

Period: Flavian.

21. Cylindrical object of bone, open at both ends. The lower portion is engraved with three dot-and-ring designs, irregularly placed and widely scattered; and it is chamfered below the small beaded rim and also in the central area. Its use is uncertain, but it may have served as a small dice-box. Rubble layer over the radial wall H.

Period: Not later than the closing years of the second century.

22. Drop-handle of bronze, with a split-pin fastener attached. One terminal is in the form of an acorn, the other missing; the rest of the decoration consists of three raised collars placed equidistantly, the surface between and beyond them faintly fluted. From the Roman layer over wall A, and probably Antonine.

23. Ferrule of bronze. It is octagonal in section, and closed at the pointed end. There is a small rectangular piece of bronze attached to the exterior on one side and a small hole opposite it through the wall of the ferrule proper. In the latter were traces of iron which also occurred in the interior, but for what purpose it served is not clear. The metal is thick and solid and weighs 2½ ozs.

Over footings of wall C. Period, late first—early second century.

*Beads.* Eleven examples of the common melon-shaped form in opaque blue frit were found in various deposits on both sites. This form seems to have had a long life extending from the late first into the third century.

Three other beads of less common occurrence are:— (a) in milky-green; (b) a small one in bright pale blue glass; and (c) a small example in opaque white glass, stained pale ferruginous, and faintly "crackled," resembling very closely a piece of polished carboniferous limestone. A bead of a precisely similar kind of glass was found at Prestatyn<sup>15</sup> in a late first—early second century deposit. The Chester example belongs to the same period and was found in the early deposit on the convex side of the curved wall C.

*Miscellaneous.* A triangular ingot of bronze, weight 7oz.; from the Flavian deposit on site A. Two bolts of a bronze lock, like those illustrated by Curle<sup>16</sup>. A plano-convex disc of lead<sup>17</sup>, weight 12oz. from the rubble layer over wall C. Three small counters of frit<sup>18</sup>, one blue the others white; all three from Flavian deposits, sites A and B. A spindle whorl of lead, weight 1oz.; from the Flavian layer, wall C. Several strips of beaded bronze, 2.5mm. wide, very like those found in the Deanery Field<sup>19</sup>, found with Antonine pottery over wall D. A group of hobnails of iron from a sandal or shoe, from the Flavian layer, site A. Studs of bronze of various sizes occurred on both sites, and in both early and late deposits.

### MISCELLANEOUS.

(Not illustrated)

*Ballista balls.* Six ballista balls were found on site B. Three of these missiles were lying together in the bone layer over wall C; the other examples came from undated deposits. One example weighed 2lbs. 4oz. and this may be taken as the average weight of the whole series.

<sup>15</sup> *Arch. Camb.*, 1937, p. 225, pl. v, 5.

<sup>16</sup> *Newstead*, pl. lxxviii, 7, 8.

<sup>17</sup> *Liverpool Annals*, xi, pl. iv, 4-6.

<sup>18</sup> *Ibid*, xv, pl. vi, 1.

<sup>19</sup> *Ibid*, xviii, pl. xlvii, 67.

### ANIMAL REMAINS.

The bone layer was for the most part well stratified. It was intersected in the majority of our cuts; and it covered an area equal to about two-thirds of the semi-circular building. It was most pronounced over walls A, C, G, H, I, but petered out eastwards and westwards beyond them. Bones of the ox<sup>20</sup> predominated and the horn-cores were all characteristic of the Celtic race (*Bos taurus longifrons*). Pig or wild boar was plentifully represented; but no remains of the horse were detected, and bird bones were absent. Pottery sherds were scantily represented, but they included representative pieces dating from the late Flavian period to the last quarter of the second century. Of the Samian form 37, seven vessels were represented; two motifs only were determinable:—Pan (Osw. 722) of La Graufesenque, Flavian; and Meanad (Osw. 368) Trajan—Antonine. The coarse ware pottery covers a similar wide range, but Collingwood's forms 44 (twenty-one examples), 46 (three examples) and 65 (thirteen examples), preponderated. The inference to be drawn from this evidence of chronology is that this deposit seems to be more or less contemporary with the sublying strata; and that after the demolition of the building the site was used as a convenient dump for rubbish.

### MOLLUSCA.

A single example each of the pecten and limpet were found at the bottom of the tiled drain at the east end of the building. Shells of the whelk and oyster occurred in

<sup>20</sup> Heads of the femur of the Ox occurred in large numbers in all the deposits, but were most numerous in the bone layer. All of these showed marked signs of having been struck off or separated by great force, generally along the line of the epiphysis, or just above the neck of the femur. A few examples exhibit one or two narrow grooves, but whether these are the marks of the implement used to separate the head from the shank it is not at all clear. Over 200 examples were collected, and many more were discarded. Such objects have been found elsewhere in Roman deposits at Chester and presumed to have been used as counters in a game of chance or skill. But the presence of such numbers on this site leaves one in doubt as to the use for which they were intended.

fair numbers in both early and late deposits, but most frequently in the cuts for the walls A and C. The common mussel seems, however, to have been eaten extensively, as the remains of this shell-fish were found in thin seams and in pockets of refuse in nearly all the strata which we explored.

### COINS.

We desire to express our gratitude to Mr. Harold Mattingly, of the British Museum, for the constant help he has given in the determination of all doubtful coins found on this and other sites in Chester during the last few years. Four pieces included in the table below seem to call for special reference :—

1. Barbarous sestertius of Antoninus Pius.

*Obv.* Bust right; but no trace of the legend.

*Rev.* A temple of eight columns; in the pediment are traces of three letters or numerals of which the last two may be read as IX or IA. In the exergue ISA. Mattingly states that he cannot make anything of this legend.

Found under the stone flags  $\alpha$  with the denarius of Elagabalus, no. 2, below.

2. Plated denarius of Elagabalus. M. and S., no. 63, p. 237, no. 178, var.
3. A barbarous  $\mathcal{A}$  3 of Tetricus II.
4. A barbarous minim of Tetricus II. ?

*Obv.* Radiate crown right.

*Rev.* Lituus and cantharus.

This in excellent condition.

TABLE OF ROMAN COINS.

| <i>Emperor</i>                  | Date<br>(A.D.) | Æ   | Æ   |
|---------------------------------|----------------|-----|-----|
| Nero - - - -                    | 54—68          | ... | 2   |
| Vespasian - - - -               | 69—79          | ... | 1   |
| Domitian - - - -                | 81—96          | ... | ... |
| Trajan - - - -                  | 97—117         | ... | 1   |
| Hadrian - - - -                 | 117—138        | ... | 2   |
| Antoninus Pius - - - -          | 138—161        | ... | 1   |
| Caracalla - - - -               | 198—217        | 1   | ... |
| Plautilla - - - -               | 202—205        | 1   | ... |
| Elagabalus - - - -              | 218—222        | 1   | ... |
| Gallienus - - - -               | 253—268        | ... | 1   |
| Victorinus - - - -              | 268—270        | ... | 4   |
| Claudius ii. - - - -            | 268—270        | ... | ... |
| Tetricus i. - - - -             | 270—273        | ... | 2   |
| Tetricus Jun - - - -            | 270            | ... | 6   |
| Carausius - - - -               | 287—293        | ... | 4   |
| Constantine i. - - - -          | 306—337        | ... | 3   |
| <i>Constantinopolis</i> - - - - | 330—337        | ... | 1   |
| <i>Urbs Roma</i> - - - -        | 330—337        | ... | 1   |
| Licinius - - - -                | 308—324        | ... | 1   |
| Valens - - - -                  | 314            | ... | 1   |
| Constantine ii. - - - -         | 317—340        | ... | 3   |
| Constans - - - -                | 333—350        | ... | 1   |
| Valentinian i. - - - -          | 364—375        | ... | 1   |
| Valens - - - -                  | 364—378        | ... | 1   |
| Illegible - - - -               | ...            | ... | 15  |
| Total                           |                | 55  |     |

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