



The Roman Amphitheatre at Chester.

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(Frontispiece and Plates i—xvi).



THE existence of a Roman amphitheatre at Chester was unknown until, one day in June, 1929, workmen engaged in excavating a chamber for the heating apparatus in the new extension of the Ursuline Convent, made the chance discovery of a small section of the foundations of the external wall (pl. i), lying buried a few feet below the existing surface of the ground.

The historic value of its discovery might have passed unnoticed had it not been for the prompt action taken by Mr. W. J. Williams, whose archaeological interest had been aroused by the discovery, on the site, of a coin of the Emperor Hadrian and the potter's stamp "**ORICAM.**"¹

It seems strange that history has not handed on to us some clue as to the existence of a Roman building of any kind on this site; all the more so seeing that houses built in the late 18th and early 19th centuries, two of which provided with cellars are now known to occupy the northern and southern limits respectively. Their erection may have

¹ *Jour. Chester Arch. Soc.* Vol. XXVIII, p. 218.

destroyed parts of the Roman work, and to some extent have reduced the evidence that would otherwise have been available.

Furthermore excavations have shown that a short section of the great radial wall (site 2), at the eastern end of the new road, was evidently standing above ground until the beginning of the 19th century, when it seems clear that it was buried by tipping a great mass of builders' refuse over it; and finally capping the whole with soil when the grounds were converted into a garden. It would appear therefore that Chester, at that time, was not much concerned with the preservation of its antiquities.

The site of the amphitheatre lies on the north side of the Dee, with the southern end of its longer axis about 400 feet from the river-side, and at an altitude of about 50 feet. From its summit, therefore, the legionaries had a somewhat commanding view of the fortress and also of the surrounding country: south-eastwards across the flat, marshy lands of the Earl's Eye; southwards along the line of Watling Street, flanked by the Roman cemeteries; and westwards to the range of Welsh mountains.

The longer axis is almost parallel with the east wall of the fortress; and the approximate position of the intersection of the shorter axis, with the W. side, is about 150 feet from the south-east angle of the fortress. (Key plan, pl. xvi). In the absence of more precise constructional details it is somewhat hazardous at this stage of our investigations to attempt to reconstruct the general setting-out plan of the amphitheatre. The relatively small sections which we have thoroughly explored, however, enable us to mark with a fair degree of exactitude the lines along which the major portion of the building lies hidden and unexplored. The approximate dimensions are: Longer axis of the exterior, 314 feet; shorter axis, 286 feet; longer axis of the arena, 190 feet; shorter axis, 162 feet. The height of the outer wall, based on the width of the cavea or seating bank of 62 feet, may be estimated as about 35 feet; and the height of the arena-wall about 11 feet; with a seating capacity for about 8,000 spectators.

Among British examples it is slightly smaller than that of Maumbury Rings, Dorchester, and much larger than the legionary amphitheatre at Caerleon. From the chronological evidence of the pottery it seems clear that our amphitheatre at Chester was built in the early eighties of our era. And the latest coin found on the floor of the arena on site 2, may be taken as an indication that the building was in use until the closing years of the third century A.D.—that is, for a period of about 200 years. For how much longer the building fulfilled its intended use, research only can determine. It may be of interest, however, to add that the the chronological limits which we have now determined for Chester almost exactly coincide with those given by Dr. and Mrs. Wheeler for Caerleon (*Archæologia*, Vol. lxxviii, 1928).

Roman amphitheatres may be roughly divided into three classes: (a) those which are essentially earthworks; (b) somewhat elaborate structures with massive stone-built revetments and seating banks of earth; and (c) structures built entirely of stone.

Of the British examples which are grouped under class (a) Ward² gives a list of about a dozen; and R. G. Collingwood³ the ground plans of eight, and states "more typical of Britain, perhaps, is the structure known as Maumbury Rings, the amphitheatre belonging to the town of Dorchester. It is about 345 by 333 feet, and the top of its bank stands even now some 30 feet above the arena, which was about 196 feet long, and 176 feet wide. Excavation has shown that the bank was revetted with timber."

Those in class (b) are somewhat elaborate structures, with massive stone walls or revetments to hold the earthen seating bank in position; and also provided with bilateral, stone-built entrances and passages with vaulted roofs and flights of steps, giving access to the seats. The amphitheatre at Caerleon⁴, is the only example which exhibits all these

² *The Roman Era in Britain*, pp. 93-94.

³ *The Archæology of Roman Britain*, pp. 103-107, fig. 26.

⁴ R. E. M. Wheeler and T. V. Wheeler, *Archæologia*, Vol. 78, 1928, pp. 111-218.

structural characteristics. It measured, externally, 267 feet by 222 feet; had a seating capacity for about 6,000 people, was erected about the year 80 A.D.; underwent certain structural alterations at various times; and remained in use until the end of the third century A.D. The legionary amphitheatre at Chester evidently belongs to this class of building.

Although the amphitheatre outside the legionary fortress of Carnuntum in Austria does not fall strictly within class (b) of our grouping, it may be of interest here to give some details as to its main characteristics, as this amphitheatre has been frequently referred to as a useful parallel to ours. In size it was similar to that of Chester, and had also a seating accommodation for about 8,000 people. Its seating bank, however, was strengthened throughout by massive cross-walls radiating from the inner wall of the *cavea* or seating bank like the spokes of a wheel. Besides the two main entrances (east and west) at either end of the longer axis of the structure there was a small entrance on the north, probably the *porta libitina* for the removal of corpses. There was possibly also an entrance in the centre of the south side which may have led to a kind of official royal box. In the middle of the arena was a squarish pit or basin, roughly walled in, and it had a clay floor. This structure seems to have provided means for flooding the arena (? for naval displays), but the arrangement for doing so was not clear. There seems to be no evidence as to when this amphitheatre was built; but the fortress nearby is shown by an inscription to have been built in 73 A.D., and to have lasted at least till the 5th century of our era. Cf. Kubitschek, *Führer durch Carnuntum*. (*Ost. Arch. Inst.*, 1923), 127.

To the third class (c) belong the structures built entirely of stone, consisting of tiers of arches forming concentric galleries throughout the buildings. Magnificent examples of this class are still standing, more or less intact, at Arles and Nîmes, in Southern France. Furthermore, the Flavian amphitheatre or Colosseum, at Rome, with its seating

accommodation for 87,000 people, may well be considered the prototype of this class of amphitheatres. There are no parallels for these structures in Britain.

At Chester the great depth of the deposit of from fourteen to sixteen feet over and above the floor of the arena, calls for some comment, as it presents a problem which generally puzzles the layman. The spade, however, has revealed the fact that the site had been used as a dumping-ground for refuse and excavated material of various kinds, during the last three centuries of our era. There was, however, no definite stratification, and there were no well-defined occupation layers, such as have often occurred elsewhere on the sites of buried cities; but masses of material dumped indiscriminately here and there. At the western end of the new road (site 5) for instance, there was a great mound of earth (now removed) nearly nine feet high, which was surmounted by an ash tree of at least thirty years growth. This deposit was remarkable for the wealth of Roman pottery which it contained. But these relics were mixed up with English sherds ranging in date from the fourteenth to the nineteenth century. Obviously the mound had been dumped there as late as the beginning of the eighteen-hundreds, and in all probability it represents material which had been transported from builders' excavations nearby.

Again the section in the garden of St. John's House (site 3) revealed a great mass of refuse nearly nine feet thick, which had evidently been tipped there during the late seventeenth or early eighteenth centuries. It consisted of old mortar and brick rubble, bits of wall plaster, wine bottles, and broken pottery. The last named represented posset-cups, pie-dishes, drinking-cups, candlesticks, and three-legged pipkins. Many of these were decorated with slip,⁵ and combed or marbled designs, and belong to that distinctive class of ware, made in Staffordshire, during the

⁵ One of the drinking-cups is inscribed with the letters . . . N: DRIN . . . F: Clearly part of a convivial inscription: Drink and fill again, or the like. The letters in slip are precisely similar to those on the posset-cup in the British Museum (*Guide*, p. 26, fig. 38).

latter half of the seventeenth century. At the time when this refuse was laid down, the arena-wall seems to have been barely covered, now it is lying ten feet below the existing surface, and the floor of the arena at the still greater depth of fourteen feet six inches. Furthermore, the foundations of an eighteenth century building crossed over the arena nine feet below the existing surface.

THE NATURE AND EXTENT OF THE STRUCTURAL REMAINS.

Five relatively small sections of the amphitheatre have now been explored. The geographical positions of these sites are shown in the key plan (pl. xvi), where they are numbered consecutively from 1 to 5, and are referred to under these numbers throughout the pages of this report.

Site 1 (pl. i). Here the structure consisted of a section of the external wall, about twenty feet long and nine feet thick; supported externally by two pilaster buttresses set ten feet apart. The footings, of five courses, were composed of roughly hewn blocks of sandstone set in puddled clay, on which there rested a single course of huge blocks of ashlar bedded in poor sandy mortar. The outer faces of these blocks had been rather roughly dressed: two of them showed faint traces of diamond broaching; but they bore no trace of weathering, and must have been covered by road-metalling or the like from the beginning.

This section was demolished to make way for a heating apparatus. In the course of this work three small sherds were secured, all of late first century origin. These included one bit of Samian 37 (not figured), showing conventional plant in lower frieze; and the rim of a cooking pot with applied "rustic" decoration. Rather slender evidence of date at the time; but later research has confirmed the chronological evidence afforded by these finds.

Westwards and southwards, below the level of the footings of the external wall, was a deposit of natural sand.⁶ A

⁶ The undisturbed level was not traceable.

similar stratum of sand was also traceable at the north end of the new building when making a cut for a number of drains. These deposits yielded much pottery, which may represent a pre-amphitheatre occupation.⁷ The pottery included Samian forms 29 (pl. viii, fig. 1) and 15; the latter stamped by the South Gaulish potter Calvus (**OF CALVI**), whose period of activity was mainly Vespasian.⁸ There were also many sherds of early cooking pots and carinated bowls.

A very short section of the foundations of another Roman building was discovered in making a cut for the main drain just in advance of the north-west corner of the new building. The rims of two early cooking pots were found in the packing against its southern face. It is just possible that we have here traces of the Roman baths, or it may be the foundations of a portion of the temple of Nemesis!

Site 2.—This lies at the eastern end of the new road⁹ near St. John's Church.

At this point we were successful in getting a complete section through the seating bank, *i.e.*, from the external wall to the arena-wall, which gave an over-all measurement of sixty-two feet approximately. Extending between the outer and inner boundaries is a massive radial wall (pl. ii), forming, it may be, the lateral wall of the main side-entrance to the arena. But no trace of a corresponding wall was discoverable on the south side, though search was made for it up to a distance of fifteen feet in advance of the centre of the southern face of our wall (D, on plan, pl. xiii).

The central portion of the great radial wall (pl. ii) is standing to a height of nine feet. Eastwards it had been robbed, and a modern drain passes over it near its junction with the outer wall. Westwards too it had also been largely quarried, and the last few feet of the footings immediately behind the arena-wall, had vanished, and in their place on the south side were a charcoal pit, and much English pottery. Its thickness, at the base, is six feet, but it is

⁷ See also Site 5, p. 17.

⁸ Oswald, *Stamps on Terra Sigillata*, p. 55.

⁹ The walls of this new bye-pass road were built in 1929.

narrowed by three offsets on either side; the lower one on the south side (pl. iii, fig. 1) overhanging the footings to the extent of seventeen inches. A little west of the central section (D, in pl. xiii) were three massive, wedge-shaped blocks of masonry (pl. iii, fig. 2), which together formed a distinct ramp, and were entirely out of alignment with the regular courses of masonry. Judging by their form they may have served as voussoirs for a vaulting or archway. They had been roughly placed in position, without any bedding of mortar; and did not, apparently, form part of the original masonry of the wall. Immediately east of these blocks was a cavity in the south face of the wall, the entrance to which was concealed by a comparatively thin block of masonry standing on the edge of its longer axis; inside the chamber there were meat bones and also shells of the common garden snail (*Helix aspersa*).

The external wall (pl. iv, fig. 1), consisted for the most part of footings nine feet thick set in puddled clay, and a single string-course of masonry from four to two inches thick. A great block of ashlar rests upon this at the north end, just behind the partly explored buttress.¹⁰

The Arena-wall (pl. iv, figs. 2, 3) is preserved to a height of six feet, but it ends abruptly on the north, with a somewhat jagged edge (see also p. 15). Not the least interesting of our finds on this site were the mason's mixing-floor (pl. xiii) and also unmistakable traces of the builders' working platforms, indicated by very thin and widely separated horizontal lines of waste-mortar, flung, it may be, from the masons' trowels, as stage by stage the wall and seating bank were raised. These stages were very clearly indicated by the infilling on the west face of the external wall. Several distinctive sherds came from the infilling, and also from the make-up of the seating bank. The spout of a mortarium (Text, fig. 4, p. 31), with a characteristically first century rim (Bushe-Fox's No. 14) came from the face of the footings of the external wall; it had been thoroughly

¹⁰ This lies under the footway and as a consequence it could not be explored.

pounded into position and smashed into fragments. From the very hard packing of the west face of the wall some bits of mica-coated ware, and a carinated bowl were found (pl. ix, figs. 11—14). Some odd sherds of an early date came also from the footings at the east end of the radial wall, including a fragment of Holt green glazed ware (pl. ix, fig. 19). The odd pieces of Samian are consistent and include the fragment of 37 (pl. viii, fig. 9) with typical late Flavian design.

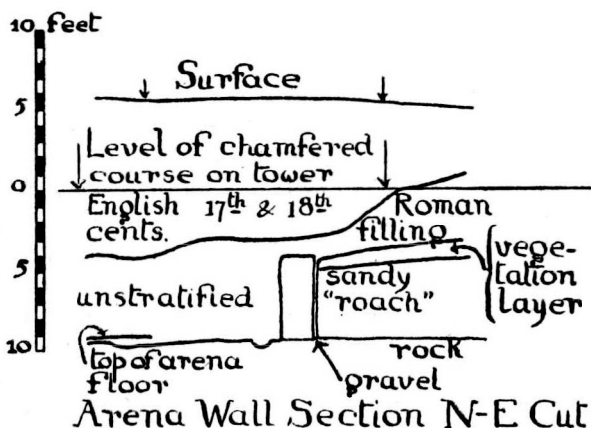


Fig. 1. Site 3.

Site 3 (pl. vii, figs 2, 3). The garden, St. John's House, East.—Here the arena-wall is standing to a height of five feet with its back resting against the virgin sandy "roach"; and its footings on the solid rock (fig. 1). Obviously the original surface had been cut away to a depth of five feet and the upcast used to build up the seating bank. The infilling at the back of the wall consisted of a very thin seam of gravel; there was no pottery, however, or any other kind of datable material with it. The Roman occupation earth over the floor of the arena showed no definite stratification, but the interesting bronze brooch (pl. xi, fig. 3), and the bronze coin of Claudius I were found in it.

Site 4.—Here our trial cut was carried, quite undesignedly, through the centre of a doorway leading apparently into a chamber under the seating bank, or *cavea*; and at first the only structural detail found was the well-worn door-sill (pl. vii, fig. 4). Subsequently permission was given to tunnel into both sides of the trench, when the whole of the entrance, two short sections of the arena wall, and the gutter on both sides were cleared (pl. xiv). Some attempt had evidently been made to block up this doorway, by filling the lower portion with a large *voussoir* (A, A, in pl. xiv), and small blocks of masonry, the latter, evidently taken from the face of the arena-wall, as one example still bore traces of the colour-wash. Soil only had been used to hold the carelessly placed stones together; but no chronological evidence was forthcoming from this which would afford any clue as to when, approximately, the doorway had been temporarily blocked up. Here, the floor of the arena had also been carried down to a slightly lower level than that of the floor under the *cavea*. No datable objects were found in it; but the amphora-stamp, **Q M R** (text fig. 8), seemingly of Antonine origin, was found on its surface opposite the doorway.

The relative position of this small room, near the main entrance to the arena, is apparently a not uncommon feature in stone-built amphitheatres. At Syracuse, which we have seen, there are four such rooms opening into the arena—one on either side of the main entrances of the longer axis. Their use is not quite clear, but they may have served as offices, shops or dens for beasts.

Site 5.—Here another cross section of the structure was explored, as far, at any rate, as the exigencies of the adjacent walls of the new road and other obstacles would permit. A study of the plan (pl. xii) of this section shows four principal structures, which are dealt with below:—

(a) An entrance six feet wide, with the foundations of its *parallel walls*, six feet thick, extending under the seating bank or auditorium to a distance of about thirty-six feet. At fifteen feet from the entrance, are two steps, and vestiges

of a third, leading upwards; and beyond the steps, between the inner ends of the parallel walls, are two post-holes (pl. iv, fig. 4, c). The floor of the entrance is practically level as far as the steps, and just inside it is partly paved with four massive blocks of sandstone, none of which, however, shows any trace of either wearing or weathering. Whether the rest of the floor was paved in the same way is not at all clear.

The steps, and also a portion of the north passage wall east of them, were completely covered with a very definite stratum of refuse, containing a quantity of broken pottery (pl. viii, 3, 4, 6, 10; pl. ix., 1-9), all clearly of late Flavian origin. The presence here of such a mass of late first century material seems to indicate that the centrally placed stairway was abandoned in the initial stage of its construction, and that, probably, a bilateral arrangement of stairs for access to the seats of the auditorium was substituted. No such an arrangement, however, is now traceable, unless the concentric walls on either side of the entrance served such a purpose.

(b) A section of the external wall, with a buttress on the south side of the entrance (pl. v, fig. 1, A, B). The footings of the former are set, as usual, in puddled clay, and over them on the east face are two offsets of finely dressed ashlar.

(c) A concentric wall (pl. v, fig. 2) flanking the entrance on the south. This is of good ashlar work, and stands a little over eight feet east of the first offset of the external wall.

There were vestiges also of the foundations of a wall somewhat in alignment with the above on the opposite side of the entrance, but they were traceable only for a distance of one foot. Whether these concentric walls represent the foundations of an arcade or bilateral entrances to the auditorium, is not at all clear.

(d) A section of the arena-wall (Frontispiece, and pl. vi) nearly twenty-three feet in length, and sixty-two feet from the outer face of the external wall. Part of this section is standing to a height of nine feet six inches, representing, it

may be, about three-fourths of its original dimensions. Its thickness at the base is two feet, and at the top two feet eight inches. A section of this portion is shown in text, fig. 2.

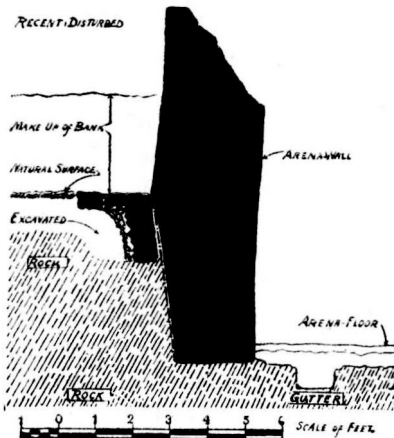


Fig. 2. Section of arena-wall and gutter. Site 5.

At the southern end of the section, the inner face of the arena-wall (pl. vii, fig. 1) had been rather roughly pointed; but it showed no trace of weathering, and seems to have been protected by the infilling of the seating bank. At a distance of five feet from the top of the section is a rubble packing set in mortar, and resting upon the natural rock which crops up at this point, but dips away to the level of the arena floor a little further north. This packing was not bonded into the wall, and there was no trace of a similar structure in the other portions of this section of the wall which were explored to the base line on both sides. The use of this structure is puzzling; clearly, however, it does not represent the base line of the podium or ambulatory, as it is at a much too low a level for that.

The central portion of the wall had, unfortunately, fallen over the floor of the arena, leaving but a single course of ashlar *in situ*. The northern portion is also displaced and

overhangs the gutter at a rather acute angle, as may be seen in the photograph, pl. vi. At the back of the great gap in the wall was a small refuse pit which had been carried down to the level of the lowest course of masonry. It contained a quantity of meat bones of the ox, sheep and pig; the jaw bones of a small race of dog; saw-cut antlers of the red deer; leg bones of the domestic fowl; and the head of a femur of a young adult person. Two fragments of coarse Roman pottery were associated with the above: the spout of a late second century mortarium, and a sherd of roughly made Castor ware. In its general technique the latter closely resembles the wares in common use during the late third and in the fourth centuries. Immediately over these, at a height of about three feet from the floor level, were some bits of broken pitchers, datable to the fourteenth or fifteenth centuries, and fragments of Roman roofing tiles. In the light of this one is tempted to attribute the whole of the deposit to the stone-robbing builders of mediæval times.

The filling at the face of the footings of the various foundations, on this site, contained several fragments of pottery, distinctive of the kind of ware in use during the last quarter of the first century. Of Samian forms there were one piece of form 29 (p. 22, No. 2); and three of form 37, with transitional decoration (p. 23, Nos. 7, 8, 12); and of coarse ware vessels, the more noteworthy were the typical first century carinated bowls, of which No. 27 is given as a type.

In the packing round the larger of the two post-holes was a fragment of a small Samian cup, form 67, and also part of the stamp of the South Gaulish potter, Albanus (**OF ALBANI**), whose period is given by Oswald (*Stamps on Terra-Sigillata*, p. 9) as Tiberius—Vespasian. Whether these post-holes represent a pre-amphitheatre period is not clear; nor is it possible to assign any use for them in connection with the entrance to the auditorium as they are placed a long distance in advance of the steps, and were well covered with the make-up of the seating bank.

THE ARENA-WALL.

The Wall Plaster, had for the most part fallen away, leaving the joints of the masonry open, and the bedding of the latter receding from the face of the blocks of ashlar to a depth, in some places, of one inch or more. In section No. 3, however, two patches of the wall plaster remained (pl. vii, fig. 2); forming a thin coat over the joints of the masonry, and presenting a rather rough and uneven face. Some detached bits of keyed plaster were found at the foot of this section; the outer face of these also presented an uneven surface, and consisted of a single rendering of mortar. Definite traces of colour-wash could be seen in all the sections; but it was most pronounced and in a better state of preservation on those blocks of masonry¹¹ which had fallen over and were lying face downwards on the floor of the arena in the central portion of section No. 5.

The principal colours used were: (1) a dark Venetian red, shading to light red and orange-red; (2) yellow shading to orange-yellow; and (3) white. In places these colours had been definitely blended together, seemingly to produce a marbled or parti-coloured effect. A small patch of a dark green colour was also preserved on the face of one block of masonry, but this colour was not traced elsewhere. From four to seven super-imposed layers of the colour-wash could be seen on some sections of the plaster. And it seems quite clear that much of the colour had been applied after the plaster had fallen away, as in many places it completely covered the faces as well as the edges of the bedding surface of the stones. No trace of false-jointing by the use of colour-wash was seen.

The mortar used in the construction of the wall was of three distinct kinds: (a) heavily charged with nodules of pure lime, varying in size from a millet seed to nearly an inch in diameter; local sand and gravel, the latter including some quite large pebbles. This type was very hard and tough, and used only in section No. 2. (b) Similar to

¹¹ See examples preserved in the Grosvenor Museum.

(a) but with relatively few nodules of lime. This kind was used in sections 3 and 4, and also in the lower courses of section 5. (c) A fine greyish mortar with a texture somewhat resembling oolitic limestone, due in a large measure to the use of a colourless sand. It was further characterised by the admixture of odd bits of charcoal, throughout its composition.

FLOOR OF ARENA.

Site No. 2. Less than fifteen square feet of the floor in this section of the arena was explored. Here primarily it consisted of a layer nine inches thick, of the natural sand which occurs in many places over the whole site. Over this at the west end of the narrow cut was a layer of burnt clay about one inch thick, which was capped with dirty sand and soil. In this capping were found many objects of interest. A group of seven bronze coins of the following Emperors: POSTUMUS, one (258—267 A.D.); VICTORINUS, one (265—267, A.D.); TETRICUS I, two (268—273, A.D.); TETRICUS II, two (268—273 A.D.); and CLAUDIUS II GOTHICUS, one (268—270 A.D.) With these coins were some sherds belonging to four coarse-ware vessels (Nos. 20—23), all of them late third to fourth century types; part of an iron dagger (p. 33); the frontal bone of a human skull; and some splintered meat bones of the ox and pig. Nothing of a datable nature was found in the clean sand forming the primary floor of the arena.

Site 3. In this section the sand forming the primary layer was discoloured, and evidently some disturbance had taken place.

Site 4.—Here the primary layer over the natural rock consisted of broken rock and sand; the final layer of sand above this was fairly clean; but no datable object came from it. In the capping immediately above the primary layer was the Antonine stamp, **Q M R**, (p. 32).

Site 5. The primary layer here consisted of similar broken rock, but with a sparse admixture of broken roofing tiles. The layer of sand above, was, for the most part,

remarkably clean, and from it, in the infilling of the gutter, was a fragment from each of the Samian bowls forms 29 and 37, the rim of a carinated bowl (pl. x, fig. 31); and the wing-bone (*ulna*) of the Sea-Eagle¹² (*Haliæetus albicilla*). On its surface, in the discoloured sand, were the Samian cup (pl. x, No. 28) and a mortarium rim similar to No. 20 (pl. x). Meat bones of domestic animals were plentiful, more especially so in the section under the fallen masonry. Of human remains there were many fragments of a skull or skulls; part of a lower jaw; two vertebræ, including the atlas bone, and the head of a left femur. The presence of human remains¹³ on this small section of the arena, and also on sites Nos. 1 and 2 is puzzling. Obviously they do not belong to the victims of gladiatorial combats, who were "butchered to make a Roman holiday." Perhaps they represent some victims who fell in an attack on the garrison, during the closing years of the third century. Some day when the whole of the arena is laid bare, the mystery connected with these remains may be explained.

Lime on the floor of the arena. Three small, tufa-like masses of pure lime (pl. vi) were found on the surface of the floor of the arena close up to the footings of the wall: one on site No. 2, and two on site No. 5. In the latter case these masses were lying thirteen feet apart and extended over the floor to a distance of seventeen inches. Its use hereabouts is not at all clear. Obviously, however, it was not intended for building purposes, though it could have been used as an absorbent; or it may have been placed in readiness for use as a colour wash for the wall of the arena.

THE ARENA GUTTER.

This was cut in the solid rock, from fourteen to twelve inches in advance of the arena wall; its width at the top varied from thirteen-and-a-half inches to ten inches; and its

¹² Kindly determined for us by Mr. Percy R. Lowe, British Museum of Natural History.

¹³ It may be of interest that the lower jaw of a human skull was found near the bottom of the ditch by the south-east angle of the fortress (See p. 47).

depth from ten inches to six inches. In the very short section (three feet) explored at the eastern end of the road (site 2) the channel was protected with small, irregular slabs of sandstone, about four inches thick; but in spite of this protection the channel was completely blocked up with finely broken rock and sand—much of it perfectly clean material, and scarcely at all stained by rainwash or mud. The much longer section of the gutter explored at the west end of the new road (site 5) was also completely filled in with similar clean material, but with bits of broken tiles added, and there was also a quite definite but very thin deposit of darkish coloured silt at the bottom of the channel. No covering stones, however, were used in this section, and the sand of the arena floor formed a thick cap over the infilling of the gutter. It would seem, therefore, that the gutter at this point had been intentionally filled in from the very beginning. It should be noted, however, that the natural drainage hereabouts was excellent, and there was no lodgment of water during the excavations even after a heavy rainfall.

On site No. 4 the gutter was of similar dimensions, and also cut in the solid rock, but it was not continued in front of the door-sill.

COPING STONES.

Coping-Stones (pl. iii, fig. 3) were found near the face of the arena-wall, on sites 2, 3 and 5, respectively: one example from each of the first two sites, and three from the last-named. They consisted of two kinds: four roughly in the form of a half-round saddle-back; one of a similar form but with a nosing at the base, on one side. They varied in depth from twenty-three inches to twenty-one inches; and one example gave a total length of four feet. It may be taken as a fair inference that these moulded blocks of local sandstone formed a part of the coping of the wall of the arena; none, however, showed sockets for holding the wooden uprights of a supplementary railing as at Caerleon.¹⁴

¹⁴ *Archæologia*, vol. 78, p. 118, fig. 3.

DECORATED SAMIAN. (*Terra Sigillata*).

(Plate viii).

1. Form 29. Excellent glaze and technique. Part of upper frieze : winding scroll, with spiral tendril ending in a rosette; bird to left (not in Déch.) Fabric of La Graufesenque. Period : Vespasian-Domitian. Site No. 1. Under the new building of the Ursuline Convent. In the natural sand, west of the amphitheatre, just below the level of the footings and may therefore be slightly earlier than the construction of the building.

2. Form 29. Friezes divided by bead-rows. Upper frieze with a continuous winding scroll : lower lobe with two serrated leaves and a pellet between them ; upper lobe with one serrated leaf and a " catkin," with a pellet between them. Lower frieze with a wavy, horizontal tendril, attached bilaterally to a very narrow vertical wreath ; in the centre a lanceolate *motif*, and outside the wreath, on either side, the terminal portion of a large leaf. In its design the lower frieze somewhat resembles the example found in London. (Walters, *B. M. C.*, M.503). Site 5. In the packing, south face of north passage wall, with two sherds of " rustic " ware, and a fragment of a carinated bowl with reeded rim. Period : Late first century.

3.¹⁵ Form 29. Fragment of lower frieze, exhibiting scroll pattern. Glaze excellent, and technique good. Site 5. In first century deposit over the steps.

4.¹⁵ 4a. Form 29. Two fragments of the lower frieze, both with part of a cruciform ornament, divided by wavy lines, and in the lower space a *motif* as in Atkinson, *Pompeii*, fig. 4E.

5. Form 37. Ovolo with the tongue broadly rounded, and separated from the decoration below by a thick wavy line. A large winding scroll ; upper and lower lobes with two large, broadly lanceolate and toothed leaves and between

¹⁵ These examples were found in the well-defined first century deposit which crossed over the steps of the western entrance to the Amphitheatre. For a description of the coarse pottery from this stratum see p. 26.

them, in the upper lobe, three large rings or discs; these were probably repeated in the lower lobe, but one only is left on the fragment. Site 5. In the upper unstratified deposit. Period: probably early second century.

6.¹⁵ Form 37. Decoration in panels divided by wavy lines. Ovolo with tridentate tongue. Boar l. (Déch. 837), and on a bowl by Mommo (Atkinson, *Pompeii*, pl. iii, fig. 11). Site 5. In first century deposit over steps. Period: Vespasian-Domitian.

7. Form 37. Decoration in panels and medallions. Upper panel sitting hare (like Déch. 951, and Atkinson, *Pompeii*, 55). Lower panel, cruciform ornament with wavy lines as diagonals, and a dart-shaped leaf on a straight stalk in each of the triangular divisions. Below, part of S-shaped border. Site 5. In packing at foot of passage wall. Period: Domitian-Trajan.

8. Form 37. Ovolo with tridentate tongue; wavy line below. Dog chasing hare. (Not in Déch.). Site 5. With No. 7.

9. Form 37. Straight wreath below wavy line. The wreath as in Walters (*B. M. C.*, xxxviii, 28); and Atkinson, (*Pompeii*; pl. ii, fig. 2). Site 5. Unstratified deposit. Period: Vespasian-Domitian.

10.¹⁵ 10a. Form 78. Bead-row above and below the decoration. Design divided by alternating arcades. (1) Pan (Déch. 423) juggling with a ball; upper spandril with a singular zoomorphic design consisting of a bird's head ending proximally in two divergent tendrils: the upper forming a volute, the lower one long and wavy, terminating in a large "catkin" or spiral. Two small bunches of grapes, or the like, immediately below the bead-row, one of which is held in the bird's beak. (2) Arcade divided transversely, in the centre, by a bead-row; in the upper portion part of what appears to be two birds (? quails) in combat; in the lower portion, eagle with outspread wings (Déch. 985). (3) Ball as in (1); spandrils also as in (1), but with one bunch of grapes between the birds' beaks. (4) Upper portion

¹⁵ *Ibid.*

of arcade as in (2). The dark cherry-red glaze and the general technique of the design point to South Gaulish origin. Site 5. First century deposit, over the steps.

11. Form 30. Nude figure of Mars (not in Déch.) wearing helmet; holding spear in right hand with drapery and possibly also a parazonium in the left. Period: Hadrian-Antonine; the general technique and glaze points to the earlier period. Site 2. Unstratified deposit.

12. Form 37. Jupiter semi-nude (Déch. 6. *La Graufesenque*, on form 30). Excellent glaze and fine technique. Site 5. Packing face of footings.

13. Form 37. Straight wreath between wavy lines. Site 5. Unstratified deposit.

POTTERS' STAMPS ON SAMIAN WARE.

An imperfect stamp, very probably part of **OF ALBANI**. On 27 (small), with the groove encircling the foot-stand broad and deep. The spacing of the imperfect letters in this stamp fit best with the stamp figured by Walters (M.1839). A similar stamp has also occurred at Neuss (*Bonn. Jahrb.*, p. 336, No. 12651). Oswald and Pryce (p. 76) dated Albanus as Claudian-Flavian and records his stamps from Sels, Carlisle, Rottiweil and elsewhere. Site: In the packing round the large post-hole; together with a fragment of the globular cup, form 67.

OF CALVI. On 18 (small). Dull glaze. From a mixed deposit at west end of new road.

OF CALVI. On 15, with quarter round fillet. Casual find by workman, on the site of the new extension to the Ursuline Convent, in 1929. Dated 90—110 A.D. at Wroxeter (*Report*, 1913); at Corbridge, 90—105 A.D. The stamps of Calvus have also occurred at Chester several times (*cf.* Hayter's List, p. 15; and Droop & Newstead, *Liverpool Annals*, vol. xviii, p. 117.)

/RMANI. On 18 (small). This is part of the stamp **GERMANI**. Germanus was a South Gaulish potter; and Bushe-Fox (*Richborough*, p. 69) states that "he began

working at the end of the Neronian, but whose chief activity lay in the Flavian period." Professor Atkinson suggests the date 60—85 A.D. (May, *Cat. Tullie House, Carlisle*, p. 16, note †). Site. Refuse or infilling (? pit) in natural sand under the make-up of the seating bank. Site 5.

PEREGRIV. On 18. Low cone. Good glaze. Type figured by Walters (M.1799). The stamps of Peregrinus have been recorded on decorated bowls at Rheinzabern (Lud. iii, 93), at Cannstatt (Knorr, p. 47); Colchester, Silchester, Chester and Wroxeter. Period: late first to early second century. From a mixed deposit at the west end of the proposed new road.

OF•VITA. On 18 (small). Large well-formed letters, with a • inside the O. Good orange-red glaze. Underneath, inside the foot ring, a large X is scratched. The stamp of Vitalis, figured by Curle (*Fort of Newstead*, p. 242, No. 180) is an exact replica of ours. Site: Refuse or infilling (? pit) with the stamp of Germanus. Late first century. For site dating cf. Bushe-Fox (*Richborough Report*, p. 59).



Fig. 3. †

Graffito (text fig. 3) on form 29. This is scratched on the underside of the base, and is probably the cursive signature of the owner of the vessel. It is clearly cut, and may be read as **ERI**. Site 1. In the stratum of sand outside the amphitheatre.

THE COARSE POTTERY.

(Plates ix, x).

The examples of coarse ware pottery here illustrated are chosen: (i) for the most part from well stratified deposits, and are apparently contemporary with the primary foundation of the building; and (ii) a few examples of later periods which have been dated chiefly by associated finds and may help to throw some light on the later phases of the occupation of the site.

1—9. This group was found in a well-defined stratification over the steps to the entrance, site 5, in association with the Samian pottery of the late Flavian period already dealt with in this report (pp. 22, 23, Nos. 3¹⁶, 4¹⁶, 6¹⁶, 10¹⁶).

1. Ring-necked flagon. Hard red clay with grey core, coated with creamy-buff slip.

2. Bowl (probably carinated) with acute, reeded rim. Clay hard, smoky red, core grey.

2a. Bowl similar in form to the preceding, but the rim oblique. Clay fine, hard, creamy-white, with traces of buff-yellow slip on the outer edge of the rim. Vessels of this class made in white clay are rare. This is the first example recorded from Chester, but Grimes (*Holt*, p. 154, No. 81) records two examples from the Legionary tile works at Holt.

3. Shallow bowl of Belgic technique. Rim broad and heavily moulded at the outer edge; inner edge with a sub-marginal groove; the broad, flat, median area finely rouletted. Clay fine pale grey, coated on both sides with a thick, smooth "varnish" which has flaked off in places. The rim of this vessel strongly resembles that of the example figured by May (*Colchester*, pl. vi, No. 60). No example of this class of pottery has been recorded from the Roman kilns at Holt.

4. Cooking pot of "rustic" ware. Rim rather thick, oblique. A groove at the shoulder; foot-ring shallow, but well formed; the barbotine decoration applied with a finger leaving two more or less parallel ridges. Space above the decoration finely tooled. Hard grey clay.

5. Rim of store jar. Pale orange-red clay.

6. Small beaker with oblique rim. Fine orange-red clay.

7. Beaker. Diameter of rim, 9.4 cm. Very fine, hard, pale red clay, mica coated.

8. Hemispherical bowl. Holt type. Rim heavy and rather deeply undercut. Body with two strong cordons. Bright orange-red clay, coated with mica inside and out. This class of pottery has been found elsewhere in Chester

¹⁶ No. 28 excepted.

(*Liverpool Annals*, Vol. VIII, pl. viii, figs. 2, 3. *Ibid.*, Vol. XVIII, p. 125, No. 31). For details of the examples in the Cardiff Museum, cf. Grimes (*Holt*, p. 172, No. 226).

9. Shallow dish with downwardly curved rim, the upper surface of which is grooved and there is also a median raised bead with equidistant, concave notches. Interior of base, with a quarter-round fillet. Foot-ring shallow, and formed by a deep broad groove at the side, and on the base. Clay pinkish-buff to pink, and of exceptionally fine texture, bears traces of mica coating and is very finely tooled. This vessel may be of Holt manufacture; but no examples of it are represented in the collection at Cardiff.

10. Fragment of hemispherical bowl. A variant of Grimes' *Holt* type, 225. Found in association with Samian sherds dating to the early years of the second century

11—14. This small group of sherds was found in the very hard, undisturbed "packing" near the west face of the outer wall, site 2; and consists of typical late first century types.

11. Foot-ring of small mica-coated beaker. Hard pinkish-buff ware.

12. Shallow dish or platter of mica-coated ware. Clay hard pinkish-buff.

13. Rim of reeded and carinated bowl, with two girth grooves: one immediately below the rim, the other at a lower level. Hard pinkish clay.

14. Reeded rim of shallow dish or bowl, probably the former. Hard pinkish clay with traces of mica coating. The upper portion of the rim is discoloured by the action of fire subsequent to baking.

15. Neck of flagon with two-ribbed handle. Upper surface of rim concave. Fine, pale, brick-red clay with grey core. North face of footings to north passage wall. Site 5. A very slight variant of this flagon is recorded from a late first century deposit in Edgar's Field, Chester. Cf. *Newstead (Records, Jour. Chester Arch. Soc., Vol. XXVII, p. 155, pl. xxiii, No. 2).*

16. Cup or beaker. Upper half cylindrical, the lower conical. Rim slightly oblique and undercut externally. Midway between the rim and the strongly carinated shoulder a well-defined cordon. Foot-ring well defined, but rather shallow. Fine pale red clay. In the clay and occupation earth used as a packing to south face of the north passage wall, site 5; with one piece of a Samian dish, form 18, and also one small bit of 37, decorated with a narrow wreath (pl. viii, fig. 13).

This vessel exhibits late Celtic features, and bears a striking resemblance to the treatment of the upper portion of the cup from the Early British burial at Welwyn, Hertfordshire (*Archæologia*, Vol. LXIII, p. 1) now preserved at the British Museum. A closer parallel in its general form, is that given by May (*Silchester*, p. 13, pl. i, fig. 9); but this is in Belgic ware and has no cordons.

17. Side fragment of cooking pot. Mica coated; coffee-brown to blackish clay on the exterior, pinkish on the interior. The decoration consists of large, low, convex bosses, formed by pressing the wall of the vessel, from the inside, against a metal ring or the like. From the late first century stratum of sand at a low level, about 25 feet west of the outer wall of the amphitheatre, under the foundations of the lodge to the Ursuline Convent, now demolished.

For vessels decorated in a similar way, cf. May (*Wilderspool, Hist. Soc. Lanc. and Cheshire*, 1899, p. 28); and Grimes (*Holt*, p. 151, No. 50).

18. Fragment of bowl, probably form 30. Diameter of rim, *c.* seven inches. Fine, smooth, chocolate-brown clay; with cream-buff slip between the lip and first cordon, and also below the second cordon; the space between the cordons with vertical bands of fine striæ, produced it may be with a metal comb of five teeth. Inside there are two, widely separated, grooves. Found in the same deposit as No. 17, together with a piece of Samian 37, showing transitional ornament and a narrow chevron wreath.

The general technique of this fragment is suggestive of late Celtic work.

19. Fragment from the lower portion of a hemispherical bowl of green-glazed ware. This exhibits part of a horizontal series of rings done in white slip under the glaze, but they are almost obscured by the thickness and opacity of the glaze. This is a Holt fabric and the glaze exactly matches that on a "saggar"¹⁷ used there in the technique of firing such wares for details of which cf. Grimes (*Holt*, p. 182).

20-23. This small group of late third-fourth century sherds was found on the floor of the arena, site 2, together with seven coins ranging from Postumus, 258-267 A.D., to Claudius Gothicus, 268-270 A.D. Parallels of these forms are commonly met with in late deposits here and elsewhere on Roman sites, but they rarely admit of close dating.

20. Mortarium. Bushe-Fox's type 206 (*Wroxeter*, 1912). Hard, creamy-buff clay; grit particles dull red.

21. Dish with outwardly sloping sides. Dark grey clay; surface with dull black polish.

22. Dish with flange. Clay and polish as in No. 21.

23. Dish with overhanging rim. Clay as in 21 and 22.

24. Dish with straight sloping sides, angular base, and heavily moulded or reeded rim. Very hard, buff-grey clay, with faint traces of burnishing on the outer surface. With late first century sherds in the natural sand below the level of the footings of the wall, site 1. There are no exact parallels for this vessel in the Holt collection at Cardiff; though it may be considered as a slight variant of the dish figured by Grimes (*Holt*, p. 160, No. 150).

25. Cooking pot. Very fine, hard, light grey clay. Rim oblique; shoulder with a girth groove, the surface above and below it tooled in zones; side, below the groove, with rouletted pattern. Found with the potter's stamp **OF VITA**, etc., at a low level under the seating bank, site 5.

This is almost certainly of Holt manufacture; but examples with rouletted technique do not appear to be represented in the collection at Cardiff.

¹⁷ Base of a hemispherical bowl, coll., R. Newstead. From the Holt kilns, ex coll. Frater, 1930.

26. Carinated bowl with reeded rim, and girth groove just below. Hard grey clay, with traces of soot under the rim. In the packing close up to the footings of the cross wall, site 2. For similar small examples of this class of vessels cf. *Liverpool Annals*, Vol. XV, pl. xiii, No. 3.

27. Carinated bowl. The flanged rim is reeded and bluntly obtuse in section. Hard grey clay. From the packing at the outer (west) face of the concentric wall, site 5; with a sherd of Samian (form 37) showing part of figure of Jupiter (see above, p. 24, No. 12). The form of the rim in this example is exceptional; but obviously it is only a slight variant of the common late first century class of bowls with reeded rims.

28. Samian Ware, form 38. Poor, orange-red glaze, and the clay relatively coarse and pale in colour. The interior of the vessel is roughened, and the glaze worn away by friction. This is an exceptionally shallow example of this class of vessels, and the walls are thick and heavy. From the surface of the floor of the arena, site 5.

29-30. Rims of two large store-jars; both in brick-red clay with a thin slip of orange-red. The rim of No. 30 has a somewhat angular ledge, possibly for holding a lid, and the vessel may therefore have been used as a honey-pot. Cf. Grimes (*Holt*, p. 152, No. 69). From a late first century deposit, site 1.

31. Fragment of bowl with reeded rim and two girth grooves. Fine hard brick-red clay, coated with orange-red slip. In the clean sand of the floor of the arena, site 5, with a fragment of form 29, etc. The technique of this piece is exceptionally good, and the strong, inward curve of the rim is characteristic of some of the Holt types of this class of vessels.

32. Dish with very slight bead, and heavy drooping rim. Clay grey, very brittle and heavily charged with fragments of shells. Interior light ferruginous; exterior darker with traces of black "varnish." In the unstratified layer over the floor of the arena, site 5.

This is a late type and seemingly belonged to the late third or fourth centuries.

33. Pot lid of fumed grey ware. Late first century. Site 1.

34. Unguent-pot. Hard, gritty, brick-red clay. This form with its tall pedestal and well formed foot-ring is unusual. Unfortunately the upper portion of the vessel is missing; and there are no examples in the Holt collection which would serve as useful parallels. In an undated deposit, site 1.

35. Store jar. This fragment belongs to a large, heavy type, in brick-red clay, and is a Holt fabric. From a low level, under the seating bank. Late first century.

36. Shallow dish. Sides incurved; rim rounded. Clay pale orange-red. Late first century; with Nos. 37—39. Low level, under the seating bank, site 5.

37, and 38. Rim fragments of two carinated bowls with reeded rims; both in brick-red clay. Same deposit as 36.

39. Shallow dish with deep groove below the rim. Fine, orange-red clay. Same deposit as 36.

MORTARIA.

The rims of seventeen examples were found; of these three only throw any light on the history of the occupation of the site. The others are from mixed deposits and may for the most part have been transported from excavations on building sites within the lines of the fortress.



Fig. 4. †

1. (Text fig. 4). Section near the spout of a very large example, having a flat-topped rim, with a shallow groove near the inner edge. Pale buff-white clay; the grit particles on the interior very scanty. This example belongs to Bushe-Fox's form 14 (*Wroxeter*, 1912) where it is recorded from first century deposits at Corbridge, Newstead, Wroxeter and elsewhere. Site 2. In the packing close up to the footings of the east face of the outer wall. The packing had been

rammed very hard, and in the process the spout had been smashed into fourteen fragments.



Fig. 5. $\frac{1}{4}$



Fig. 6. $\frac{3}{8}$

2. (Text figs. 5, 6). This example belongs to the same class as the preceding, differing only in having the surface of the rim slightly arched. Clay, creamy-white; grit extending to the rim. The stamp **VERAN** (fig. 6), has a narrow herring-bone border, above and below. It is recorded from Boulogne (*C.I.L.* XIII, 10010, 2005, f¹). Site 1. In the apparently natural sand, below the level of the footings, outside the building.

STAMPS ON AMPHORAE.



Fig. 7. $\frac{3}{8}$

1. (Text fig. 7). This stamp reads vertically downwards on the handle. It is probably a variant of **ROMANI** (*C.I.L.* XII, 5686, 750 (d)). *Vienne Mus.*



Fig. 8. $\frac{3}{8}$

2. (Text fig. 8). Retrograde and vertically downwards on the handle. In Britain, this stamp has been found on amphoræ handles at Ambleside and Papcastle; and on the Antonine wall at Balmuildy. Cf. Miller (*Balmuildy*, p. 77). Site 4. On the surface of the arena floor.

LEGIONARY STAMPS AND ANTEFIX.



Fig. 9. $\frac{1}{4}$

1. (Text fig. 9). This is part of the stamp **LEG XXV** figured by Brushfield (*Jour. Chester Arch Soc.* O.S., iii, p. 18); and recently presented to the Grosvenor Museum by the Rev. F. A. Potts. Two examples are also recorded by Grimes (*Holt*, p. 140,

No. 11) from the Legionary kilns at Holt. None of these is dated. Site 1. In a mixed deposit outside the amphitheatre.

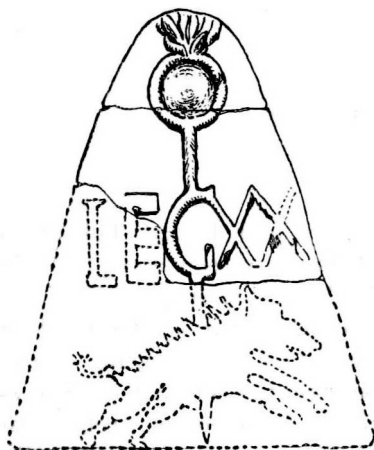


Fig. 10. $\frac{1}{4}$

2. (Text fig. 10). Upper portion of antefix. This is a Holt fabric, and belongs to No. 1 of Grimes' series (*Holt*, p. 137). It should be noted, however, that in the 13 examples preserved at Cardiff the details of the design, above the phalera, represent "what appear to be two short swords with hilts complete . . . set radially, one on either side, with their points to the centre." In our example

there seem to be a bundle of ill-defined, tongue-shaped leaves, radiating from the edge of the phalera. Site 5. From the metalling of the road, outside the amphitheatre, in association with some late first century sherds.

SMALL OBJECTS (METAL, Etc.)

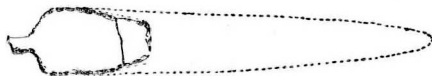


Fig. 11. $\frac{1}{4}$

Text fig. 11. The proximal portion of an iron dagger, very badly corroded. Site 2. On the surface of the floor of the arena, with late third century coins and pottery.

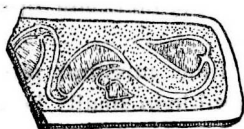
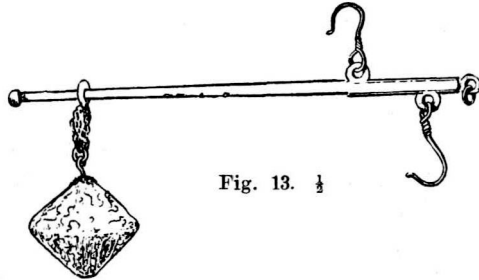


Fig. 12. $\frac{1}{3}$

Text fig. 12. Bronze enamelled terminal for a strap or girdle. The enamel of the background is dull vermilion, and in the leaves dark green. Site 5. At a low level under the seating bank. This beautifully executed relic was inadvertently destroyed by fire.

Fig. 13. $\frac{1}{2}$

Text fig. 13. Bronze steelyard or balance. This small balance is in an almost perfect state of preservation; the only missing portion being the hook for the suspension of the object to be weighed. The beam or bar is graduated on opposite sides: the longer one in six divisions, the shorter in seven; it is oval in section from the counterpoise end as far as the upper hook, the rest is flattened out, rectangular in section, and has a marginal groove on all four sides. The wire hooks for suspension are attached to the eyelet by binding the wire spirally round the stem of the hook. The sliding weight is of lead, and biconical in form. In its present condition, tests with English weights show that the longer beam could determine a maximum weight of 29 ozs.; the shorter one a maximum weight of 8 oz. Such balances as this are known from many Roman sites in Britain; and Watkin (*Roman Lancashire*, p. 156) figures a very close parallel with a sliding weight of the same form as ours. Site 2. In an unstratified deposit at a low level near the footings of the outer wall.

(Plate xi).

1. Knife handle of bone, pierced with four holes for attachment to the tang of the blade by rivets. The deep transverse grooves forming the decoration seem to have been cut with a saw. Site 2. In the packing at the north face of the footings of the cross wall. Period: late first century.

2. Bronze brooch, with the spring (now missing) protected by a semi-cylindrical cover. Chord-loop small; bow convex above, flat beneath, strongly produced over the arms

of the sheath; catch-plate solid. This rather stumpy form has a close parallel in the example, described by Bushe-Fox (*Richborough*, 1926, p. 43, No. 3); there dated 80—110 A.D. Site 5. In mixed deposit.

3. Bronze brooch with spring in semi-cylindrical cover; the chord held by a small loop in the head. Bow with a central rib for the first third of its length, the rest convex. Catch-plate with a large triangular opening. This example, though slightly smaller, is of the same type as Bushe-Fox's No. 6 (*Wroxeter*, 1914, p. 23), which was "found in a deposit dating up to the second half of the second century." Site 3. Over the floor of the arena.

Bead of blue frit of the form commonly met with here and elsewhere. Site 5. Unstratified. [Not illustrated].

4. Bell of bronze. This is an unusually small example, and obconical in form. Site 2. Mixed deposit.

5. Dress-fastener of bronze. The circular head has a central punch-mark, a large concentric ring, and the edge is unevenly notched. Site 5. In the arena-gutter, with late first century pottery.

6. Stud of bronze, somewhat hemispherical in form, with a slight flange. The interior is filled with a gypsum-like substance. Site 5. Unstratified.

7. Pin of bronze with a biconical head. Site 2. Unstratified.

8. Bead of jet. Roman objects in this material are exceedingly rare at Chester. Site 5. In the late first century deposit over the steps.

9. Counter of bone. This is a common type. Site 2. Unstratified, low level.

10. Handle of blue glass. Unstratified deposit.

COINS.

Mr. Harold Mattingly, of the British Museum, has very kindly examined all the coins found on the site of the amphitheatre, and those pieces which he determined are marked with his initials—H.M. The small group or hoard

of seven pieces (Nos. 4—10) from the floor of the arena (see p. 19) includes the rare PROVIDENTIA type of Tetricus I. These coins were the only ones found in a stratified deposit.

Roman—Imperial.

CLAUDIUS I. 41—54 A.D.

1. *Obv.* Illegible. Head bare l.
Rev. [CONST]ANTIAE [AVGVSTI]. In field, s c.
 2Æ. Cohen 14. Det., H.M.
 Site 3. In fallen masonry, face of arena-wall, eleven feet from surface.

SEVERUS ALEXANDER. 222—35 A.D.

2. *Obv.* IMP C M AVR SEV [ALEX]AND AVG. Bust laureate r.
Rev. P M [TR P VII] COS II P P. Emperor, laureate, standing l. before lighted tripod, holding patera in r. hand.
 Denarius. Cohen 357. Worn. Site 2. Mixed deposit.

SALONINA. 251—3 A.D.

3. *Obv.* S[ALO]N[IA]NA AVG.
Rev. PVDICITIA (?)
 Antoninianus. Cohen 94? Site 2. Mixed deposit.

POSTUMUS. 258—67 A.D.

4. *Obv.* IMP C POSTVMVS P F AVG. Bust radiate and draped r.
Rev. [FIDES] MILITVM. Fides standing l., holding two standards.
 3Æ. Cohen 67. Site 2. Group. Capping of arena floor.

VICTORINUS. 265—7 A.D.

5. *Obv.* [IMP] C VICTORINVS P F AVG. Radiate and draped bust, r.
Rev. [INVI]CTVS. Sol advancing l., right hand raised, whip in left.
 3Æ. Cohen 49. Site 2. Group. Capping of arena floor.

TETRICUS I. 268—73 A.D.

6. *Obv.* IMP C TETRICVS Radiate crown r.
Rev. [PROVIDENTI]A AVG.
 3Æ. Cohen 134. Overstruck. Det., H.M.
 Site 2. Group. Capping of arena floor.
7. *Obv.* Illegible. Radiate crown, r.
Rev. [HIL]AR[ITAS] AVGG
 3Æ. Cohen 54. Det., H.M.
 Site 2. Group. Capping of arena floor.

TETRICUS II. 268—73 A.D.

8. *Obv.* CAES. Radiate crown, r.
Rev. [SPES] [PV]BLICA.
 3Æ. Cohen 75?.
 Site 2. Group. Capping of arena floor.
9. *Obv.* Legend gone. Radiate crown r.
Rev. [PIETAS AVGV]STO. Priestly emblems.
 Minim (3Æ, Q.). Det., H.M.
 Site 2. Group. Capping of arena floor.

CLAUDIUS II GOTHICUS. 268—70 A.D.

10. *Obv.* Illegible. Radiate crown, r.
Rev. CONS[ECRATIO]. Flaming altar.
 3Æ. Cf. Cohen, 50.
 Site 2. Group. Capping of arena floor.

Post-Roman.

EDWARD III.

- Obv.* EDWA[RD. D. G. RE]X. ANGL. Z. FRAN[C].
Rev. POSVI DEVM[ADIVTOREM. MEVM]
 CIVITAS LONDON.

Half Groat, issued between July, 1351 and May, 1353.

Det., H.M.

Reckoning Counters or Jettons.

One English. About the end of Edward I (1307 A.D.)
 Det., H.M.

One German, with symbol of St. Mark. Fifteenth or early
 sixteenth century. Det., H.M.

For pottery found in association with the coin and
 counters, see pl. xv.

MEDIAEVAL PERIOD.

(Plate xv).

During the course of our excavations a good deal of early English earthenware was discovered, always unfortunately in a fragmentary condition, and generally in mixed deposits. But on reaching the lower levels, among the fallen Roman masonry, one class of English pottery was often found, notably, however, on site 2, just behind the arena wall; and also in a deep cut a few paces away in a north-easterly direction. With these groups there were also a few datable objects such as portions of fourteenth to fifteenth century pavement tiles, a groat of Edward III, and a Nuremberg counter bearing the emblem of St. Mark. This evidence of date, though not altogether satisfactory, fixes the period from the fourteenth to fifteenth centuries, and the material may belong to any date between these chronological limits.

1. A large, broad-bladed knife of iron, with the tang for attachment to the handle centrally placed. The blade is eleven inches long, its greatest width 2.5 inches, and its thickness at the back scarcely 0.2 inches; but it is rather badly corroded and may have been much thinner originally. Site 5.

This is an exceptionally interesting find, and although it was found in association with mediæval pottery it may belong to an earlier period. It certainly bears some resemblance to an Anglo-Saxon scramasax, but is relatively shorter than the blades of these weapons now preserved in the Colchester Museum.

2—4. Glazed pavement tiles, ornamented with impressed designs. The surface of the first is much worn, that of the others not so. Tiles of this class are often met with in Chester and elsewhere; and generally attributed to the fourteenth and fifteenth centuries. In his account of *The Grey Friars of Chester*, Bennett (*Jour. Chester Arch. Soc.*, Vol. XXIV, pp. 1-80) gives illustrations of a long series of pavement tiles from the Friary of which his No. 13 is a parallel to No. 2, above.

5. Spout of a pipkin or cooking vessel, in very coarse, unglazed, brick-red clay. Both spout and body-wall are discoloured by the action of fire, and still retain traces of soot. Site 2.

6, 7. Handles with crooked ends; belonging, apparently to vessels of a similar class to No. 5. Both examples in pale brick-red clay and partly coated with yellowish glaze. Site 2.

8. Rim or large jar or pot, giving a diameter of $7\frac{3}{4}$ inches. Pale brick-red clay, sparsely coated with greenish-yellow glaze. Two examples. In the absence of glaze, these might easily pass as of Roman origin. Sites 2 and 5.

9. Jug or pitcher of very hard, overbaked, purplish-brown clay. Several fragments of this vessel were found, but none, unfortunately, registers with the piece selected for illustration, and its general form cannot be determined. Site 2, west of the arena wall, with a coin of Edward III.

10. Rim of large jar or pot, with a comparatively high shoulder. Clay fine, buff-red. No glaze. This seemingly belongs to the same class as No. 8. Site 2.

11. Jug or pitcher of coarse buff-red clay, very thinly coated with yellowish glaze. The body is finely and regularly tooled in horizontal lines; the handle long and strongly keeled dorsally. Site 2, partly buried in a great mass of charcoal, with fragments of other mediæval pottery.

12,13. Rims of large jars or pots, of coarse brick-red clay. No. 12 has a trace of glaze on the upper surface of its rim, and measures 10 inches in diameter. The other has two widely separated blotches of glaze and in the centre of each of these is a well-marked puncture. Six rims of this type of vessels are represented—three with and three without traces of glaze. All of these are characterised by a groove in the centre of the upper edge of the rim, and a deep and broad concavity on the interior below it. Sites 2, 5.

14. Rim of pot or jar of unglazed, dull buff clay. Although the rim of this example is decidedly angular in section, the vessel to which it belonged seems to be but a slight variant of Nos. 12 and 13. Site 2.

15. Rim of pot or jar of coarse brick-red clay, with one patch of yellow glaze. This example has a very high shoulder which is strongly grooved. Site 2.

16. Large dish with outwardly sloping sides, and inwardly projecting rim. Brick-red clay with grey core. The interior splashed with yellowish glaze. Site 2.

17. Unglazed dish of similar type to the preceding; but the clay is darker, and the exterior of the vessel burnt and smoked by the action of fire, subsequent to baking in the kiln. Whether or not these vessels were provided with handles is not clear. Site 2.

18. Fragment of vessel, belonging apparently to the same class of vessels as Nos. 5-7, in unglazed brick-red clay. Site 5.

NOT ILLUSTRATED.

Fragments of many vessels, chiefly large pitchers, coated with yellow, greenish, or pale brown glaze were also found. The handles of these were of two kinds: keeled as in No. 11, or two-ribbed. The latter were sometimes decorated with incisions or punctures, without any attempt at formal design. Fragments from the sides of large pitchers exhibited six kinds of decoration: wavy lines (four); girth grooves, either single or arranged in widely separated pairs (3); lattice pattern (2); a combination of large punctures, and X's within a circle (one); narrow strips of applied clay notched with a wheel (2); and broad strips of applied clay with finger-tip impressions (2).

