

EXCAVATION OF THE ROMAN FORTRESS AT CARPOW,¹ PERTSHIRE, 1961-2²

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Several distinguished scholars gave their advice freely and in particular I must thank Dr K. A. Steer and Dr F. Walker. Professor Birley was a constant source of encouragement and advice and with Mr A. R. Birley and Mr Wilfred Dodds contributed appendices to this paper. The photographs are the work of Mr J. Walker. Finally I must thank my wife for drawing the plans for publication and for putting up with my absence from home for long periods.

INTRODUCTION

Although mention is to be found of Carpow in the earliest of Scottish written records, little is known of its history until the eighteenth century. 'CEIRFUILL'⁴ and 'KERPUL'⁵ are spellings of the modern Carpow attested in fifth and twelfth century records, but there was never any suggestion of Roman occupation of the site. Alexander Gordon, who visited Abernethy before 1726, makes no mention of Carpow, whilst a visit from the Young Pretender in 1745 only resulted in the forfeiture of the estate in 1746.

By 1783, however, important discoveries had been made. In Gough's *Camden* of 1806⁶ there is a letter from Mr James Wedderburne of Inveresk which deals primarily with the Roman bath-house at Inveresk but also includes the following:

At the confluence of the river Earn and Tay, on a noble and beautiful situation, are very considerable remains of the same kind, pavements etc., ignorantly mistaken for the ruins of a palace of the earls of Strathearn. They are on the estate of Carpon [*sic*].

These remains had probably come to light shortly before 1783, and it seems as

¹ In September 1961 the Carpow mansion was burned down after being struck by lightning and subsequently demolished. A new bungalow has been built a few feet to the S. of the site. Some reports of Carpow refer to the 'old mansion house'; this is the overgrown ruin amongst the trees to the N. of the walled garden, some 150 yds. from the later houses.

² Excavation continues (1964) under the direction of Dr John Wilkes of Birmingham University.

³ Mrs Joyce Pirie, Mrs Hay-Neave, Mrs Suttie, C. M. H. Millar, C. E. Stevens, Mrs Sedgewick, Ilay M. Campbell, Col. Sir James Horlick and Messrs Wedgewood and Jenkins.

⁴ Chadwick, H. M., *Early Scotland* (1949), 9.

⁵ Laing, A., *Lindores Abbey and its burgh of Newburgh*, 96 (note), 463.

⁶ *Camden's Britannia*, ed. Gough (1806), iv, 47-49: letter dated 2nd April 1783.

though they were discovered during extensive land clearance. One of the most puzzling features of the site is the lack of positive surface features, and it may be that Carpow's owner¹ had been in a position to clear and level a valuable part of his land. It looks as though he did not welcome visitors, for the Rev. Dr Small, the local antiquarian, writing in 1823² had to accept his facts from a second party, and the Perthshire Literary and Naturalist Society, founded in 1785, appears to have no record of the excavations.

Small's account is the first of a crop of references to the site which appeared in the early years of the nineteenth century.

A few years ago (he writes) the present proprietor of Carpow found, on an eminence a little behind the present new house, a Roman bath, with a sudatory or sweating room, and other subterranean apartments, with a wall that ran a considerable way below ground; this he attempted to take down (significant phrase) but fortunately for the antiquary, its firm and compact nature resisted all his efforts, so that he was obliged to desist, and build up the entry again. The bath was quite entire, and was made so as to allow the person to lie and stretch himself at full length, with a pavement which, as far as I could understand by the description given, was a tessellated [*sic*] one. There were some beautiful urns with handles found, which contained burnt bones, but, unfortunately, when exposed to the atmospheric air, they crumbled down. There were also two Roman coins found when scouring a ditch, one of them a beautiful coin of the Empress Faustina.³

This is clearly another reference to the buildings discovered before 1783, and the main interest of the passage lies in its references to Carpow's owner.

Soon, however, the situation at Carpow mansion changed, for both the *New Statistical Account*⁴ and Stuart's *Caledonia Romana* (1845)⁵ print what is substantially the same version of the new discoveries, and their information is derived from someone with accurate knowledge. They talk of the attention drawn to the foundations of old buildings by the extreme drought of 1826, and they continue

a recent excavation in these grounds brings to light foundations of many old walls. They are rudely constructed of stones and pieces of brick, with what would now be considered a very superfluous expenditure of lime and cement. One apartment, pretty entire, of which the walls were standing to a height of twenty inches, measures ten feet by eighteen feet, and seems to have been neatly floored with tiles. Another appears to have been fitted as a bath. It is seven feet by ten feet, and the floors and sides are carefully plastered over with a hard compact cement, apparently composed of lime and brick-dust.

The last of the early accounts is from a little-known second publication of the Rev. Dr Small.⁶

In the year 1826, the site of more than 40 of these [houses] appeared, and also in this present year [1843], by the moisture being absorbed from the foundation walls by the long continued

¹ A Patterson who had made a fortune in the W. Indies (*Perth and Dundee Steam-boat Companion*, 1838).

² Small, Rev. A., *Roman Antiquities of Fife* (1823), 176.

³ Small, op. cit. See Butler, Rev. D., *History of Abernethy* (1897), 26 for description of the find-spot, $\frac{1}{2}$ mile from the 'baths'. Sir G. Macdonald records the discovery of a third coin nearby, at the House of Cary on the Earn, *P.S.A.S.*, LII (1917-18), 246; it was a denarius of Titus-Coh. 1, 453, No. 292. In *P.S.A.S.*, LXXXIV (1949-50), 140-1, Miss Anne Robertson attributes the Faustina coin to Faustina the Elder.

⁴ *New Statistical Account* (1845), 851.

⁵ Stuart, R., *Caledonia Romana* (1852).

⁶ Small, Rev. A., *True Millenium and Cure for the Night Mare* etc. (1843).

droughts; and in searching for the Roman bath adverted to in pp. 175 and 176 of my work [*Discoveries in Fife*], that was filled up sixty years ago, the present proprietor, Captain Paterson, came upon three small rooms connected with, or as appendages of it, one of these about ten feet square, three feet deep, and its floor laid with the same cement, nigh as firm and compact as any pavement. A beautiful silver ornament resembling a shell, two inches square, was found among the rubbish, with Diana the huntress and her bow and arrows, attended by her two faithful dogs, sitting under the Roman spread eagle, beautifully raised on the convex side of it. There is also a small square camp¹, seemingly divided into two, that would contain about four thousand or six thousand troops – a whole legion betwixt them; but the eastern rampart has been lately demolished. There was also found amongst the rubbish, a corner broken off the tessolated [*sic*] pavement, with the three letters VIC upon it, showing that either the sixth legion, called victrix, or the twentieth, called valens victrix, had lain there, or helped to build the town. . . .

The letters VIC were obviously part of a tile stamp, for Small's 'tessolated' pavements were the cemented down tile floors. It is difficult to identify the rooms uncovered in this investigation, but the account prepared the excavators for disturbance of the remains and some stone-robbing. Fortunately the size of the building and the durable nature of the architecture saved the greater part of the structure.

So much for the early accounts. There is no record of subsequent excavation until the present excavation began (although pottery is said to have been discovered on two occasions since the last war) and scholars' speculation was confined to the comfort of their studies. Dr W. F. Skene in 1886² discussed Ptolemy's *Geography* and suggested that ORREA must have been near the junction of Earn and Tay, perhaps at Abernethy (Carpow?). The Rev. D. Butler in 1897³ quoted Skene's suggestion about ORREA and went on to propose that 'the beautiful villa and bath' might be the residence of 'some Roman General. The square bath of the villa is still to be seen', he adds, 'and is made of the same kind of red tile as is found in the Roman works at York.' Sir George Macdonald in 1918⁴ quotes Small's record of the coins, and refers to Small's gift to the museum of a piece of cement from Carpow.⁵ Professor Richmond's survey of the literary evidence of Ptolemy and the Ravenna Cosmography followed in 1922⁶ enlarging on Skene's suggestion, in 1956 the O.S. Map of Roman Britain marked Carpow as the possible site of HORREA CLASSIS⁷ and in 1958 Professor Piggott⁸ pointed out that Carpow was a suitable place for a sea base in support of Agricola's northern campaigns; at the same time Mr Gillam suggested⁹ that the known Antonine forts in the neighbourhood (Ardoch, Dealginross, Strageath and Bertha) seem to be protecting the peoples of the southern part of Strathmore and Fife against their more warlike neighbours, and Carpow ought to play a part in such a scheme.

In the meantime O. G. S. Crawford had had this to report (1949)¹⁰:

Carpow can be quickly disposed of. It stands on a bluff one and a half miles north-east of Abernethy, overlooking the estuary of the Tay near the mouth of the Earn, and it is certainly the

¹ The 'small, square camp' to those familiar with Small could mean anything, but mention of rampart destruction is revealing.

² Skene, Dr W. F., *Celtic Scotland*, 2nd ed. (1886), I, 74.

³ Butler, op. cit.

⁴ *P.S.A.S.*, LII (1917-18), 232-3.

⁵ *Arch. Scot.*, v, 24, 28, etc.

⁶ *P.S.A.S.*, LVI (1921-2), 289, 294, etc.

⁷ O.S. *Map of Roman Britain* (1956).

⁸ *Roman and Native in N. Britain*, ed. I. A. Richmond (1958), 24.

⁹ *ibid.*, 73.

¹⁰ Crawford, O. G. S., *Topography of Roman Scotland* (1949), 59.

site of a coastal fort, but when I wrote the first draft of this book only the baths had been found and no traces of the fort itself had come to light. Since then Dr St Joseph, flying over the site in Sept. 1943, has seen remains of the ramparts and subsequently identified them on the ground. Most of the outline of the fort is visible as a crop mark, with two ditches round the south and east sides.

He went on to quote a letter from Dr St Joseph which added that the area within the rampart centre worked out at about 12½ acres, though it was suspected that this might include an annexe. Research from the air continued¹; the eastern rampart showed up clearly, there were traces of the southern rampart and ditches and a crop mark was recorded running in a line towards the 'baths' which was interpreted as indicating an aqueduct channel bringing the required water from a near-by stream.²

There the matter stood when excavation began at the end of September 1961 – ruins of a Roman building, thought to be a military bath-house, were known to exist; there was aerial evidence of the E. and S. ramparts; it was believed that Agricola's *Horrea Classis* probably occupied the site in the late first century, with the possibility of subsequent Antonine reoccupation.

THE EXCAVATIONS

Site 1 – The Headquarters Building

Mr John Smith was particularly anxious for an examination to be made of an area 60 yds. N. of the 'bath' ruins – and therefore supposedly outside the fort itself – where he had noticed parched marks on the turf earlier in the summer of 1961. These marks proved to belong to a headquarters building of orthodox plan but unusual size, and its position immediately altered previous conceptions of Carpow, extending the area of the site, as will be seen later, to approximately 30 acres, and bringing the supposed 'bath-house' within the fortress, fronting on its *Via Principalis*.

The outline of the building can be seen on the plan (fig. 2). It was not possible to excavate its front due to the presence of crops, but its position could be calculated in relation to the *Via Principalis*. The external measurements would thus be about 155 ft. broad (N. to S.) and c. 130 ft. long, excluding the 4 ft. projection of the *sacellum*.¹ Trenching revealed two long narrow rooms at the sides of the forecourt, to be identified as *armamentaria*. They were floored with a thick layer of river cobbles and clay, and there were indications that the inside wall in the forecourt was of wood upon a cobble foundation. A few scraps of iron and the first three roofing tiles were found in the southern room. The forecourt was divided from the cross-hall by a 3 ft. wall, pierced by three 10 ft. doorways. There was no suggestion of a gate on any of these doors. At the northern end of the cross-hall, which was floored with clay and small rubble, lay a combined tribunal and strong-room, the latter being entered by a step down on the eastern wall. The internal measurements of the room were 15 by 10 ft., and 2 ft. square masonry pillars had supported a heavy flat stone roof. A number of these slabs, 3 in. thick, lay within the strong-room, and others were heaped against the outside walls. Three fragments of coarse pottery were found within the room. There was no sign of a stone staircase leading

¹ *J.R.S.*, xli (1951), 63 and xlvi (1958), 91.

² *ibid.*, xlvi (1958), 91.

to the tribunal platform, and this must have been reached either by a wooden ladder or from within Room IX of the office range.

The range of rooms against the western wall were not fully excavated. A trench uncovered the western wall and 3 ft. of the interior of all the rooms with the exception of No. V, the *sacellum*, and No. IX, which were fully investigated. Room I, 15 ft.

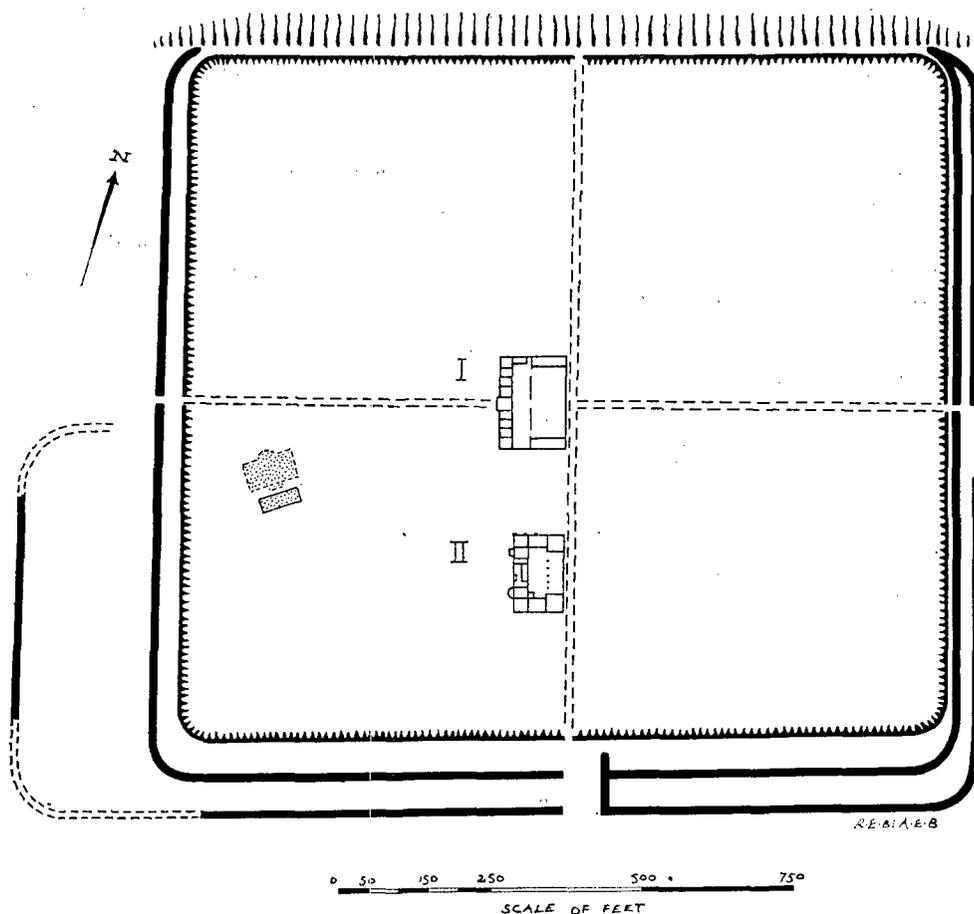


FIG. 1. Plan of fortress

6 in. by 15 ft. 6 in., had a 3 ft. pit sunk in the south-western corner, filled with wattle daub from the walls, some of it burnt, and fragments of amphora. Its purpose was not apparent. Room II contained a hypocaust and was floored with concrete, made up of lime mixed with fragments of tile. Two hypocaust wall flues were found in the western wall. The floor was not disturbed by the excavators, but to judge from other examples it was probably supported by dwarf walls. There was no indication of the source of heat. Room II measured 15 ft. 6 in. by 10 ft. 6 in.; Room III, 15 ft. 6 in. by 16 ft. 3 in.; Room IV, 15 ft. 6 in. square; Room VI, 15 ft.

6 in. by 15 ft. 10 in.; Room VII, 15 ft. 6 in. by 16 ft.; and Room VIII, 15 ft. 6 in. by 10 ft. 6 in. All had floors of beaten earth and rubble, unless a wooden floor had been used and later removed. Room V, the *sacellum*, had a 4 ft. 6 in. offset on the western wall, and measured 20 ft. by 18 ft. 6 in. The floor was made of 2 in. thick concrete above a heavy river cobble foundation. Within, in the centre of the room, lay an altar base cemented to the floor and broken a few inches above the floor. This was removed, and it was found to have been resting upon a heavy roughly faced slab beneath the floor (see Pl. XVIII, 2). These indications suggested that the altar must have been unusually tall, since the floor was strongly constructed and would have borne the weight of a normal stone. Some fifteen scraps of coarse pottery, fragments of bone and antler, a mass of badly broken tiles, including over fifty with part of a stamp, five nails and assorted pieces of iron, together with a mass of plaster from the walls were found within the room. The eastern wall had been badly destroyed, and amongst the debris there were seven small fragments from the border of some kind of frieze. Finally, Room IX, the only other room to be fully investigated, measured 15 ft. 6 in. by 14 ft. 6 in., and its floor was similar to those of Rooms I, II, IV, VI, VII and VIII. A 4 ft. 6 in. door gave access to Room VIII (which in turn had a 4 ft. 3 in. door leading into the cross-hall). There was no exit direct to the cross-hall from Room IX, but there may have been an entrance higher up to the tribunal.

The outside walls of the headquarters building measured between 3 ft. and 3 ft. 3 in. (if one includes the 3 in. offset at ground-level), and they were strongly constructed of red sandstone blocks, roughly faced, and bonded with cement. The core of the walls was rubble and cement. The inner face had been plastered. The walls were of almost uniform height, and bearing in mind a mass of wattled daub found around them, the building must have been half-timbered, roofed with the normal tile *imbrices* and *tegulae*. There were also suggestions of deliberate dismantling. The absence of a large number of nails – and those few found were all bent – and the presence of only a thin $\frac{1}{4}$ in. layer of burned matter, together with the heavily broken tile, all indicated an orderly withdrawal, with main beams and other articles of value carefully removed. There was a narrow 10 ft. cobbled road running alongside the southern wall of the building.

Site II – The Legate's Residence

150 ft. S. of the headquarters building a low mound and fragments of walling revealed the site of the earlier excavations. That early work had done much to obscure the true nature of Carpow, for the identification of fort baths in this area – *a priori* outside the fort itself – led later investigators to assume that the break in the S. rampart near those 'baths' signified a turn to the N., whereas the real purpose of the break was to allow a gateway.

The building measured 132 ft. by 82 ft. 6 in., and was a very impressive structure. In spite of the attentions of a variety of indiscriminate searchers into a building that had been methodically dismantled by Roman hands, the huge foundations remained almost entire. The walls, both external and internal, measured at least 3 ft. broad

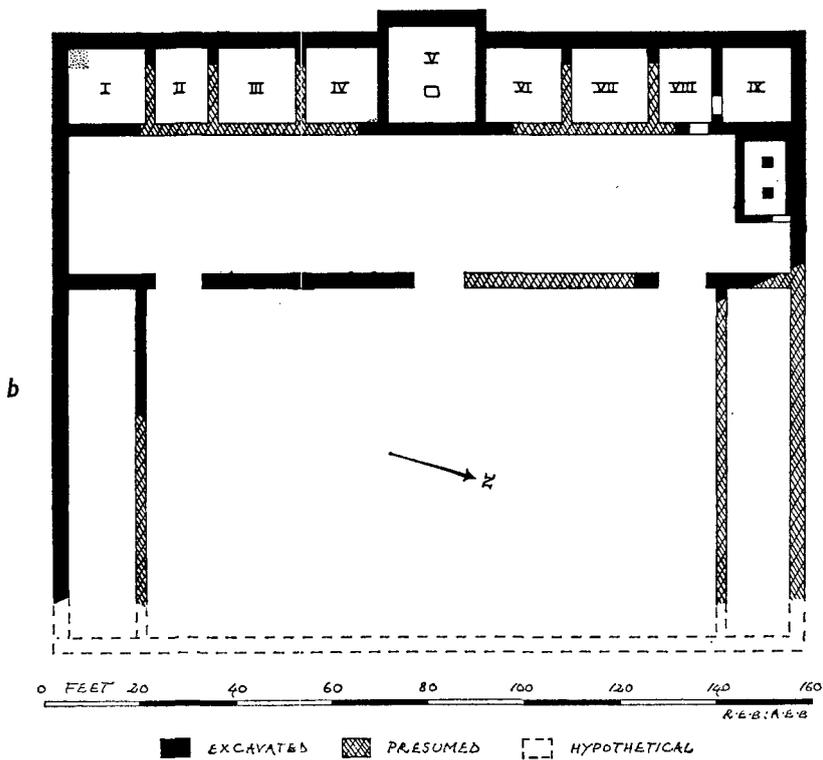
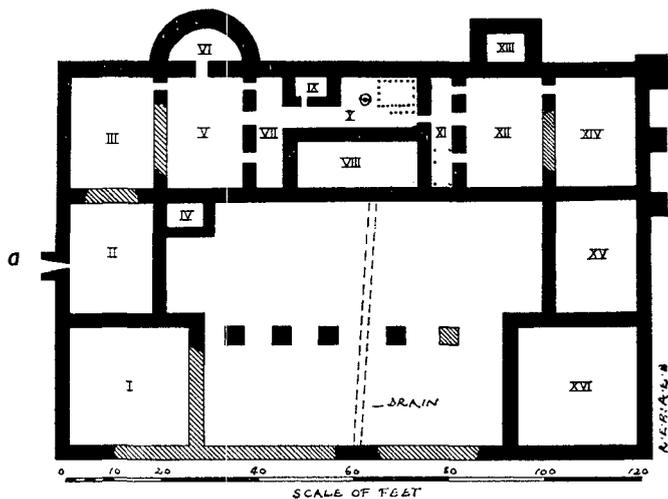


FIG. 2. (a) Plan of legate's residence, (b) Plan of headquarters building

■ EXCAVATED ▨ PRESUMED □ HYPOTHETICAL

– in one room they were 3 ft. 6 in. (Room XIII) – and they were constructed on the same principle as those in the headquarters building. The plan (fig. 3) is difficult to interpret. There was probably an upper storey over most of the building, and the courtyards appear to have been roofed. The drainage system and other remains rule out the possibility of the building being nothing but a bath-house, and the presence of such a substantial structure in the central building block off the *Via Principalis* ought to indicate the legate's residence. If that is so, his accommodation seems to have been limited unless there was a great deal above ground-floor level; nevertheless it seems best to speak of the building as the legate's residence, that being the most likely explanation in the present state of our knowledge.

The Courtyard. The eastern quarter of the building had been heavily robbed and it is doubtful whether any trace of the main door would have been found, had it been possible to examine the area beneath a large tree. But the courtyard was trenched and five stone-built column bases were revealed, each 4 ft. square, dividing the courtyard into two unequal portions. The floor was made up of a thick layer – varying between 2 ft. and 18 in. – of rubble and pebbles, above which portions of flagging remained (especially in the south-western corner). There was no trace of any guttering, which seemed to indicate that the courtyard had been roofed. At the north-western end of the inner courtyard a mass of concrete and plaster perhaps represented the remains of some form of staircase to an upper storey – and upon this debris a coin of Plautilla was found, in mint condition.

Room I. One of a pair of large rooms flanking the entrance, 27 by 25 ft. and badly robbed. A thin $\frac{1}{2}$ -in. cement floor was laid upon packed soil, and there was no provision for hypocaust heating.

Room II. Chiefly notable for the furnace which was stoked outside the building. The mouth of the furnace contained a 6-in. layer of fine grey wood ash, which had spread, though thinly, over the room inside. Fragments of light green plate glass lay outside this room, but within, little was found except for the broken tiles of the raised floor.

Room III. Had a raised concrete floor above the hypocaust system, but it was not examined.

Room IV. This 'room' was probably a water-tank (see Pl. XX, 2). The method of construction is of some interest. Box-tile flues had been filled with cement and placed end to end to form the two walls giving access to the courtyard, while the steps on each side of the wall gave easy access to the tank, which was floored with a hard orange cement. A grooved channel in the southern wall probably housed a lead pipe, bringing, one presumes, cold water to the tank. Whether the water was allowed to flow out through the gap in the tank at the north-eastern corner, or whether its use was merely for occasional draining for cleaning purposes could not be established. The tank measured 7 ft. 9 in. by 5 ft. 6 in.

Rooms V and VI. Both with provision for hypocausts, the former containing pillars supporting an immense 8-in. concrete floor (which had been methodically smashed to pieces), the latter containing dwarf walls and a floor of tiles and plaster, again effectively demolished.

Room VII. Partially destroyed by modern investigations, but containing well-preserved dwarf walls, 2 ft. 9 in. high, and fragments of the tile and plaster flooring in position at the western end of the room. The lower portions of these dwarf walls were badly scorched by heat, and a layer of ash and soot 1 in. thick covered the floor.

Room VIII. Almost certainly a bath of some sort. It measured 25 ft. 6 in. by 9 ft. 6 in., and a large drain carried the water out of the building and into the main drain on the *Via Principalis*. Heavy downpours during excavation showed that the drain was almost flat, and a good deal of effort would have been necessary to drain the room completely. There was no indication of the method of introducing water into the room, or of any entrance to it. Fragments of wall plaster, some decorated with plain red lines and others entirely red or blue, were found near the mouth of the drain, but this room had been excavated before – probably in the late eighteenth century – and had subsequently lain open for a long time. The floor was concrete – badly pitted due to long exposure, but still very firm. No attempt was made to cut through it and determine whether hypocausts lay below. At the time of writing, it is impossible to say whether the bath was hot or cold, and whether or not other rooms were devoted to the same purpose. But an extensive examination revealed no more drains, nor did this drain have any branches leading off it.

Room IX. A peculiar structure, damaged in earlier excavations. Measuring 5 by 6 ft., it has been variously interpreted as a furnace and an oven. Since Room X bore signs of cooking, perhaps the latter explanation is the more likely.

Room X. The most interesting and puzzling of all the rooms. There had been interference in this room since the Roman occupation, some of it probably dating to the earlier excavations, but a part, at any rate, to some earlier period. Here there lay a greater depth of soil above natural than in any other room, much of it excavators' tip from Rooms VII, VIII and IX, and nearly 70% of all the pottery and small finds found during the excavation came from this room – mainly, unfortunately, unstratified. The only certain thing one can say is that the hypocaust flue leading to Room XI had been blocked by the Romans and the floor had been of wood, raised above the soil by a series of posts. A large circular hole in the subsoil had been the scene of a severe and prolonged burning, whilst a thick layer of burned matter, including fragments of tile, pottery and amphora, lay all over the room. Above this deposit lay a quantity of antler, some of it carefully cut, together with building debris. Above all this lay the subsequent deposits from the other rooms. Amongst the pottery from the secondary layer there were found two mortarium rims of early fourth century type, alongside other rubbish contemporary with the fortress. The blocking of the hypocaust, the wooden floor and the proximity to a structure that could be interpreted as an oven suggest that the room may have been a kitchen. In the dismantling of the building, the room seems to have become a dump for rubbish. Then at some later date, someone, Roman or native, had come upon the scene, perhaps camping on the site during a hunting expedition. This seems to be the logical explanation of the antler and fourth century pottery types in the secondary deposit, but the true story may well have been different.

Room XI. Here again the floor had been of wood set upon wooden posts, with the three hypocaust ducts leading to Room XII firmly blocked. Intensive burning at floor level was probably caused by the deliberate firing of rubbish collected in the dismantling, and amongst the debris were found over a hundred fragments of a large mortarium, smashed ruthlessly by a heavy object. Many of the fragments were badly scorched, but several had escaped the flames altogether.

Rooms XII, XIV, XV were not fully investigated, but it was determined that although included in the original hypocaust scheme, alterations, such as those found in Rooms X and XI, had cut them off from the source of heat, and the floors must have been wooden.

Room XIII. Approximately 6 by 8 ft., seems to have been another addition to the original plan, for its walls were not bonded in with that of Room XII, and they were also thicker – 3 ft. 6 in. It may have been the base of a tower – 3 ft. 6 in. walls and deep foundations would support a sizeable structure. The view from such a tower, if that is what it was, would have included the Tay estuary, the hills N. of Perth and a long stretch of the Earn valley.

Room XVI was identical in every respect to Room I.

The 'buttresses'. Built on to the northern wall of the building at its western end were three 'buttresses', the corner one being 5 by 7 ft., and the other two 5 by 4 ft. There seemed to be no need for buttresses at this point, and the two most likely explanations are that they were either the supports of a balcony, or that they were statue bases – perhaps of Severus, Caracalla and Geta. Whatever they were, they represent a unique feature.

The area by the 'buttresses' had been made up of packed rubble, and embedded in this were coins of Hadrian and Caracalla. The area between the apse and the tower was packed with roofing tiles of both varieties, and from the manner in which they lay it appears that they had been tipped off the roof by the demolition gang bent upon recovering the main timbers. Subsequently the minor timbers and other inflammable material had been burned on the spot. In this deposit will be found an inexhaustible store of the stamps of the Sixth Legion – after recovering over 100 stamped tile fragments, including two complete examples, the excavators abandoned the remainder to future investigators. An interesting statistical feature of the hoard was that, on average, one stamped tile fragment was found in this deposit to every thirty unstamped pieces. There was no such deposit outside the remainder of the building, which may be an indication of the roof's construction.

Other Sites near the Legate's Residence

A. *The 'Via Principalis' Drain.* Running parallel with the eastern wall of the legate's residence, and 25 ft. 6 in. from it, lay an open drain, 2 ft. wide and 3 ft. deep. There was no trace of road metalling between the drain and the residence, nor in the 10 ft. of the trench beyond the drain.

B. *Wooden buildings.* 11 ft. 6 in. from the north-eastern corner of the residence a timber foundation trench ran parallel to the northern wall. A further 17 ft. N. of this a 3 ft. band of post-holes were found, some of them torn at the edges, suggest-

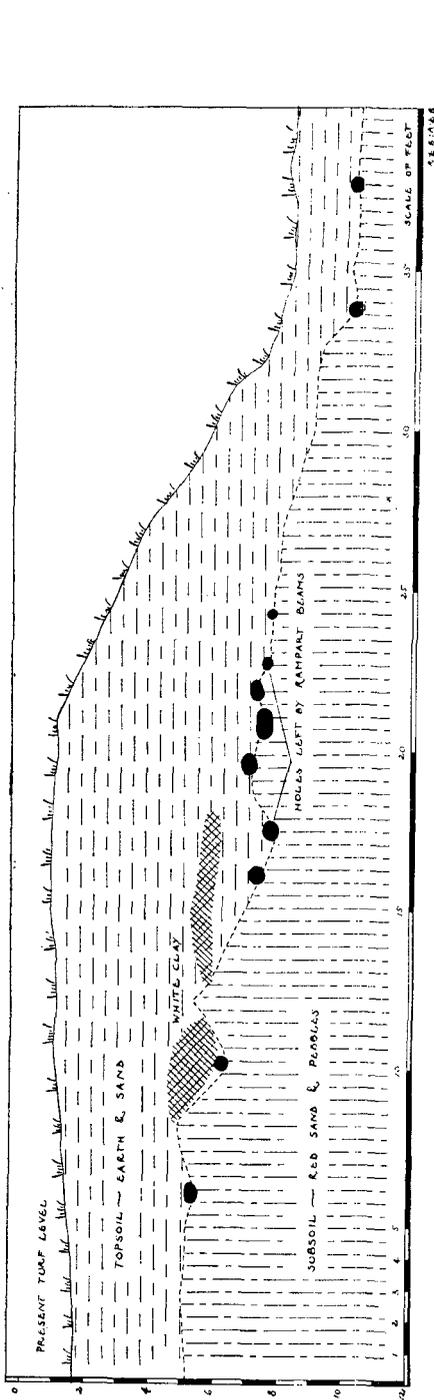


Fig. 3. Section through N. rampart

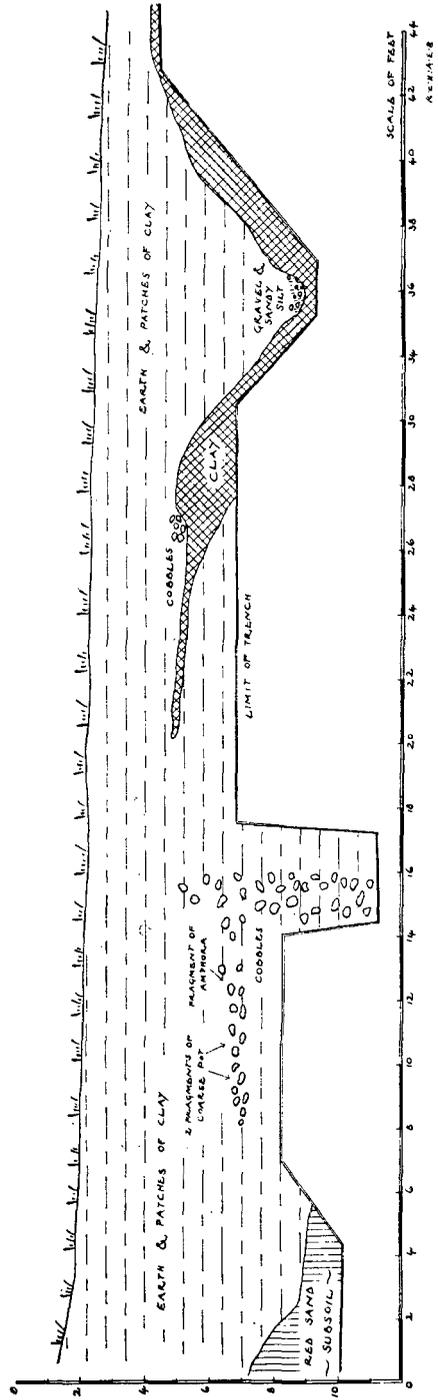


Fig. 4. Section through inner W. ditch and rampart facing

ing that the posts had been removed. There was no trace of any occupation material in this trench.

C. Beyond the packed surface near the 'buttresses', 13 ft. from the residence, a patch of worked clay and two irregular concrete lumps indicated the presence of another building, but no occupation material was found beyond some small tile fragments.

The N. Rampart

The natural escarpment at the northern end of the plateau, overlooking the Tay, was the obvious place to find the N. rampart. Earlier observers had been misled here, as on the S. rampart, by the identification of the legate's residence as fort baths, for the pronounced ridge at the head of the escarpment, though broken by a modern path, runs from the north-eastern corner of the fortress, identified by aerial photography, for over 400 yds. before the escarpment peters out. There is no trace on the ground of the NW. corner and trees obscure the aerial view, but its position can be calculated from the known position of the W. rampart. On the northern slope of the escarpment, some 9 ft. below the top, runs what at first sight looks like the remains of a ditch, but is in fact an ornamental pathway – called, locally, the 'Roman way'.

One section was cut through the rampart – enough to give a general indication of its construction, but not sufficient for a full examination. It was built of sand and gravel heaped above a framework of heavy timbers, laid E.-W., above which there were traces of bands of clay. The trace of the timbers appears today as a series of parallel holes some 6 ft. below the modern surface, and they extend some 30 ft. wide, though the greatest concentration was within 10 ft. of the centre. They had been large timbers – some of the holes had a diameter of a foot or more – but the shifting nature of the subsoil demanded a firm base for any form of rampart, and the absence of good stone in the neighbourhood, together with the labour required to bring it to the site, probably forced the builders to use local wood. There was no ditch, as far as could be ascertained, but on the escarpment such a feature would have been unnecessary.

The Western Defences

On the map of the fortress a small annexe has been provisionally marked on the south-western side. Aerial photography suggested an outer ditch on this side, but since there was only time to cut one section through this area, insufficient information was gained to allow a positive statement to be made. But the two ditches at this point were clear enough. An outer W. ditch was cut in natural grey clay, with the bottom 7 ft. 7 in. below the present ground level and 5 ft. 9 in. below the top of the upcast. The width of the ditch was 18 ft. 233 ft. to the E. of the inner lip of this ditch lay the outer lip of the second ditch. Cut in sand and gravel and lined with clay, the bottom was 6 ft. 7 in. below the present ground level and 4 ft. below the level of the berm. The ditch was only 9 ft. 7 in. wide. There was no mistaking the ditches when they were discovered, but there was no trace of any normal ditch

filling, and it seemed as though they had been filled in not very long after their construction. The only logical explanation is that the ditches never carried water – on such a well drained plateau this is possible – and that they were filled in on the departure of the troops to ensure that the locals could make no use of them. This is a problem that only further sections can solve.

On the inner side of the second ditch there was a 12 ft. 7 in. berm of clay, followed by the rampart. Only the outer part of the rampart could be investigated, but there

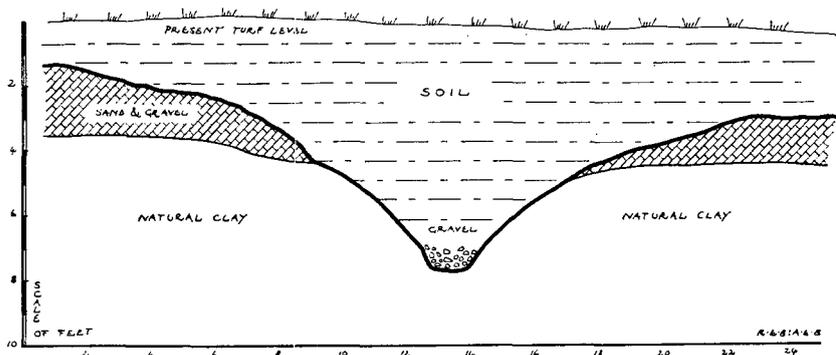


Fig. 5. Section through outer W. ditch

were clear traces that a straight-sided trench had been dug to take a cobble foundation, to a depth of 8 ft. 6 in. below the present ground-level. The rampart itself was composed of sand and earth. One fragment of amphora and two fragments of coarse pottery were recovered from amongst the cobble foundation.

'Aqueduct Channel'

A section across the 'aqueduct channel' to the S. of the fortress, first recognised by Dr St Joseph, as noted above, revealed a ditch 8 ft. 6 in. wide and 2 ft. deep in the centre, sunk into the sand and gravel subsoil. There was no trace of any clay or wooden bottoming. The crop mark showed up particularly well along the line of this ditch as it crossed a field of wheat. Perhaps wooden guttering had been removed from the ditch, which must have brought water into the fortress.

Area of the Site

Insufficient sections were cut to determine the area of the fortress accurately, but both N. and W. ramparts were located by excavation and their line determined, whilst the S. and E. ramparts are largely visible on aerial photographs. Approximate measurements are thus: 415 yds. (E.-W.) by 345 yds. (N.-S.), which gives an acreage of 29.6.

DISCUSSION AND CONCLUSIONS

Dating Evidence

Dating evidence is supplied by the coins, tile-stamps, pottery, amphora stamps and the small finds, and indicates a Severan occupation. A fuller discussion of the

pottery and stamps appears below: Professor Birley is confident that the coarse pottery is representative of an early third-century date, whilst the scarcity of samian supports this view. The thirteen amphora stamps have previously appeared in late second and early third century deposits. Of the small finds, the two rare divided bow brooches indicate late second–third century dating.¹ The legionary tile stamps with the novel B(RITANNICA) had not been found before (though Mr L. P. Wenham has now reported the discovery of a single example in the *colonia* at York), and the dating evidence hinges upon the interpretation of the letter B. If it represents the title BRITANNICA, then it is a question of when it was awarded to the legion. Service in the N. under Ulpius Marcellus in A.D. 184 – after which campaign Commodus himself took the title BRITANNICUS – seems to be the earliest possible date, though perhaps more likely, bearing in mind the coins, would be a year around A.D. 210. Then Severus and his sons jointly took the title BRITANNICUS after initial success in the N.

The coins of Caracalla under Severus (A.D. 202) and Plautilla (A.D. 202–205), both stratified, put the matter beyond doubt. The fortress thus falls in with the Severan campaigns in Scotland, constructed perhaps in 209 and abandoned shortly after the death of Severus in February 211. At any rate, there is ample evidence on record that Caracalla withdrew the northern garrisons before he left for Rome in 211.

The buildings testify to a single, short occupation, followed by a methodical withdrawal and dismantling of the fortress. Buildings were stripped of their movable parts – main beams, metalwork, inscribed stones, lead piping – and in some cases the heavy floors were broken up with sledge hammers. From the look of the western defences, the Romans went so far as to fill in the ditches as well.

In turn, this single, short occupation casts doubt upon the existence of any earlier Roman occupation of the site. There was no trace of an earlier occupation in the area examined in 1961 and 1962, and aerial photography, whilst revealing very little, shows nothing that cannot be equated with the Severan fortress, and these reasons alone indicate that the Agricolan *Horrea Classis* is to be found elsewhere.

The Garrison

No barrack accommodation was examined, but the size of the fortress alone (c. 30 acres) gives a clue to the strength of the garrison. If a Severan legion required as much space in a permanent home as did the legions of the first two centuries, then there was room for some 3500 men at Carpow – that is a sizeable vexillation or a legion less a vexillation. The former alternative seems the more likely, since Military H.Q. at York, the legion's normal home, might be expected to retain the headquarters staff and enough men to provide a skeleton garrison.

That the garrison was provided by the Sixth Legion there is little doubt, in spite of the absence of inscribed stones.² The 217 tile-stamps and the architecture

¹ Collingwood, R. G., *Archaeology of Roman Britain*, fig. 63, group U.

² Part of an inscribed stone with the symbols of the Second Legion has been discovered (1964) at the E. gate.

of both headquarters and legate's residence, are convincing proof of legionary construction and presumably occupation. The headquarters of 155 ft. by approximately 130 ft., with its nine rooms in the administrative section, is the largest to be fully investigated in Britain, smaller than the continental examples and those of the great legionary bases at York, Chester and Caerleon (judging by the evidence that has come to light about them), but larger than that at Inchtuthil (140 ft. square).¹

The origins of the Sixth Legion are obscure,² but it is known to have fought for Octavian at Perusia, and for a long time thereafter was stationed in Spain. It was moved to Lower Germany in A.D. 69, and there it added to its old title, *VICTRIX*, the additional *PIA FIDELIS DOMITIANA*, granted to several units for their loyalty to the emperor in the revolt of Saturninus in 89. The death of Domitian saw the disappearance of *DOMITIANA* from the titles, but the remainder were retained and lasted until changes in the titles of all legions in the third century. In 122 the legion was transferred from Lower Germany to Britain,³ either to replace the ill-fated Ninth Hispana, or because Hadrian's ambitious building programme required additional skilled labour. It took over the Ninth's base at York and, as far as we know, remained there until the close of the Roman occupation.

Inscriptions tell us something of the work of the legion in the years following 122. It is recorded on many sites on and near Hadrian's Wall, portions of which it built between 122 and 128. A vexillation from the legion was at work on the Antonine Wall a few years later. In these inscriptions, twenty-two in all, the legionary titles are recorded either in full, as with the stone from the banks of the Clyde *LEG.VI.VIC.P.F.*,⁴ or in the more frequent abbreviated form *LEG.VI.VIC*, as with the Corbridge stone.⁵ No other title occurs in this period.

*General*⁶

The effect of early third century dating and of the concept of a legionary force permanently stationed on the S. bank of the Tay in the early third century alters our appreciation of Severan frontier policy, and indicates that the emperor achieved much more in Scotland than his critics would have us believe.

Our knowledge of the campaigns rests largely upon the evidence of Dio and Herodian, who are often taken to dismiss the operations as a series of guerilla actions against elusive natives. But, as Dr Steer has pointed out,⁷ it is clear that these campaigns were highly effective. Before examining Carpow's relationship to the period, it would be advisable to examine briefly the accounts that have come down to us.

Severus had come to Britain in 208 after the governor, presumably Alfenus Senecio, had reported that in spite of the reconstruction of Hadrian's Wall (destroyed by northern tribes in 197 when the governor Albinus took his troops to Gaul

¹ *J.R.S.*, XLIV (1954), 85, fig. 9.

³ Birley, Eric, *Roman Britain and the Roman Army*, 27f.

⁴ *CIL VII* 1140, Macdonald's No. 15, 368.

⁶ The greater part of this summary appeared in *S.H.R.* (October 1963).

⁷ *Roman and Native in N. Britain*, 95.

² Parker, H. M. D., *Roman Legions*, 153.

⁵ *J.R.S.*, XXIX (1939), 183.

to dispute the Imperial crown with Severus), and in spite of his own operations N. of the Wall, the tribes were so restless that either more troops must be sent to further increase an already huge garrison, or an Imperial expedition should tackle the problem. To Severus, the opportunity of getting his sons out of Rome and giving them some active work in the field was particularly welcome, and though he was now an old man in poor health, he accompanied the army on its northern march. Dio relates that Severus 'approached the extremity of the island' – somewhere on the Moray coast, if not still further N. – before returning 'to the friendly portion of the island'. The Caledonians made peace in 209, and a revolt of their southern neighbours, the Maeatae, was crushed in 210, but the harsh Roman victory terms, which included great drafts of their young men to overseas auxiliary regiments, produced a joint revolt in 210–211. As the emperor prepared to meet this new threat he died at York, on 4th February 211. Whether or not Caracalla carried out the projected final campaign is not clear from the evidence, but at any rate he came to terms with the enemy, withdrew the garrisons from their territory, and departed for Rome.

Carpow may have been constructed after the initial success against the Caledonians in 209, and it must represent a decision by the emperor to retain his new conquests within the bounds of the Empire, despite the laborious reconstruction of Hadrian's Wall. Carpow was probably chosen because it could be supplied by sea – for a legionary base in the North this must have been an essential requirement – and because of the natural amenities of the site. Perhaps also the proximity of Abernethy may have been considered. The hill fort above the modern village was probably abandoned some time before the early third century, but the subsequent Pictish capital at Abernethy suggests that it was an important tribal centre throughout – perhaps a member of the Maeatae confederacy. By normal Roman frontier policy in Britain, there ought to be auxiliary forts N. of Carpow. Bertha and Cardean are possible sites, and there may be more hitherto undetected. But it is quite possible that Severus applied his Danubian experience to Britain and put a legion at the extreme limit of the frontier, in that case running perhaps along the line of the Tay estuary – Carpow – Bertha – Gaskridge – Strageath – Ardoch – and down some line to modern Glasgow.

Only further excavation on such key sites as Bertha and Cardean can illuminate this frontier problem, but it does not detract from the Severan achievement. After the abandonment of the Antonine Wall in the late second century and the subsequent destruction of Hadrian's Wall, Severus had restored a great part of Britain to the Empire, and he intended to hold it. The nature of the buildings at Carpow does not indicate temporary occupation. The massive walls, the extensive use of concrete, the deep hypocaust channels, all demonstrate the work of men who intended to make their long stay comfortable. No doubt they packed their bags willingly enough when Caracalla reversed his father's policy, for their old base at York must have been a much more attractive proposition than service in the chilly North, but that decision cannot have been anticipated in 209 and 210.

Severan occupation at Carpow must have some bearing on the Antonine Wall.

Only Cramond has yielded Severan coins so far, and it is generally accepted that that port served as his depot on the campaigns, but it is inconceivable that Severus would not reoccupy some at least of the forts on the wall, if only to safeguard his lines of supply and communication. The shadowy and mysterious third period of occupation found in some forts – and its very scale at Cadder¹ – and the careful demolition and tidying up so often evident, must be the work of Severan troops, in spite of the fact that no Severan coins have been found in the excavations.

Such, then are some of the ideas and theories provoked by the Carpow excavations. The permanent thirty-acre fortress of the Sixth Legion, with its brief Severan occupation, cannot stand alongside Cramond as representing the only traces remaining of that energetic emperor who stormed through Scotland in the early third century. Perhaps the most important aspect of the excavations will have been to remind excavators that they must be prepared to find traces of Severan occupation in other northern forts, traces which are the harder to find because of the brief nature of the occupation and the deliberate dismantling of the forts by the departing troops. For if the legion had not had time to build in stone much more than its two principal buildings, then the auxiliary troops were probably still living in wooden forts, and the only trace of that occupation will be a thin scattering of rubbish and a series of empty post-holes.

APPENDIX I

Tile Stamps

A total of 216 stamped tiles were found during the excavations of 1961 and 1962, in addition to the single example found before 1843²; most of them were found outside the W. wall of the legate's residence, where several hundred more undoubtedly still lie, the remainder coming from the headquarters building. There are deep deposits of clay on the S. shore of the Tay, and there is no reason why the tiles should not have been made on the spot.

In two cases the complete stamp was preserved, once on an *imbrex* and once on a *tegula*; Mr R. P. Wright, F.S.A., points out³ that all come from one or other of two dies. The reading is not in doubt: LEG·VI·VIC·B·P·F. *Legio VI Victrix* acquired the additional titles *pia fidelis Domitiana*, in common with other units of the army of Lower Germany, for its loyalty to Domitian in A.D. 89, dropping the title *Domitiana* after his assassination and the official damning of his memory in A.D. 96; the intrusive *B.*, as Professor Birley first pointed out to me, cannot well be interpreted in any other way than as standing for *Britannica*, presumably a fresh title of honour conferred on the legion for a campaign in Britain for which an emperor took the title *Britannicus* for himself. The first recorded instance of the kind was under Commodus, in A.D. 184, but the coin evidence shows that we must plump for A.D. 210 when Severus, Caracalla and Geta adopted that title; it presumably lapsed during the sole reign of Caracalla.

Most of the Carpow tiles have been deposited in the National Museum of Antiquities, but examples have been given to the Ashmolean Museum in Oxford, the Perth Museum, and the Department of Archaeology in Durham University.

¹ *ibid.*, 96 and footnote.

² See Small, *Rev. A.*, *True Millenium* . . .

³ *J.R.S.*, LII (1962), 197 and LIII (1963), 164.

APPENDIX II

*The Coins*¹

by A. R. BIRLEY, M.A.

Nos. 1 and 3 come from over the cobbled foundation outside the NW. angle of the legate's residence and Nos. 2 and 4 from the destruction deposit in its courtyard.

1. Hadrian, *sestertius*, c. A.D. 134-138; worn.

Obv. HADRIANVS AVG COS III P P – head of Hadrian, laureate, r.

Rev. AEQVI TAS [AVG] – Aequitas, draped, standing l., holding scales in r. hand and vertical rod (*pertica*) in l., s c l. and r. in field. (BMC Hadrian 1481, cf. RIC Hadrian 743.)

2. Faustina junior, *sestertius*, A.D. 176-180; very worn.

Obv. DIVA FAV STINA PIA – bust of Faustina, draped, her hair elaborately waved and knotted in a chignon low on the neck.

Rev. [SIDERIBVS RECEPTA] – Diva Faustina as Diana, draped, wearing crescent on shoulders behind the neck, standing front, head r., holding lighted torch in both hands, s c l. and r. low in field. (BMC Marcus 1584, cf. RIC Marcus 1715.)

3. Caracalla, *denarius*, A.D. 202; mint condition.

Obv. ANTONINVS PIVS AVG – bust of Caracalla, laureate, draped, r.

Rev. PART MAX PON TRP V COS – two captives seated r. and l., mourning at foot of trophy. (RIC Caracalla 65, cf. BMC Severus and Caracalla, note to 392 in BMC vol. v, p. 233.)

4. Plautilla, *denarius*, c. A.D. 202-203; mint condition.

Obv. PLAVTILLAE AVGVSTAE – bust of Plautilla, draped, head bare, r., her hair waved horizontally in seven ridges and bound in a bun at the back of the head.

Rev. CONCORDIAE AETERNAE – Caracalla, togate, standing l. holding roll in l. hand and clasping r. hands with Plautilla who stands r., draped, in front of him, gathering up folds of drapery with her l. arm. (BMC Severus and Caracalla 401, cf. RIC Caracalla 361.)

APPENDIX III

*Other Finds*by E. BIRLEY and WILFRED DODDS²

In view of the close dating of the single brief occupation of the two stone buildings, it has been judged unnecessary in most cases to cite parallels from elsewhere or to specify particular findspots in the following report. The coins of Caracalla and Plautilla demonstrate that the brief occupation was in fact Severan; but for them, the pottery as a whole might have been taken equally well to suggest a slightly earlier date, in the 180s, as there was no really drastic change over the whole field of pottery production under Severus, to compare with that in the area of Hadrian's Wall in Hadrian's day. It is noteworthy, however, that the material includes nothing which could be dated nearly as early as the governorship of Lollius Urbicus, let alone the Agricolan occupation which equation of Carpow with *Horrea Classis* would necessarily require. A transient visit by Roman troops c. A.D. 300 or a little later is suggested by two hammerhead mortarium rims (fig. 8, Nos. 4 and 5), and perhaps by a wall-fragment of colour-coated ware.

(a) *Samian Ware*

Figured samian was represented by a rim fragment of Dr. 37, showing none of the decoration, and by one piece from the lower part of a bowl of the same form (fig. 7). It is Lezoux ware, but

¹ Thanks are due to Dr J. P. C. Kent, F.S.A., for his assistance in identifying the two worn sestertii.

² Mr Dodds made all the drawings for figs. 7-12 and undertook the initial search for parallels and first draft of the descriptions.

cannot at present be attributed to any specific potter: the two figure-types are a *warrior to r.*, Dech. type 117 = Oswald type 188, and a large *eagle*, D. 981 = O.2167, both used by a number of different firms, though it is perhaps worth noting that the eagle was particularly favoured by CASVRIVS, CERVVS and PVGNVS, potters whose decorated wares occur regularly in the destruction levels of the end of the second century at Corbridge. The determinant details are the vertical *roped line* dividing the two panels of decoration, the *astragalus* terminal and the 'cog-wheel' ornament in the field, but

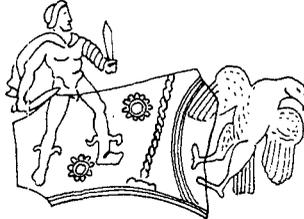


FIG. 6. Figured samian (½)

we have not been able to find any potter who makes use of them. On typological grounds, a date late in the second century would seem most appropriate, but of course there is no reason why such a piece should not have been still in use in the time of Severus.

Other samian included a small piece from the wall of a globular beaker showing barbotine decoration; the cup, Dr. 33, is represented by two fragments and the platter, Dr. 31, by five; the flanged bowl, Dr. 38, by a flange fragment and by three conjoining pieces from a bowl which has been burnt in a wood fire; and there are seven pieces, possibly from as many different vessels, of the samian mortarium, Dr. 45, which hardly appears on Roman sites in the region of Hadrian's Wall before the time of Severus.

(b) Amphorae and Amphora Stamps

A very large quantity of amphora fragments was recovered, including thirteen stamps, one on a shoulder and the rest all on handles. For this category of material it is at present best to refer to Dr M. H. Callender's study of the Corbridge collection,¹ where parallels are cited and dating evidence discussed; it is clear that all the Carpow stamps come from southern Spain and represent the importation of olive oil, their occurrence on a Severan site providing welcome confirmation of Dr Callender's inference² that Spanish oil was still being used in Britain during that reign.

1-4. Four examples of the stamp PNN, Callender's No. 46, dated by him *c.* 160-210.

5-9. Five examples of F·SCIM | NIANO, his No. 54, dated *c.* 150-210.

10. Fragmentary example of L·IVNI·M | ELISSI·P, his No. 27, *c.* 160-210.

11-12. Two examples of L·F·C, his No. 19, *c.* 150-198.

13. One example of the counter-stamp P·ARVA (*ibid.*, 76).

One fragment stands out from the rest, both in fabric and in its interest. It comes from an amphora which does not seem to have been of the globular Spanish type, but rather closer to the cylindrical wine-amphora, though it is too small for the size and shape of the complete vessel to be calculated from it; the fabric is greyish in fracture, light buff on the surface and with traces of a cream wash on the outside. Incised after firing is a graffito in Greek capitals, first deciphered by Mr R. P. Wright, F.S.A., to whom we are grateful for his note³: ΠΡΑΣΙ[].

'Dioscorides (*de mat. med.* v, 48) gives the recipe for a wine flavoured with horehound (τὸ πράσιον) which was deemed to be beneficial for complaints of the chest.'

It is common knowledge that the Roman army had an efficient medical service, but this graffito, implying a supply of medicated wine to counteract the rigours of the Caledonian climate, casts a fascinating and unexpected ray of light on the workings of that service - unless, indeed, the wine was imported for the use and at the expense of the legionary commander himself.

¹ *Arch. Aeliana*, 4th ser., xxvii (1949), 60 ff.

² First published in *J.R.S.*, LIII (1963), 166.

³ *ibid.*, 115.

(c) Other Pottery

Fig. 7:1. Many fragments, mostly conjoining, of a mortarium in the hard, smooth, whitish fabric characteristic of the Midland factories' products, mainly to be dated to the second half of the second century, in the closing years of which this particular vessel would not be out of place.

2. Part of a somewhat similar mortarium, its rim-section of a typologically more developed form.

3. Rim fragment from a mortarium in a rather whiter fabric.

These three vessels are all consistent with the brief Severan occupation of Carpow; No. 3 comes

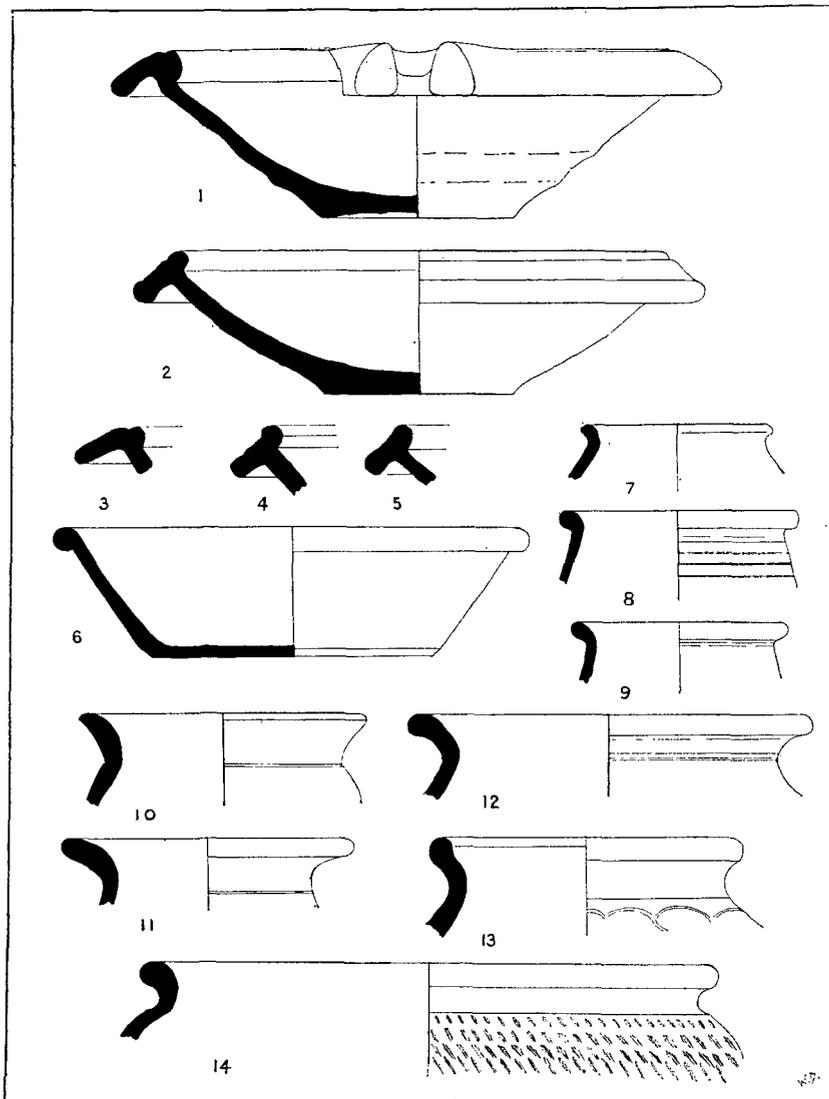


FIG. 7. Coarse pottery (a) (1/2)

from the floor of the *sacellum* of the headquarters, No. 1 from the demolition deposit in and about the legate's residence.

PSA O

4. Rim fragment from a hammerhead mortarium with reeded rim in the fine, white pipeclay fabric characteristic on Hadrian's Wall of deposits of A.D. 300 or later.

5. Rim from a similar mortarium, with only vestigial reeding.

By contrast, these two rims cannot well be earlier than the time of Constantius Chlorus, some ninety years after the dismantling and evacuation of the Severan fortress. It may be suggested that

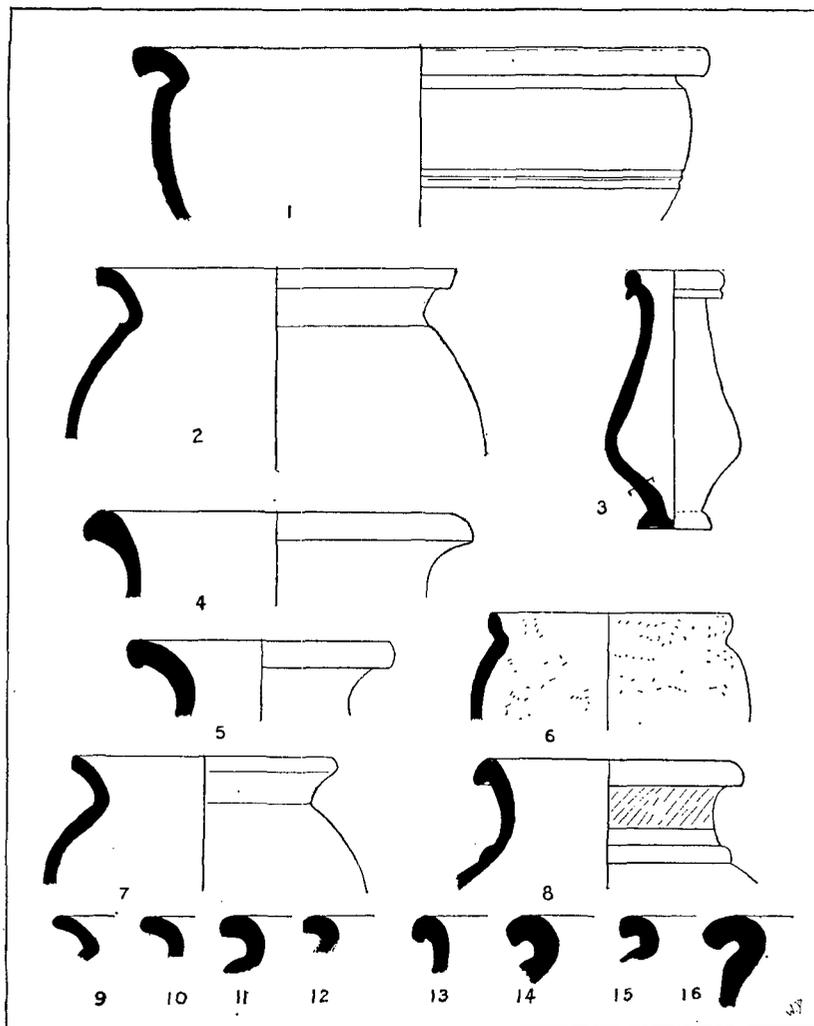


FIG. 8. Coarse pottery (b) ($\frac{1}{4}$)

they represent the leavings of a Roman force paying a brief visit to the site during the campaigns of Constantius against the Picts, at some time in the decade A.D. 296-305.

6. Grey bowl with rolled rim and vestigial chamfer between base and wall; the type is commonest in the first half of the third century.

7-9. Jar rims in grey fabrics: No. 8 has a matt surface and burnished lines below its rolled rim, No. 9 a burnished surface.

10. Jar in hard, light grey fabric.
11. Narrow-necked storage jar, grey fabric.
12. Wide-mouthed storage jar, similar fabric.
13. Light grey jar with internal seating for a lid, burnished arcs on the shoulder.
14. Large storage jar in dark grey fabric, its body below the rim decorated with horizontal rows of rouletting.

Nos. 7, 8 and 12 come from the *sacellum* floor, Nos. 6, 9 and 14 from the demolition deposit in and around the legate's residence.

- Fig. 8: 1. Wide-mouthed jar in hard, lead-grey fabric.
 2. Large jar, originally hard, dark grey but now burnt brown.
 3. Small flask in light fawn fabric.
 4. Rim of large storage jar in hard, reddish fabric, with burnished lip.
 5. Rim of rather narrower-necked storage jar, grey fabric burnt red.

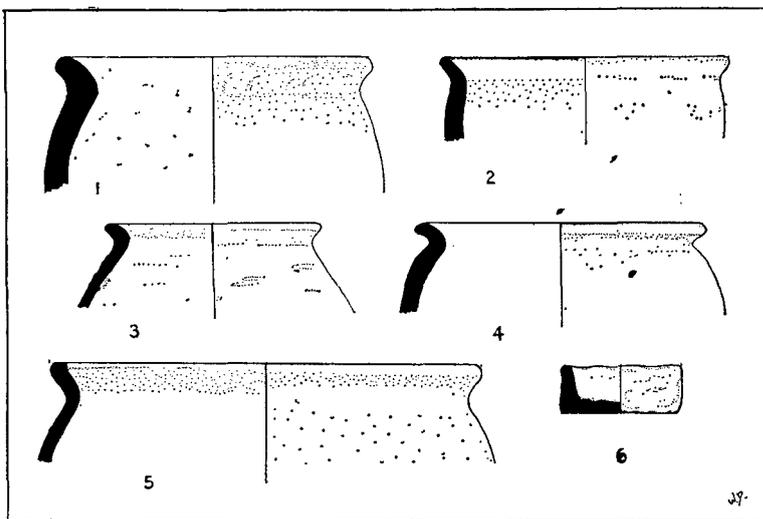


FIG. 9. Native wares ($\frac{1}{4}$)

6. Small jar in very hard, red fabric with grey pimply surface and quartz grits in the body, reminiscent of Romano-British Derbyshire or Dales wares but different both in fabric and in rim-section.

7. Large jar or cooking-pot, probably originally grey but burnt red.
8. Storage jar in burnished red fabric with grey core.
9. Black burnished cooking-pot rim with considerable overhang (not, however, the early our th century type in which the maximum diameter occurs at the outer edge of the rim itself).
- 10-12. Grey jar rims.
13. Rim from a jar like No. 8 above but in fabric close to that of No. 6.
14. Rim of a rather coarse wide-mouthed jar.
15. Grey jar rim.
16. Wide-mouthed jar rim.

The almost complete absence of black burnished cooking-pots is a noteworthy point, perhaps best explained by the fact that there were no barracks for the rank and file in the area excavated in 1961 and 1962.

(d) Native Wares

Fig. 9: 1, 2 and 4. Rim fragments from somewhat similar hand-made jars, all in a medium hard,

grey fabric with very fine grits: No. 1 shows the pressure-marks of fingertips immediately below the rim and red burning on the inside, and No. 4 a number of fine specks of mica.

3. Hard, grey fabric, not unlike that of Yorkshire or Derbyshire wares of the later Roman period.

5. Burnt rim fragment, originally rather similar to No. 3.

6. Almost half of a clay saucer, rather flaky in texture.

Of these interesting pieces No. 5 was stratified at the base of the W. rampart of the fortress, and No. 2 came from the *sacellum* of the headquarters; the remaining pieces had no significant associations.

The fabric can be paralleled from many sites in Northumberland and in the S. of Scotland, but close parallels to the rim-types have not yet been noted, though they show affinities with material from the Vale of Pickering in Yorkshire and with that from various Scottish sites. There can be no doubt that these vessels were of native workmanship, but that does not preclude their having been used by the Roman garrison of the site.

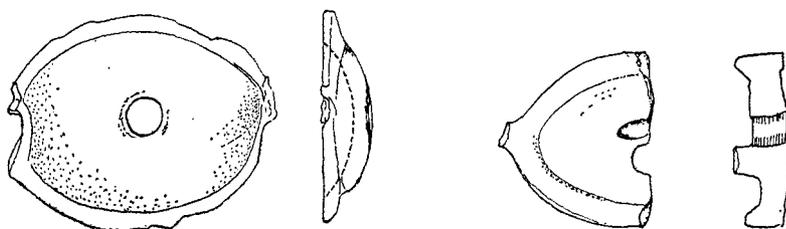


FIG. 10. Lamps ($\frac{1}{2}$)

(e) *Lamps*

Fig. 10 illustrates the top of a lamp in reddish buff clay (above) and a sizable piece from what seems to have been another lamp, of an unusual form, in a light buff fabric with traces of a very thin, glossy slip.

(f) *Miscellaneous Small Finds*

Fig. 11:1. Knife handle of stag antler, a cut-down tine with the upper end rounded off and the lower end still showing the saw mark.

2. Similar handle, of a more sophisticated type: the rugosities have been smoothed off and the upper end given an incised decoration of chevrons and cross-hatching. Parallels have been noted on Roman sites at Chesters and Corbridge (Northumberland), Lydney (Gloucestershire) and Wroxeter (Salop).

3-4. Bronze divided-bow brooches, which might well have served as the type-specimens for Collingwood, *Archaeology of Roman Britain*, fig. 63, 79 and 80 - examples of the P-shaped type U, datable examples of which, as Collingwood observed, normally fall within the period A.D. 180-260. They accord excellently with Severan occupation.

5. Part of a heavy bronze ring, perhaps from either a cauldron or a torque.

6. Portion of bronze, probably from a scabbard binding.

7. Bronze nail with large flat head: a 'clout' nail for fixing leather or fabric to wood, the large head preventing it from tearing away.

8. Portion of a bronze belt-plate with openwork Celtic ornament in an asymmetrical pattern; unpublished parallels have been noted at Carlisle (Tullie House) and at Corbridge (Corstopitum Museum).

9. Circular bronze mount with one stud remaining on the back and with a bronze split-ring attached: a junction-mounting from military equipment or harness.

10. Spiral bronze ring, plano-convex in section. The type has a wide distribution in time (from the Continental late Bronze Age onwards) and in space (from the N. of Italy northwards and west-

wards): doubtless native workmanship, and not necessarily dating from the brief Roman occupation of the site.

11. Lead spindle-whorl.

12. Bauxite bead, belonging to a small group with an interesting northern distribution: a perfect parallel comes from Fortingall, Perthshire, and closely similar specimens have been noted from

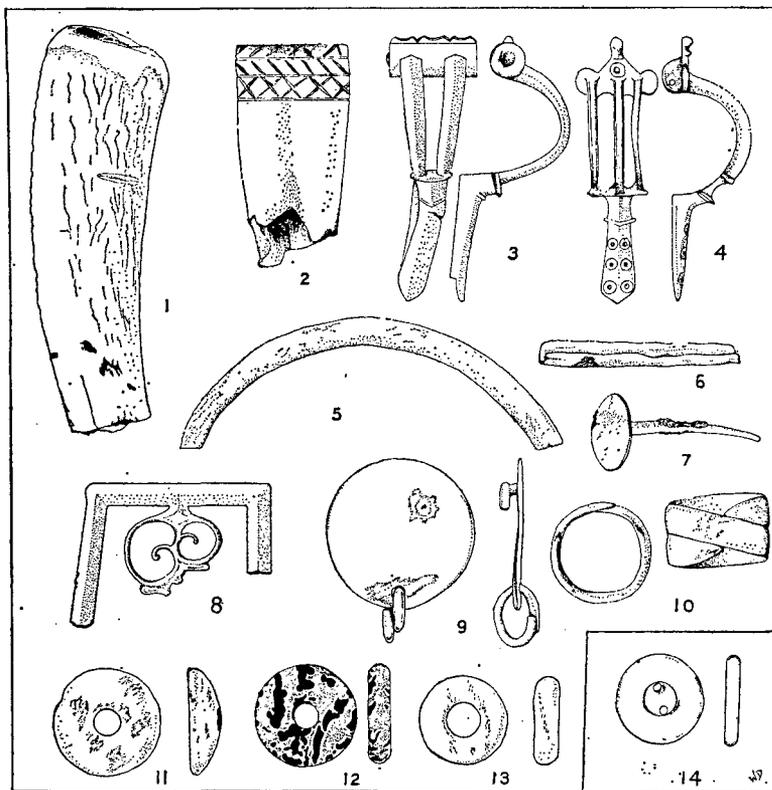


FIG. 11. Miscellaneous small finds ($\frac{1}{2}$)

Camelon, Newstead, Inverness, Parc-croc-rioch (Oronsay), somewhere in the Lothians,¹ Rainton (Gatehouse of Fleet), Corbridge and Housesteads; there are also numerous examples in the Belfast Museum, and the material is apparently Antrim bauxite. It presumably attests some trading connection between northern Ireland and the N. of Britain, well before the period of the first Scotie raids.

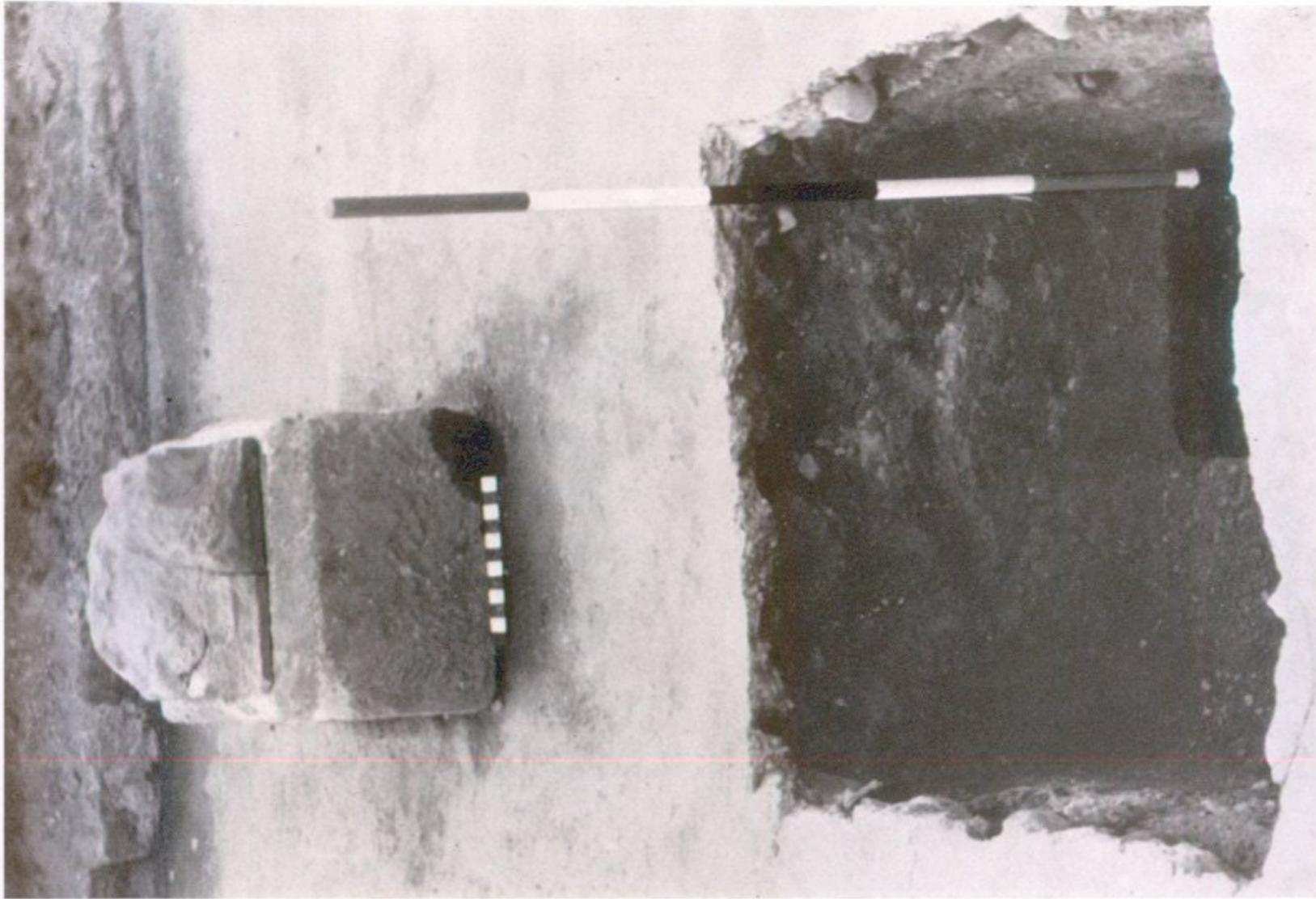
13. Bone bead.

14. Victorian lead button, of a type used to weigh down the edges of voluminous draperies – doubtless evidence of a crinolined visitor to the site a century ago.

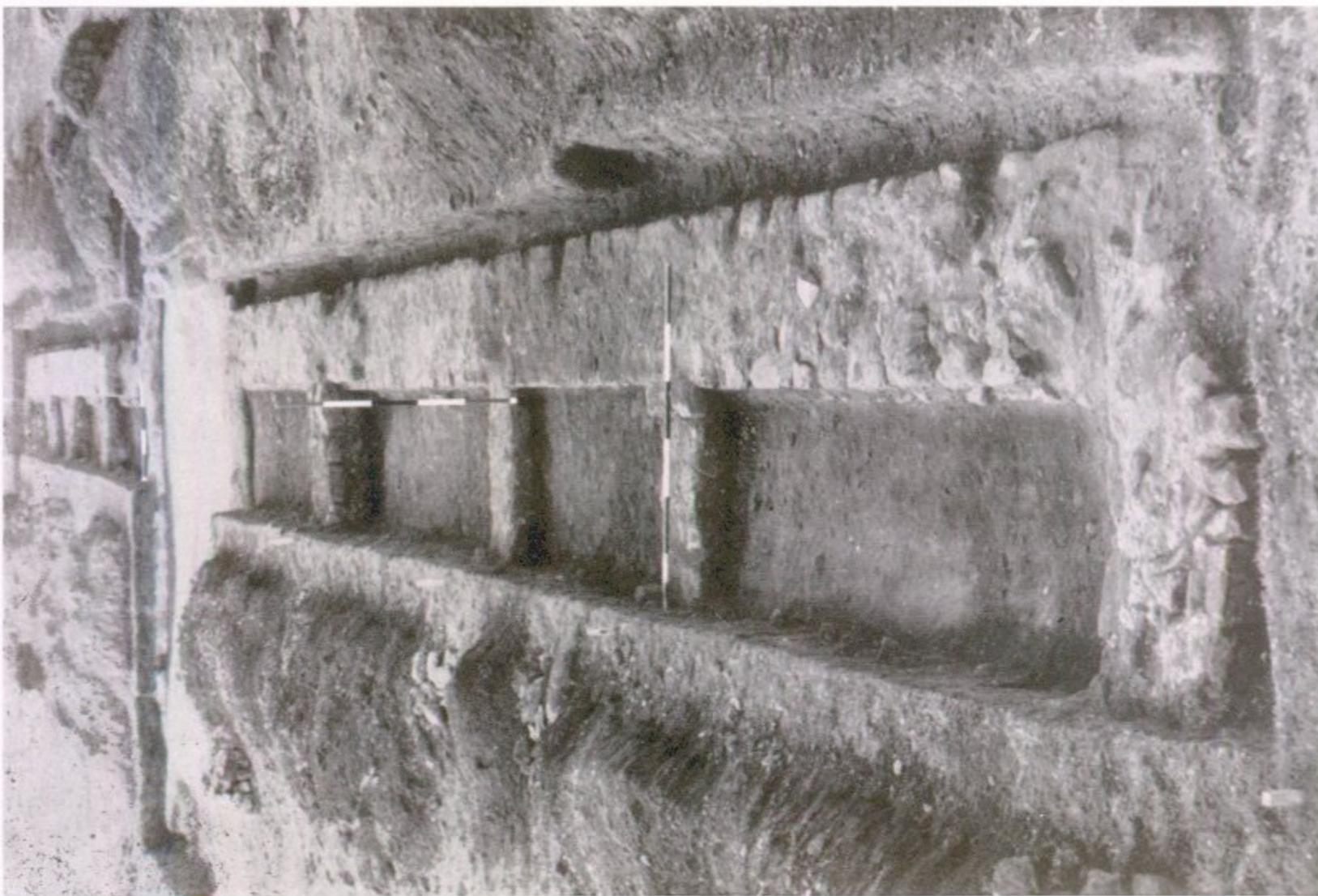
Not illustrated: spindle-whorl made from the distal process of an ox (?) bone; fragments of iron, bronze, agate and shale or jet; half a dozen pieces of glass, including two of window-glass and two from heavy, square-faced bottles; four coarse pottery counters.

None of the small finds had any significant stratification except the divided-bow brooch No. 3, above, which was embedded in the road-metalling outside the S. wall of the headquarters building.

¹ *P.S.A.S.*, LXXXVIII (1954-6), 229.



2. The same: *sacellum*. Altar base and support removed from original position. The cut through the floor shows its construction and the undisturbed soil beneath



1. Headquarters Building from the N. The floors of Rooms II and V were of concrete, the rest are presumed to have been of wood



1. Headquarters Building: tribunal and strongroom from the E. Note flagged floor and supports for tribunal floor



2. The same: fallen flagstones from the tribunal floor lying in the strongroom



1. Legate's Palace: furnace passage through wall of Room II. The furnace was apparently in the open outside the wall



2. The same: Room IV – probably a water-storage tank. The groove in the wall (right foreground) carried a lead pipe, and beyond can be seen the exit gap



1. Legate's Palace: dwarf walls in apsidal Room VI. Note great width of internal walls - 3 ft.



2. The same: dwarf walls of Room VII, heavily burned by heat of hypocaust. The floor consisted of flat tiles covered by a thin layer of cement



1. Legate's Palace: Room IX. This was the scene of recent disturbance; the gap in the outside wall may have been caused by attempts at land clearance



2. The same: Room XIII – possibly a tower foundation. Its walls were not bonded in to the main building



1. Denarii of Caracalla and Plautilla (left): obverse (approx. $\frac{4}{1}$)



2. The same: reverse. The coin of Plautilla (left) was blurred in striking



3. Roofing tiles with Legionary stamp from different dies: the upper stamp is on an *imbrex*, the lower on a *tegula*