

ART. XIII.—*Excavations at the Roman Fort of Watercrock, 1944.* By LT.-COLONEL O. H. NORTH, D.S.O., F.S.A. and E. J. W. HILDYARD, F.S.A.

SINCE the war, part of the site of the Roman Fort at Watercrock, a mile south of Kendal, which was formerly all pasture, has been under plough and in 1944 the writers took the opportunity afforded by the autumnal interval between crops to conduct a trial excavation there between the 12th and 20th of October. War conditions imposed many difficulties, the time available was very limited, working hours were unavoidably short, and labour was confined to that of the writers themselves and their respective gardeners. Finally, the weather could scarcely have been worse. There were in fact only two fine days; rain interfered, usually very seriously, on all the others and but for the highly porous subsoil it would probably have been impossible to do any digging at all.

THE SCOPE OF THE WORK.

Chance finds, observation on the ground and previous work by the first writer in 1931 (these *Trans.* N.S., xxxii, 116-123) had left our knowledge of the site incomplete. Our object was therefore to obtain more definite information on the history and form of the defences and on the plan of the internal buildings. The south angle, which had hitherto been untouched and which stood higher than any other part of the fort, was selected for attention. A trial trench (Section I: see figs. 1 and 2), 4 ft. wide and 75 ft. long, was cut across the south angle from just inside the fort to a point outside the wall, with the intention of

including the ditch. The north end of this trench revealed an internal building (Building I), the outer walls of which were traced by means of shallow trial pits. This process in turn revealed a second adjoining building (Building II), the outline of which was followed by the same methods. A second section of the defences, Section II, dug in order to check the results obtained in Trench I,

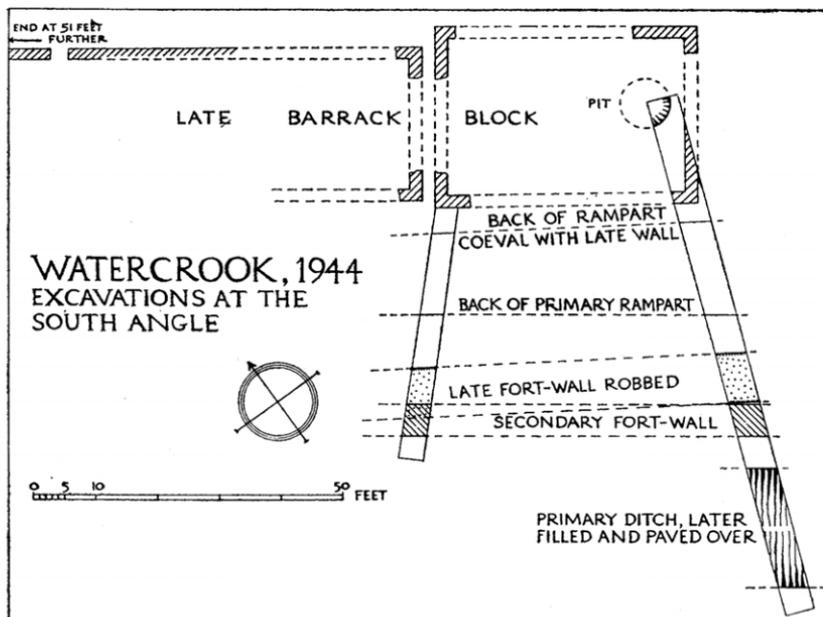


FIG. 1.—Plan of excavations at Watercreek, 1944.

was taken from the western corner of Building I, at right angles to its south-west wall, and 40 feet to north-west of Section I.

THE DEFENCES.

The nature of the defences was revealed by Section I (fig. 2); and our record concerns this section only, since bad weather prevented us from securing a drawing of

Section II, where nearly all the features of Section I were reproduced. At the north end of the trench, at a depth of 9 inches, the corner of Building I was encountered, just inside the west side of the trench (see fig. 1). The walling was 2 ft. wide, though it appears as much wider in the section, which crosses it obliquely.

Hopes that we might encounter a well-preserved section of the fort wall, with plinth and facing stones (*ibid.* 118, fig. 4), were disappointed; but, at the outer edge of the mound, footings of a massive wall, 5 ft. 6 ins. wide, crossed the trench at right angles, as might be expected on the normal rounded corner, the trench being too narrow to show the curve. At the footings, which consisted of large cobbles set in sandy clay, there was a change in the subsoil. Behind them the subsoil was everywhere yellow sand, capped by a band of brownish-orange sand one to two inches thick. This layer did not look like an old surface upon which growth had taken place but more like subsoil from which the original turf had been stripped. Similar conditions were observed in Section II. On the berm, outside the footings, the subsoil was gravel, except for a patch of light yellow sand (quite distinct in colour from the undisturbed yellow sand) a foot deep and two feet wide, packed in front of the footings and providing a firmer base for them than the natural gravel. This feature was again repeated in Section II.

Outside the south angle the ground falls and on the slope a ditch had been dug in the gravel. Owing to the loose nature of the gravel the exact lips of the ditch are difficult to define, but the ditch was at least 20 ft. wide and some 5 feet deep, the somewhat shallow section being accounted for by the loose subsoil. The ditch also seemed to have been filled in fairly soon after being dug, for there was little sign of silt at the bottom and the filling was gravel, slightly sandier and dirtier indeed than the

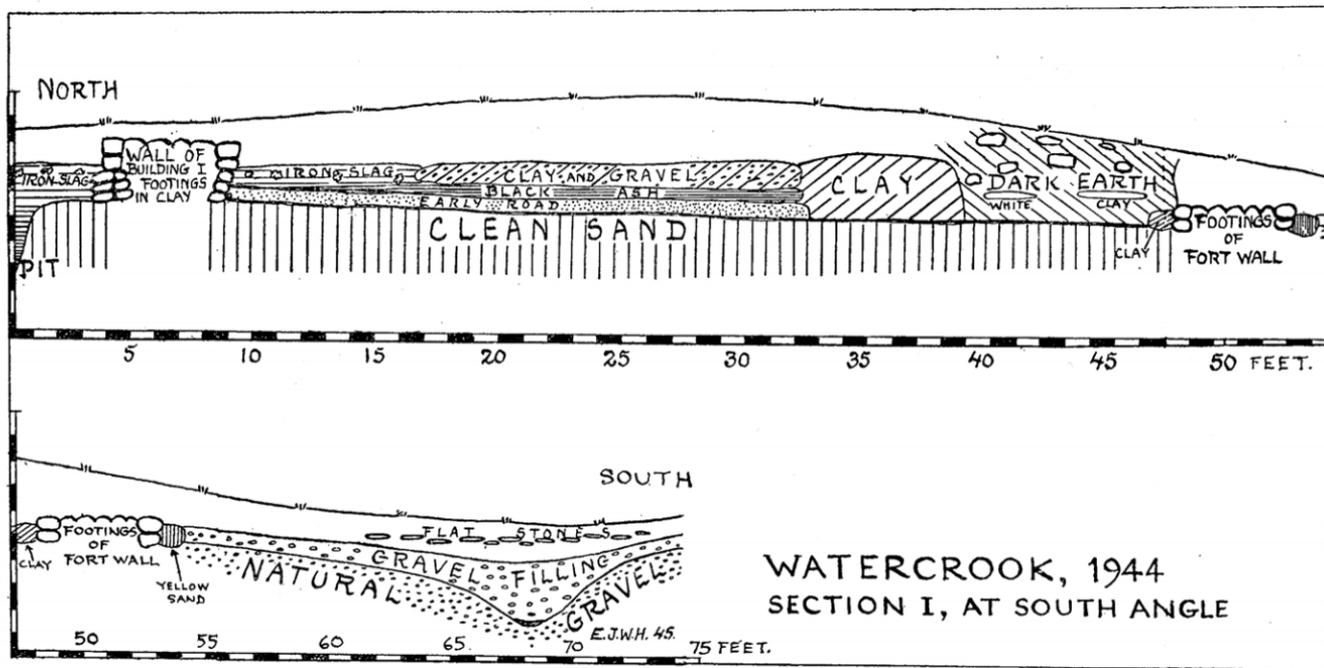


FIG. 2.—Section of defences at Watercreek, 1944.

subsoil, but so uniform in appearance that, until the ditch sides began to appear clearly, it might have been mistaken for undisturbed gravel. Three small fragments of Samian ware from this filling included part of a cup of Dragendorff's form 27 and, from near the bottom of the ditch, a small piece of a decorated bowl of Dragendorff's form 37 (fig. 3, no. 3), with just enough decoration surviving to suggest to Dr. Oswald a probable Domitianic date. The ditch thus filled was capped by a layer of small flat stones. Section II reached only as far as the inner lip of the ditch, though carried far enough to identify it, and the capping or paving of flat stones was repeated there. Not dissimilar paving over a filled ditch of the same age occurs at the north angle of the fort at Slack (*Yorks. Arch Journ.* xxvi, pp. 15 and 36).

Behind the fort wall, whose footings have been described above, conditions were complicated. Immediately behind the footings came a patch of sandy clay corresponding to the yellow sand in front. Then followed a gap of nine feet, filled with dark disturbed earth, large stones (including one or two facing stones), bands of whitish clay and decomposed mortar. This gap recurred in Section II though it was there only six feet wide. Next came a bank of clean brown sandy clay, very even in consistency, 2 ft. 6 ins. high and 6 ft. wide in both sections, though it did not yield any pottery in either.

Behind the clay bank the subsoil was covered by a layer of rammed white gravel, six to nine inches thick, capped by a metalling of small flattish stones and following the slope of the ground. This continued to the end of the trench, on the south-east side of Building I, and was also found to run northwards past the eastern corner of the building. A gravel layer appeared in Section II in a corresponding position, but the gravel was much yellower and browner and less thick and compact. But the feature as a whole corresponds to the southernmost

road marked in Hoggarth's survey (these *Trans.* N.S. viii, 102, 104), and it may undoubtedly be recognised as the *intervallum* road.

On the top of the road at the angle was a layer of black ash, with white admixture, which continued beyond the road under the footings of Building I. Inside this building, a pit was also filled with the same black material. but its full size and depth could not be ascertained in the time available. Finds from the black layer, occurring within a few inches of the surface of the road, included three small fragments of a decorated Samian bowl of Dragendorff's form 37 (fig. 3, no. 2) which can be ascribed to BIRAGILLUS of Banassac and is dated by Dr. Oswald to A.D. 80-85, a rim of a rustic bowl (fig. 4, no. 2) and an almost complete bowl (fig. 4, no. 1) reminiscent of Belgic prototypes; the last two pots are also definitely of the Flavian period. Throughout this occupation layer, inside and outside building I, lumps of iron slag also occurred in considerable quantity. There were further several large pieces of lead and a number of bronze fragments, all in very decomposed condition except for the head of a nail. Several small fragments of bronze were also found in the pit.

Finally, the black layer was sealed by a compact mass of mixed sandy clay, extending for seventeen feet behind the clay mound, and over-topping it.

An interpretation of the section may now be given. Two points are clear; first, that the builders of the fort made use of a natural bank of alluvial gravel and sand (such as might be expected on a peninsula nearly surrounded by the river) on which to plant their defences; secondly, that at least two periods are immediately apparent. The first period is represented by the ditch and the fragment of clean clay bank, which may be presumed originally have extended to the lip of the ditch and thus represents a rampart once about 20 feet thick. With this

rampart go the early road and the burnt layer which produced the iron slag. We are able to date this period, with fair precision, to the years A.D. 80-90. The second period is marked by cutting back the clay bank for the insertion of a stone wall; for the wall footings cannot be regarded as contemporary with the ditch owing to the absence of a berm, certainly required in such shifty subsoil. It may thus be assumed that the ditch was filled up and capped with flat stones when the stone wall was built; it is clearly not the ditch found in 1931 outside the north-west gate, which belonged to the period of the stone fort-wall and was full of fallen masonry (these *Trans. N.S.* xxxii, 120).

But it is also clear that the whole history of the defences is not represented by the clay rampart and its subsequent revetment in stone. We have yet to account not only for the bank of mixed clay and gravel which extends above and behind the clean clay bank, but also for the gap behind the footings of the stone revetment. This gap, filled with scattered layers of clay and mortar and with fragments of rubble and worked stone, is manifestly a trench made by stone-robbers; and it may be regarded as certain that it represents the latest fort-wall, later completely removed by seekers for stone. The mixed clay and gravel bank then falls into place as the extension of the rampart behind this late wall, contemporary with the stone buildings. The fact that the gap from which the late wall is inferred to have been torn extended for nine feet behind the footings of the first stone wall in Section I and for six feet in Section II will further suggest that the later and earlier walls converged towards the gateway.

BUILDINGS I AND II.

Apart from examining the south-east wall of Building I where it passed across Section I, no attempt was made to

do more than ascertain the outline of the internal buildings, of which the walls lay less than one foot below the surface. In Section I the south-east wall was found standing two courses high (see fig. 2) and was built of a soft limestone, not used in the north-west gate or hitherto met on the site. The style of building was somewhat rough and mortar was used sparingly. The wall rested upon three courses of footings, set in yellow clay, which protruded irregularly from six inches to one foot on the inside while the wall slightly overlapped them on the outside. It was clear that the building was not contemporary with the ash-strewn early road outside it, for both the ash-layer and the gravel of the road were found under the footings. No trace of any floor contemporary with the building could, however, be detected. The dimensions of Building I were found to be 43 feet by 29 feet externally, the walls being 2 feet thick. Large cement blocks, one of which was 2 feet long and about 1 foot thick, occupied the west and north corners.

The passage between Buildings I and II was barely 2 feet wide. The north-east wall of Building II was set back 2 feet (see fig. 1). The dimensions of the building were found to be 118 feet long by 27 feet wide, and a gap almost half way along the N.E. wall may represent a doorway 2 feet, 9 inches wide, though the point was not established. In position, plan, and dimensions the two buildings, however, together resemble a barrack block, the N.C.O's quarters being represented by Building I and the men's by Building II. Separate units of the kind occur at Birdoswald and Greatchesters. Gravel and paving stones suggestive of a road were encountered along the north-west end of the block.

CONCLUSIONS.

Despite the very limited extent of the work, new and definite information has been gained about the site at

Watercreek. The fort is seen to have been built on a sandbank, and it would be interesting to see whether this has anything to do with the irregular outline of the north-west and north-east sides, or whether their decline from rectangular form is due simply to faulty setting-out.

An early fort, built in A.D. 80-85, is now structurally established and Watercreek falls into line with Ambleside and the rest of the Agricola series. The suggestion of its early date, based on comparison with these other forts and on the previous discovery at Watercreek of a stamp of the Samian potter ALBINUS and coins of Augustus and Vespasian, can now be regarded as definitely confirmed.

The position of the early *intervallum* road confirms Hoggarth's survey of surface indications during drought and disproves the suggestion (these *Trans.* N.S. xxx, 101) that the outer "roads" marked on the plan were the fort wall. There is as yet no direct evidence for the date of the first and second fort walls of stone, but this should be secured in future by further digging. The style of masonry in the internal buildings suggests that they go with the later period of stone building: if Hoggarth's road plan is to be trusted, as there now seems little doubt, the buildings themselves form one member of a pair of barrack blocks, housing two out of the six centuries of a *cohors quingenaria*, the arrangement commonly found in the *retentura* of a fort of standard plan. This is the first definite evidence of the planning of internal buildings.

Finally, the discovery of Signal-Station pottery definitely carries the occupation of the fort, in whatever form, beyond A.D. 369.

APPENDIX I. SMALL OBJECTS.

IRON. Iron objects consisted of nails, one knife blade, and indeterminate fragments, none worth illustration.

LEAD. Lead objects from the black layer already mentioned

comprised one seven-ounce lump which had fallen, when molten, on to a rough irregular surface not intended to receive it. This may well indicate destruction of a building by fire. There were also three other small fragments of sheeting, unmelted and indeterminate.

BRONZE. Fragments of bronze were frequent in the early layer and in the pit, but most were too decomposed for recognition or treatment. The following identifiable objects may be recorded:

(i) A small fragment of thin corrugated bronze, stated by Mr. Bulmer to be part of a small ferrule about the size and shape of a thimble with flat end. These objects occur, in several sizes, at Corbridge. Their use is unknown. From the black layer, Section I.

(ii) A bronze head of a nail, the iron shank missing. The head is $7/10$ inch in diameter with sunk circular moulding inside and outside and bronze boss to cover the iron pin externally. Cf. *Richborough I*. Pl. XIII, No. 13; *Richborough II*, Pl. XV, No. 17. From the black layer, Section I.

APPENDIX II. THE POTTERY.

A. SAMIAN WARE. PLAIN FORMS.

Fragments of Forms 27, 33, 31 and 38 were represented, but none was sufficiently complete or otherwise so notable as to merit illustration. One stamp (fig. 3, no. 1), faint and in part doubly impressed upon Form 27, is read by Dr. Oswald as VITALIS FICIT and attributed to VITALIS of Rheinzabern, of about A.D. 150. It was found in Building I, among topsoil.

B. DECORATED SAMIAN WARE, by Dr. Felix Oswald, F.S.A.

1. A bowl of Form 37 (fig. 3, no. 2), which can confidently be ascribed to BIRAGILLVS of Banassac. His ovolo, festoon and tassel as on a 37 BIRAGIL at Rottweil (of Knorr, *Rottweil* 1907, Plate XV, Domitian) and in his style at Brecon with the same bird (Oswald 2247) in addition. A.D. 80-85. From the black layer, immediately above the early road, in Section I.

2. A bowl of Form 37, exhibiting an ovolo with tassel bent to left and wavy line, below a narrow plain rim (fig. 3, no. 3): this fragment is too small to identify certainly, but is probably Domitianic and South Gaulish ware. A.D. 80-90. From the ditch filling, at a depth of 5 ft., in Section I.

3. A bowl of Form 37, comprising a fragment of base exhibiting a row of rosettes (fig. 3, no. 4). This might be Rheinzabern

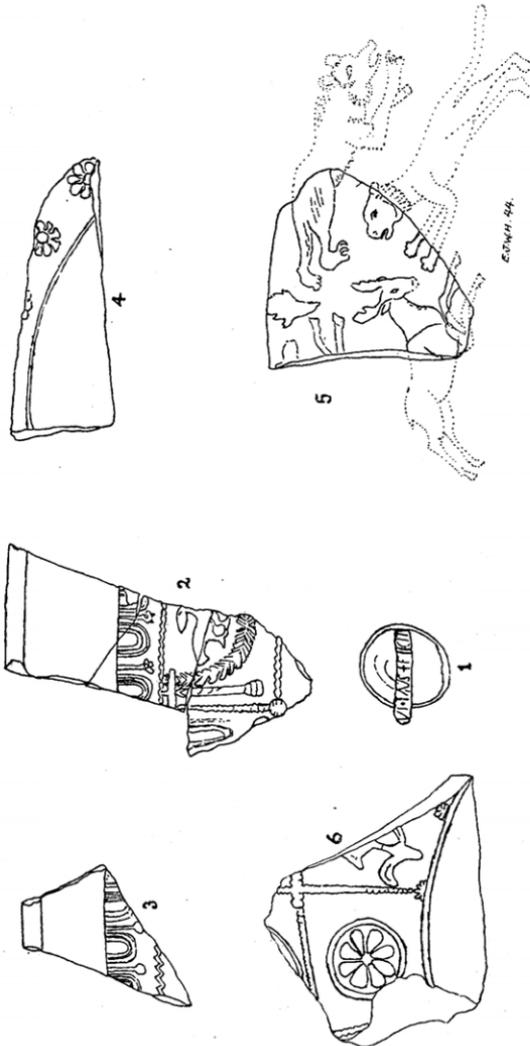


FIG. 3.—Fragments of decorated and stamped Samian Ware from Watercreek (Scale, $\frac{1}{2}$).

ware. This row of rosettes is very similar to that used by AUGUSTINVS instead of an ovolo border (cf. Ludowici, *Rheinzabern*, Plate V., p. 149). From Section I, unstratified.

4. A bowl of Form 37, badly flaked, in a free style (fig. 3, no. 5), which can be attributed to CINNAMVS of Lezoux, since it contains his stag (*O.* 1720), his bear (*O.* 1588), the trifold ornament as at Segontium and Vichy (CINNAMI OF) and a panther (*O.* 1546). It is of early Antonine date, C. A. D. 140. From Section I, unstratified.

5. A bowl of Form 37, in rather dull glaze, which may be tentatively attributed to LAXTVCISSA, of Lezoux and Lúbié, who uses this particular kind of *fleur-de-lis* (here rather distorted through its position near the base of the bowl) and these little radiate rosettes (fig. 3, no 6). It belongs to about A. D. 140. From outside Building II, in the topsoil.

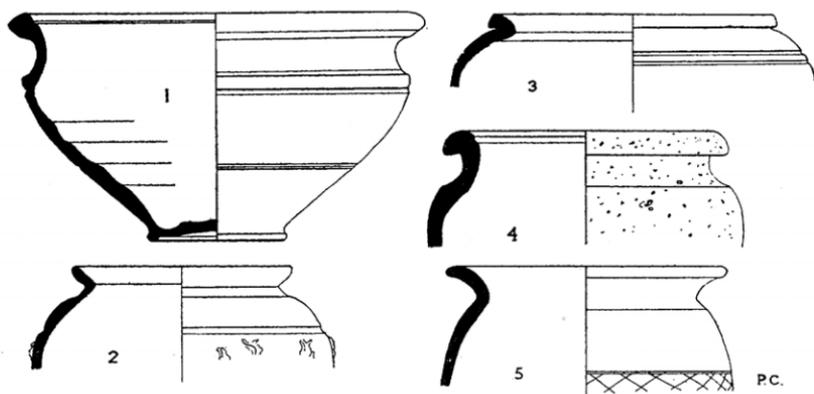


FIG. 4.—Coarse ware from Watercreek (scale, $\frac{1}{4}$).

C. COARSE POTTERY, by Philip Corder.

1. From Section I, in the black layer: a wide-mouthed bowl (fig. 4, no. 1) in very hard dark grey ware with black core, slightly burnished on the shoulder beneath the rim and on the lower part of the body. The maximum diameter is at the rim, and there is a well-marked groove inside the rim as if the vessel had been for use with a lid. There is a foot-ring to the raised base. The deeply incised groove beneath the prominent shoulder produces the effect of a broad cordon separating neck and body, which suggests a somewhat distant Belgic prototype. I know of no published parallel for this unusual bowl, but comparison may be suggested with a bowl from the earliest occupation at Brough (*Petuaria*) which has the same marked shoulder, incurved sides and raised base (*Brough IV*, 1936, fig. 10, 7) and which is certainly Flavian at

latest. I have no hesitation, in view of the ware and technique of this bowl, in assigning it to the first century.

2. *From Section I, in the black layer:* A jar, in very hard drab ware with fumed grey surface, having a flat oblique rim, bulging shoulder and ridges of rustic decoration on the body (fig. 4, no. 2). This is an example of a well-known first-century type in the North, and can be closely matched on many Flavian sites (cf. *Newstead*, fig. 25, 11; *Slack* pl. xxiii, 15-21; *Ilkley*, pl. xxxiv, 1-11; *Malton*, fig. 17-18; *Brough IV*, fig. 11, 23). A sherd of hard light grey ware bearing vigorous rustic decoration came from the same layer, while the rim of another rustic jar was found in the topsoil covering Building I. While rustic ware of poor quality occurs in the earliest deposits of Hadrian's Wall, these sherds are of a better and earlier type; none can be considered as later than Trajan's reign.

3. *From Building I, unstratified:* a globular beaker (fig. 4, no. 3), in smooth ware, of drab to grey colour, with sharply everted rectangular rim and two marked shoulder-grooves. The type is found at Hofheim in the late-Flavian period (Ritterling, *Das Fruhrömische Lager bei Hofheim i. T.* type 118); it rarely outlasts the reign of Trajan (Atkinson, *Wroxeter*, 1923-27, fig. 44, B 10) and is common on Flavian sites in the North (*Slack*, pl. xxiii, 53; *Ilkley*, pl. xxxiv, 12; *Malton*, fig. 15, 17, 19).

4. *From Building I, unstratified:* a cook-pot of "Huntcliff" type, in hard brown ware with black pitted surface (fig. 4, no. 4). First recognised at Poltross Burn (these *Trans.* n.s. xi, 453, pl. V, 6), it is characteristic of the Coastal signal stations (*Arch. Journ.* lxxxix, type 26, 242-4) and has never been reported from a deposit earlier than A.D. 367. The finding of this sherd and of two other rims from similar vessels thus proves a late fourth-century occupation at Watercreek.

5. *From Building I, unstratified:* a cook-pot with burnished black surface and a band of oblique lattice scoring round the body (fig. 4, no. 5). This is a widely used fourth-century type, common all over Britain in the first half of the century: it has been found, with coins dating to A.D. 337, at Westbury (*Devizes Mus. Cat. II*, No. 654, pl. LX, 2), and occurs at Hambleton (*Arch.* lxxi, fig. 16, 163), while it was common in the third period on the Wall (A.D. 300-368), after which it was superseded by the Huntcliff type (*Birdoswald*, these *Trans.* n.s., xxx, fig. 14, 19 a-c). The place in the series of any particular example seems to depend on the extent to which the rim oversails the girth, on which criterion this sherd would belong to the first quarter of the fourth century.

[In addition to the pottery illustrated and described above by Mr. Corder the following may also be noted. A sherd of Derbyshire ware, of the kind which appeared in the excavation of 1931 (these *Trans.* N.S. xxxiv, 39; *Ant. Journ.* xix, 435). A small portion of the rim of a frilled tazza].

D. POTTERS' STAMPS ON COARSE POTTERY,

by Eric Birley, M.A., F.S.A.

1. Found in 1931, find-spot unrecorded. [L]OCCIVIBI, retrograde, upon a fragment of *mortarium* rim (fig. 5). The impression is feeble and slightly distorted. Other examples come from Corbridge (*Arch. Ael.* ser. 4, xv, 274-75, where the stamp is fully discussed), Ardoch and Margidunum (*Antiq. Journ.*, xxiv, an incomplete example). Fabric, lettering and rim-type are the



FIG. 5.—Stamped *mortarium* rims and their stamps, from Watercrook (scale $\frac{1}{4}$).

same as those of the potter who stamps LOCCIM (retrograde) on examples from Corbridge, Ardoch and Tiddington (Stratford-on-Avon): fabric only the same as that used by the potter stamping LOCCI-PR (retrograde) on pieces from Mumrills, Old Kilpatrick, Balmuildy, Newstead, Binchester, South Shields and Sawtry (Hants.). Date, shortly before A.D. 200. Source, possibly the Midlands.

2. From the topsoil over Building II. Three-line stamp, retrograde and feebly impressed (fig. 5), upon a small *mortarium* rim. The last line is broken away except for the base of a rounded central letter and a final upright: the first line reads VAS and the second SAN. There is no parallel known to me.

3. VIRI, upon the handle of an *amphora* in buff ware.

[Our grateful thanks are due to Mr. J. Dixon, the landowner, and Mr. J. Bell, the tenant, for permission to dig, and to the latter for help in various ways and provision of shelter; to Captain Lightburn, Editor of the *Westmorland Gazette*, for assistance in staff work and for a photograph of the *amphora* stamp, and to Messrs.

T. W. Wearmouth and G. Fox, who stuck manfully to the job under most discouraging conditions. In the preparation of this report we also acknowledge with thanks the expert help of Dr. F. Oswald, F.S.A., who examined the decorated Samian pottery; of Mr. I. A. Richmond, V.P.S.A., whose suggestions have cleared up several problems concerning the development of the defences; of Mr. Philip Corder, who contributed not only the descriptions but also the drawings of the coarse pottery (fig. 4); of Lt.-Col. Eric Birley, M.B.E., F.S.A., for a note on the *mortaria* stamps; of Mr. W. Bulmer, who examined and treated the small objects, and Mr. S. T. Thornton, who undertook the survey upon which the plan of the excavations is based].