

ART. XXVI.—*Excavations on Hadrian's Wall in the Gilsland-Birdoswald-Pike Hill Sector, 1928.* By I. A. RICHMOND, M.A.

THE significance of the Durham University Excavations, conducted at Birdoswald in 1928 by Mr. F. G. Simpson and the writer, will be more easily appreciated after a brief summary of the results gained in 1927 by Mr. Simpson on the same site. In that year an attempt was made to solve two problems: (a) the relation of Birdoswald Stone Fort to the Turf Wall; and (b) the relation of a structure on Pike Hill to the Stone Wall.

Two examinations were made at Birdoswald Fort. The east rampart was trenched at a point 39 feet north of the subsidiary East Gate. There was revealed the usual earth rampart, with a frontal revetment of masonry, five feet thick. But below this occurred a disused covered drain, triangular in section, running north-east and south-west. This feature clearly ante-dated the rampart; but it awaits a more precise description, since floods submerged it before details could be secured.

The second trench cut the Turf Wall Ditch at right angles, 180 feet west of the East Gate, on the north side of the *via principalis*. Above the Ditch lay three parallel two-foot walls, two feet and fourteen feet apart respectively, running east and west; they apparently belonged to barrack blocks set back to back and early second-century pottery was associated with them. Later levels here had either been swept away, or had never existed. The trench then penetrated the Ditch-filling, blocks of peat, cut oblong, and pitched anyhow into the Ditch, which was 7 feet 10 inches deep by 27 feet 6 inches

wide at the top. The drainage channel at the bottom, 1 foot 6 inches square, was filled with washed silt. Yet there was no sign of growth therein, and so the case is conclusive for a filling of the Turf Wall Ditch soon after it had first been cut. Meanwhile, the section through the east rampart had demonstrated that the present Fort embodied no earlier work connected with the Turf Wall, while the existence of something earlier, on a different orientation, was suggested by the newly-discovered drain.

Presently, but unexpectedly, the Pike Hill excavation told us more about the Turf Wall. Working from the last-known milecastle, Wall Bowers, and using the now familiar turret-interval (540 yards) as a unit, Mr. Simpson located the sites of three turrets without delay. Two of them lay east of Pike Hill, between Wall Bowers and Bankshead Milecastles: after Bankshead Milecastle came the Pike Hill structure, and then followed the third turret, at normal distance from Bankshead Milecastle. Pike Hill was therefore crowned by a structure which had nothing to do with the normal milecastle and turret system, and so the character of this building and its relation to the Stone Wall become of the greatest interest. If Dr. Bruce observed correctly that its northern angles (swept away in 1870) were rounded, visions of an isolated watch-tower, later embodied in the Stone Wall, may yet come true.

The new turrets presented new peculiarities. Several turrets on the Stone Wall precede in order of construction the Wall which connects them; but the front wall of all these except Walltown Crags is extended beyond their limits to east and west, ready for attachment, with flush front, to the Wall when it came. The new turrets, on the other hand, have no extended front wall; they are square, and the Wall joins them, unbonded, about two feet behind their front face. The turret west of Pike

Hill, moreover, has a plinth on its front wall, though not on the side walls, at a height not preserved in the other turrets. Finally, all are arranged to fit, not the twenty-foot berm of the Stone Wall, but the six-foot berm of the Turf Wall. Once again, an irresistible conclusion follows. The three newly-discovered turrets were built for the Turf Wall, and adapted later for the Stone Wall; in other words, the Turf Wall once ran at least as far west as the turret west of Pike Hill. One season's work, then, had proved that the Turf Wall was quickly disused at Birdoswald, while its original length was a mile and one third longer than had yet been known. One more detail was secured. A beautiful section of the Turf Wall, cut at High House, enabled us to make the first photographic record of its nature. It had slightly battered faces (the front steeper than the back), and the three lowest courses of turf projected from each face like a wide plinth. The turf-work was not homogeneous; there was a core of mixed material, like surface upcast from the Ditch, as in the north rampart of camp B at Cawthorn.

With this information in hand, it was decided to concentrate on the following problems in 1928. The validity of the conclusion that the Turf Wall had stone turrets could be tested by finding such turrets on the sector cut out by the Stone Wall. At Birdoswald Fort, also, it became necessary to test the relation of the Vallum Ditch to the Fort. For the odd course pursued by the Vallum, as laid down in 1896-7, combined with the evidence for an earlier structure on the site of the Fort, led us to suspect that the Vallum was really laid out in relation, not to the Fort, but to some structure which the Fort superseded.

(1) *The Turf Wall*.—We worked from Wall Bowers Milecastle, using the turret-interval as a unit, and searching at Appletree. At first, a depression slightly east of the right spot led us astray, and we found there, albeit for

the first time on the Turf Wall, only traces of sporadic kerbing, where the subsoil was full of soft pockets. Returning westwards, we discovered the Turret, 20 feet square externally, reduced to its footing at the north and west, and robbed of its south-east and south-west angles. But the east wall existed one course high, and three courses of turf ran up against it. The interior awaits excavation, but just inside the west wall lay five large pieces of *dolium*. Encouraged by this success, we explored the sites corresponding to Birdoswald Turret and High House Milecastle. Intensive cross-trenching over a considerable distance at both sites (160 feet at High House) produced no stone-work. High House Turret-site was under grass, and awaits exploration in 1929. So the net result of our work was as follows. The Turf Wall certainly had stone turrets, since at least one exists in the independent sector thereof. Further, this one is set out in relation to those which antedate the Stone Wall in the Pike Hill sector, and it resembles them exactly in size and form. It is therefore certain that these turrets also once belonged to the Turf Wall. On the other hand, we do not know whether the Turf Wall had milecastles or turrets only; and we have failed to find any stone remains on two possible sites between Appletree and Birdoswald. It is, however, too early to appreciate the significance of this negative evidence. Another season's work may change the situation. For example, the eastern series of turrets may be set out from Harrow's Scar milecastle, and their sites therefore may be elsewhere.

(2) *Birdoswald Fort*.—The first task was to determine the relation of the Vallum to the south-west angle of the Fort. The Vallum-ditch was found on each side of the angle. It was much reduced, being only fifteen feet wide, but flooding prevented us from touching bottom. At the angle itself, a radial trench disclosed the fact that the Fort-ditch and the Vallum-ditch did not quite coincide,

but formed two separate channels, with a comb of earth, below ground-level, between them. The comb was also examined where the Vallum-ditch began to diverge from the Fort-ditch on the west. But the junction was not

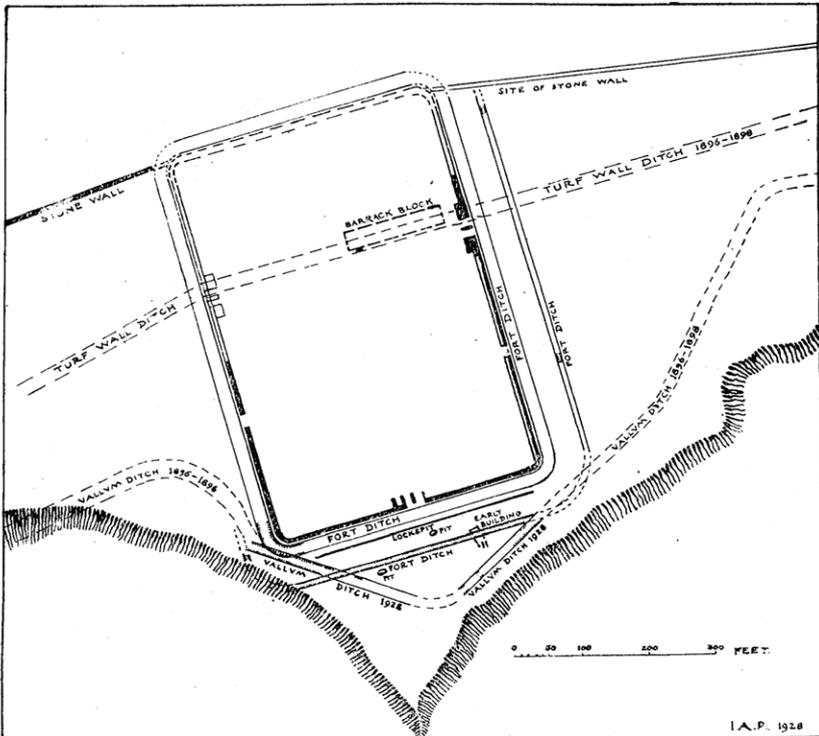


FIG. 1.—PLAN OF BIRDOSWALD
to illustrate the excavations of 1928.

cleared, and flooding led to the abandonment of these trenches. Meanwhile, however, they had shown us an important fact about the filling of the Vallum-ditch. The upper layers thereof were boulder-clay, being, as it seemed to us, the mounds of the Vallum returned in part to the Ditch whence they had come. Below this came cut blocks of peat, following the side of the Ditch, and

continuing as far as we reached. The Fort-ditch on the other hand was filled with silt, covered by fallen masonry. This essential difference in filling demonstrated that the two ditches had a different history.

The history of the Fort-ditch is not in doubt: clearly, it remained open for as long as the Fort existed, and was then gradually filled with masonry, which fell when the Fort was ruined, or was tumbled there by stone-robbers. The history of the Vallum-ditch was revealed by a section cut close to the south-east angle of the Fort. Here the upper layers of boulder-clay filling, as at the west end, gave way to cut blocks of peat, thrown in anyhow, one on top of the other. They covered the whole width of the bottom of the Ditch, and there was no trace of silt or growth visible beneath them. Here we were able to take a complete vertical section of the Ditch-filling, pack it into a special box, and send it to Dr. Kathleen Blackburn, Lecturer in Botany, Armstrong College, Newcastle-on-Tyne. Her report is conclusive:

“ Report on an Investigation of the Bottom of the Vallum Ditch at Birdoswald, with a view to ascertaining how long the Ditch was open.

The investigation was made on a vertical section of the material now filling the Ditch, including some of the subsoil from the bottom. Above the yellow silt of which the bottom was composed, were deposits of peat, which varied in thickness in different sections and were obviously composed of lumps of peat put in by hand. A layer of silt of the same nature as that on the bottom completed the section. An investigation of the material from the floor of the Ditch showed little organic matter, and no traces of the dark coloration which is the usual product of organic decay. What little remains were present consisted very largely of weed seeds: the majority of these were of the Knot-grass (*Polygonum Aviculare*), but examples were also found of Chickweed (*Stellaria Media*) and of a buttercup, which was probably *Ranunculus Acris*. These seeds were in perfect preservation, probably due to the preserving action of the water draining from the peat immediately above. Such a flora as these seeds suggest is one which would only be found on newly-disturbed

ground. From this, and from the absence of organic remains, I think we may assume that the Ditch could only have been open a year or two before the re-filling with the peat."

The evidence for a speedy disuse of the Vallum Ditch at Birdoswald is as good as that which told the same tale about the Turf Wall Ditch. The Vallum Ditch was here blotted out of existence almost immediately after its creation.

Meanwhile, further explorations were explaining why this change had taken place. The spit of land between the visible Fort-ditch and the Vallum was trenched, in the hope of finding what the Vallum was really avoiding. The first trench, cut from the South Gate at right angles to the Vallum, revealed a new ditch. This was traced along the whole south side of the Fort. It varied greatly in depth and width, and it was consequently difficult to establish its exact line. Eventually, it worked out as continuous and generally parallel with the Fort, but not set out quite accurately from section to section. The impression given is that it is unfinished, for it has no drainage channel, and its eastern end is shallow, broad, and inadequately scarped. Burnswark and Cawthorn have produced very similar unfinished work. Nevertheless, it continued round the south-west angle, where we picked it up south of the Vallum-ditch; this section was filled with washed silt, containing a typical piece of third-century cooking pot. Again, a ditch appeared in the same relative position on the east side of the Fort, where we cut across it at two points, at the south end of the north-east angle, and opposite the rampart-section of 1927. On the other hand, the ditch did not appear at the north end of the south-east angle, though we traced it to the west end of that angle where it coincides with the Vallum. Yet, clearly, we have to do with a ditch designed to be cut all round the Fort, and the fact that it was clearly unfinished at certain points may well explain its

absence at the south-east angle. A gang working on one side only (*cf.* *Caes. B.G. i, 42*) would finish one angle last. Finally, this was not the only unfinished work which we encountered. On the south side of the Fort, ten feet in front of the inner ditch, we cut across a small trench, one foot deep by 2 feet 6 inches wide; the same feature was then picked up at four other points, distributed evenly along the whole side. The purpose of such a trench is not in doubt. One like it appears in continuation of the unfinished ditch-system at Cawthorn and at Burnswark; it is, in fact, a lockspit, cut to mark the line where the ditch is to come. So far this feature has appeared only on the south side of the Fort, but it has not been sought elsewhere. Its position is significant. It would mark a second ditch; there is then space for a third; and the fourth appears as the unfinished ditch which we have already described. We should thus get a quadruple system, like that which belongs to the first stage of the Stone Wall at Aesica. But this example at Birdoswald was never finished, and it will be of the greatest interest to elucidate its relation to the Turf Wall and the Stone Wall, a task reserved for 1929.

For the moment, then, we get the following facts. Very soon after the Vallum had been dug at Birdoswald, its mounds were removed, and the Ditch was filled up level with the surface. Not all the mound-content was put back into the Ditch, but practically none was left on the ground. It is reasonable to conclude that much of it went to build the ramparts of the new Fort which was now erected on the site. However that may be, the ditch-system of the Fort was dug right across the filled-in Vallum-ditch, in such a position as to show, at the south-east angle of the Fort, that the two, Fort-ditch and Vallum-ditch, in no way formed part of the same system. When the Fort-ditch was dug, and never finished, the Vallum-ditch had already been disused and filled up.

Again, we can add something to the information about the unfinished Fort-ditch system. After remaining unfinished, it was not blotted out in order to make the site tidy. It silted up gradually, and was filled with all kinds of rubbish, dating from the early second to the early fourth century. In the fourth century, pits would seem to have taken the place of the ditches as receptacles for rubbish, and we found two of them, containing typical mid-fourth-century pottery. Perhaps at the same time, a rough pavement was laid down over the unfinished fourth ditch opposite the south gate of the Fort.

It had thus become evident that the course of the Vallum had indeed nothing to do with the present Fort, since at the time when the Fort was built, the Vallum was out of existence at Birdoswald, not long after it had first been projected. But we also began to get further inklings of structures in association with the Vallum, which had existed before the Fort. In the first place, the southernmost cut for the eastern fourth ditch of the present Fort disclosed the existence of another ditch, cutting across the ditch for which we were looking, on a north-west to south-east alignment. This ditch was narrow and deep, and seemed to lie at a lower level than the fourth multiple ditch; but there was no opportunity to test the relation between the two accurately. Nevertheless, the fact that the new ditch was approximately at right angles to the Vallum, and also to the drain discovered below the rampart of the present Fort close by in 1927, is suggestive of an earlier fortified structure on the Vallum alignment. Fortune has thus put into our hands a clue that should be of value in 1929. Secondly, examination of a soft pocket in the side of the fourth multiple ditch south of the Fort, led to the discovery of a small wooden building, 20 feet by $14\frac{1}{2}$, heavily built with great postholes, and the tracks for sleeper beams in conjunction therewith as in the watch-towers of the German *limes*. The area of the

building was not excavated, since the discovery was made only just before closing for the season. But, as the plan indicates, the orientation of the structure roughly suits that of the Vallum, and it would have lain just at the north edge of the north mound of the Vallum. Yet the chronological relation of the building to the Vallum is in no way defined; and the problem is further complicated by the discovery of a small ditch, running north and south, very close to the south side of the building. The relation of this little ditch either to the Vallum, or to the building, or to the fourth multiple ditch of the present Fort, is still obscure. In short, so far as the relation of the Vallum to buildings earlier than the present Fort is concerned, our knowledge remains little advanced. We can only say that such buildings exist, and that we now have the clues in our hands which may help us to find them quickly.

We also began to excavate a prominent mound, to the north of the *via principalis* inside the present Fort, in the hope of uncovering a building which would shed some light upon the history of the Fort by presenting us with a well-marked stratification. Here our best hopes were justified. A late building, $46\frac{1}{2}$ feet long by 20 feet broad, very closely resembling the late fourth-century barrack-block at Carnarvon, was outlined by trenching, and we began to open up its eastern end. The floor was extremely rough, composed of flagstones and older architectural fragments, such as windowheads, but it was well defined by a layer of burnt material and by pottery. From the small part which we opened, we secured 13 stratified coins, ranging from Claudius Gothicus to Valentinian I (268-375), of which two were illegible. The occupation therefore continued down to 368, when the Wall was overwhelmed in the Pict War, and with this numismatic evidence, for which we are indebted to Mr. Mattingly, the pottery seemed to agree, since no late fourth century pottery of the Scarborough or Malton type was produced

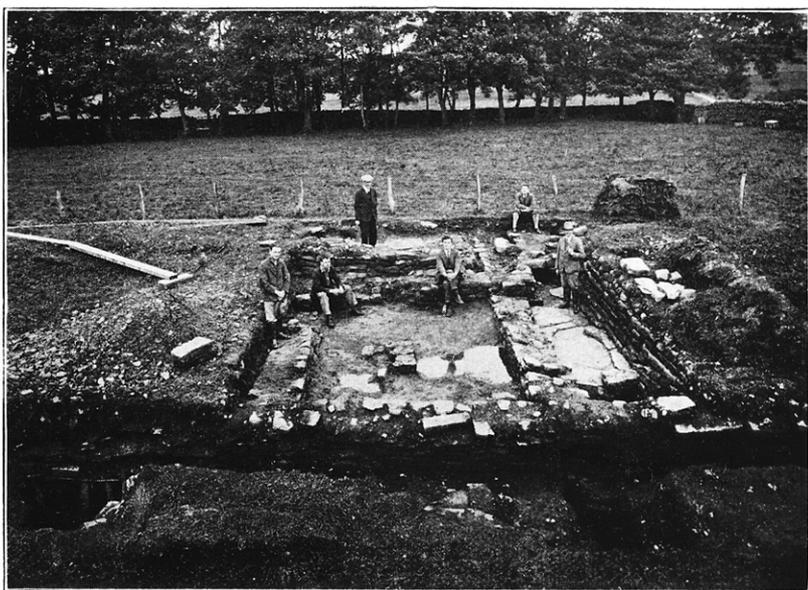


FIG. 2.—BARRACK-BLOCK
at Birdoswald (1928).

FACING P. 312.

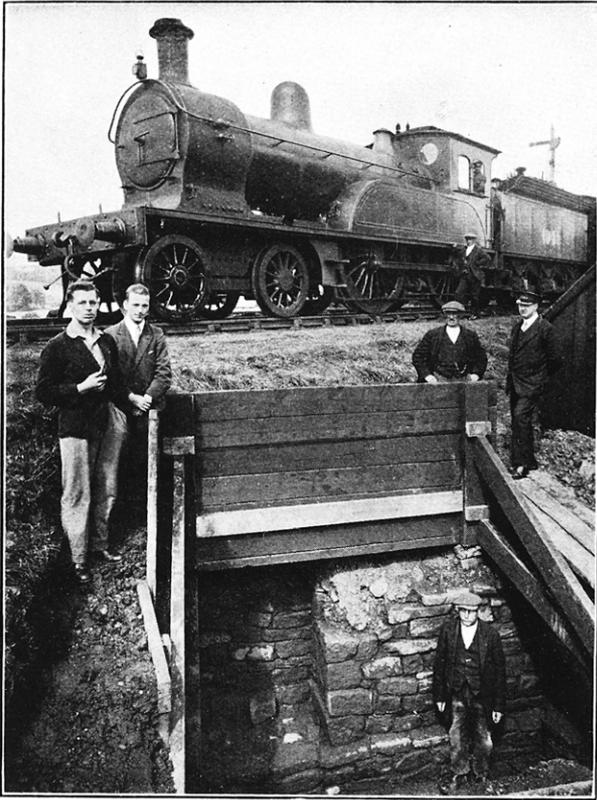


FIG. 3.— POINT OF REDUCTION
west of Poltross Burn Milecastle.

FACING P. 313.

by this part of the building. Yet this was not the end of the story. On to the east end of the building there was tacked an additional structure, of which we uncovered a few feet of the south wall, very roughly built with ill-assorted robbed blocks. A trial trench inside its area produced a representative set of pottery of the Scarborough signal-station type. Here we seem to get beyond 368; but it would be useless to speculate how far beyond, when excavation yet promises to tell us precisely. For the moment, it is enough to know that our hopes for good stratification have been fulfilled.

Of the lower levels, we cleared two rooms in the east of the building. The easternmost of these, 16 feet by 4 feet 2 inches, had a southward-sloping flagged floor, culminating in a sump, which emptied in turn into a drain on the *via principalis*, falling towards the East Gate. There was also a shoot into the sump from the next room, 10 feet 3 inches by 14 feet, which had an earth floor, and a central hearth. The plan of this earlier building is not yet clear, since it extended further north than it was possible for us to dig. But it might well be the non-commissioned officers' quarters of an ordinary barrack. The floors of both rooms produced third-century pottery, that of the east room a silver finger-ring with intaglio and a first brass of Antoninus Pius. The sump yielded a *denarius* of Elagabalus (218-222). Below this we did not probe inside the building; but a trench outside the south wall disclosed that, still deeper, immediately on top of the filling of the Turf Wall Ditch, there lies still another building, of which the south wall is standing three courses high, in well-built, rather thin masonry. This wall is separated from the upper levels by a great layer of rubbish, which presumably represents the disaster of 180.

It is clear, then, that the building disclosed is one of great promise, which gives us a rich stratification, covering the period of occupation of the Fort, down to its

latest days. This building will be the first among those of the Wall-forts to be examined with special reference to its stratification; and as a start in the recovery of the history of the Forts should be of great service to the cause of History.

(3) *Poltross Burn Milecastle.* We have already referred to the fact that several turrets and milecastles were, in order of construction, completed before the Wall. In such cases, the order can be detected by the fact that the Wall was finally built narrower ($7\frac{1}{2}$ feet) than the extended north wall (10 feet) of the milecastle, or turret, and where the two joined, an abrupt reduction in thickness took place at the back of the Wall, for the front face was kept flush. Such "Points of Reduction" had been recorded for the whole mile between Willowford and Poltross Burn, except at the west junction of Poltross Burn Milecastle, which was covered by the railway embankment of the L. & N. E. R. This year, Mr. F. E. Harrison, District Engineer (Newcastle District) of the L. & N. E. R. Co., arranged to uncover the junction, with the co-operation of Mr. Simpson. The task was successfully carried through, and revealed a well-preserved Point of Reduction of usual type. The foundation of the Wall, built ten feet wide, as in the whole sector, is continuous with that of the milecastle. This completes, for an important sector, our knowledge of such junctions, which will eventually contribute largely to the unravelling of the constructional history of Hadrian's Wall. Everyone will be grateful for the enterprise of the L. & N. E. R., and the co-operation of Mr. Harrison.

(4) *Mains Rigg Tower.* This site lies just south of the level-crossing on the L. & N. E. R., west of Over Denton. It is on the Stanegate, almost straight across the Irthing valley from Birdoswald, and nearly midway between the sites of the Stanegate Forts at Throp and Nether Denton. It can be seen from all three places. Here we discovered a

stone tower, 14 feet square internally, and 21 feet square externally. It was built in typical Hadrian's Wall masonry, of the thin-coursed, early type. Round it has been dug a ditch, left incomplete at the south-east angle. Between ditch and tower is a normal berm. No Roman object has yet been discovered. Until a complete excavation has taken place, no more can well be said, except that the structure corresponds closely in size to the Wall-turrets, and the towers on the Cumberland coast (these *Trans.*, o.s., vol. v), and suggests a development of signalling along the Stanegate which has not been recognised hitherto.

The blocks illustrating this article have been kindly lent by the Editor of the *Durham University Journal*, to whom we wish to express our thanks.