

ART. IV.—*The Coastal Mile-Fortlet at Cardurnock.* By  
F. G. SIMPSON and MISS K. S. HODGSON.

WITH CONTRIBUTIONS BY I. A. RICHMOND, ERIC BIRLEY,  
ROBERT HOGG AND JOHN CHARLTON.

I. INTRODUCTION ON THE DISCOVERY OF THE SITE AND  
ASSOCIATED WORKS. By F. G. SIMPSON, Director C.E.C.

THE recent archaeological history of the site at Cardurnock is a chequered one, ending abruptly; for the fortlet, within a year of excavation, was totally destroyed in the spring of 1944 under pressure of national emergency, as was the Roman fort at Templebrough, between Sheffield and Rotherham, in 1917.<sup>1</sup> Earlier, the site had come within an ace of discovery in 1880. During their brilliant campaign of that year upon the coastal works,<sup>2</sup> Chancellor Ferguson and Joseph Robinson of Maryport, learned from an old inhabitant of Cardurnock that the name of a field about 450 yards south of the village was Castlesteads. They visited the field (no. 784), "Nothing, however, could be seen or found" (*ibid.*, 130, 131). Later, when R. G. Collingwood, who must, of course, have read Ferguson's reference to Castlesteads field, made a four days' survey of the coast from Bowness-on-Solway to St. Bees Head, in July, 1928, no old inhabitant remained who knew which was the field; and we know from Mr. Eric Birley and Mr. C. E. Stevens, who accompanied Collingwood on this part of his journey, that the site of the fortlet was not visited. Ferguson, however, had in fact noted the position of the field on a

<sup>1</sup> T. May, *The Roman forts at Templebrough*, iii.

<sup>2</sup> C.W. 1, xiv, 124-131.

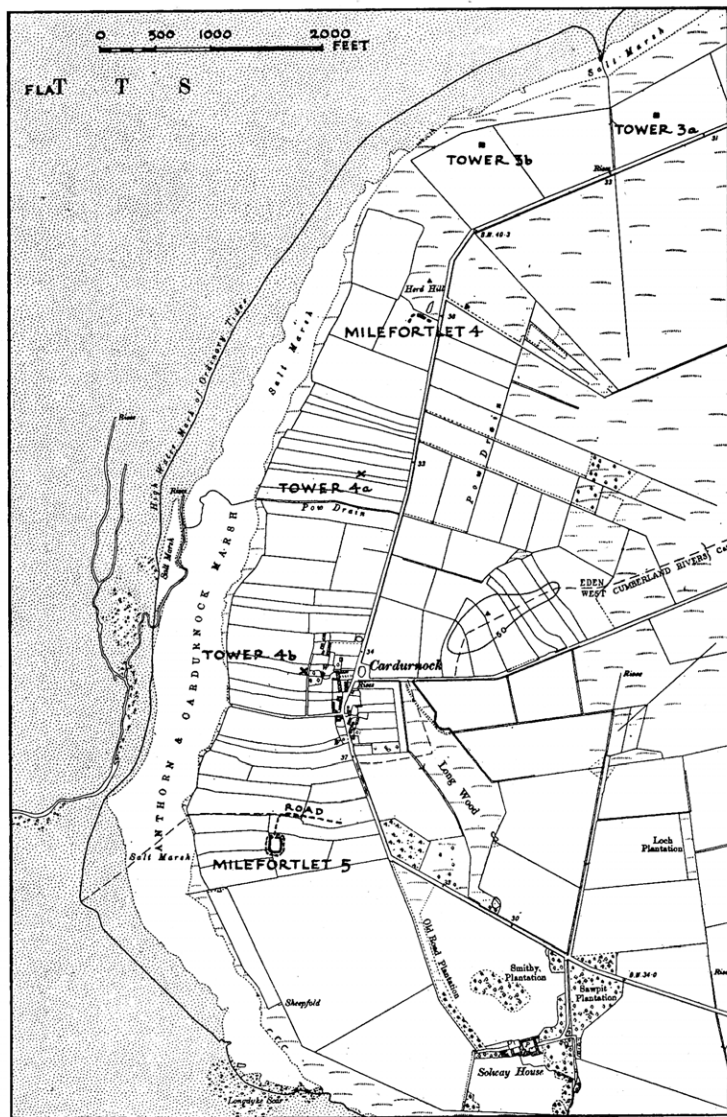


FIG. 1.—CARDURNOCK AND ADJACENT SITES.

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six-inch O.S. map and this map was unexpectedly found in 1937 by Dr. I. A. Richmond, among the archives of this Society at Tullie House (*J.R.S.*, xxviii, 177). The significance of Castlesteads field now became clear (fig. 1). The site occupied a position approximately twice the turret-interval on Hadrian's Wall (540 yards) from the known site of a turret north of Cardurnock village (Collingwood's No. 4, *ibid.*, p. 152, par. 2). Further, if the building at the next interval-position to the north (i.e. in Cardurnock village, as suspected by Collingwood, *ibid.*, par. 3) was a turret, Castlesteads would be the position for a mile-fortlet (Collingwood's name for these components of the coastal-patrol system corresponding to milecastles, and would be the first of these sites to become available for excavation.

Accordingly, in 1938, Dr. Richmond, accompanied by Dr. St. Joseph, followed Collingwood's example and "walked" the coastal extension of Hadrian's Wall. They visited Castlesteads field and confirmed the archaeological significance of the name by finding a minute fragment of Samian: the site was then under the plough. Then came the War, and, in the summer of 1943, our member, Mrs. Crawford, of Bowness-on-Solway, became concerned for the safety of antiquities in the Anthorn peninsula, and wrote to Dr. Richmond, who sent her letter to me, reminding me of Ferguson's map. So I in turn came to see Ferguson's map and realised the significance of the Castlesteads field. The appropriate authorities then concerned with the ground at once gave permission for an inspection and, the next day, Mrs. Crawford, Miss Hodgson, Mr. T. Gray and I first saw the site from the road, unmistakably indicated by a mass of yellow ragwort, sharply contrasting with the dull green of the surrounding field.<sup>3</sup>

<sup>3</sup> The significance of ragwort (*Senecio jacobaea*) as an indication of rich soil, and therefore of an anciently-occupied site, is well illustrated by a story told

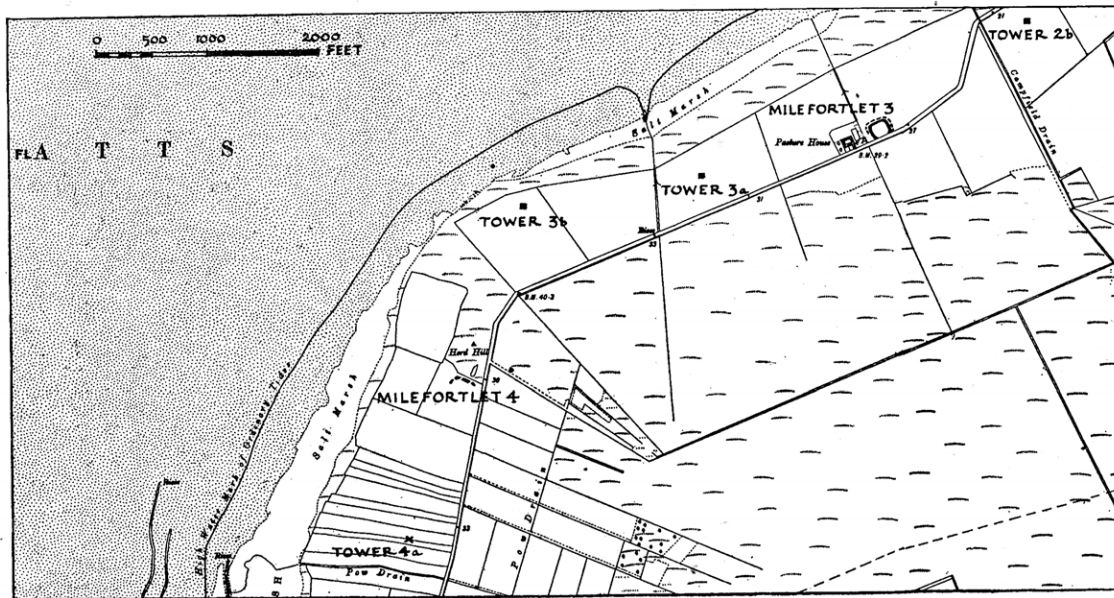
Permission to excavate the site was at once given by the authorities. Messrs. John Laing and Sons, Ltd., of Carlisle, contractors, provided us with a staff of their workers, and the Ancient Monuments Department of H.M. Ministry of Works sent Mr. Thomas Hepple, now our honorary member, to take charge of them. He was with us for ten weeks. He was followed by Mr. George Ritson of Brampton, ex-foreman of our Committee's pre-War staff, most kindly lent to us for a week by Mr. Stanley Walton, Agent for the Boothby Estate; and, finally, we had the services of Mr. William Newton, also ex-foreman of our Committee's staff, and now employed by the Ministry of Works.

Miss K. S. Hodgson was in daily charge of the work throughout the course of the excavation. This began on September 7th, 1943, and continued until the middle of December, when bad weather made further progress impossible on a subsoil of sand and gravel. Next spring, when the destruction of the site was in progress, work was resumed for a week in April, and final results were secured, with the help of Dr. Richmond, in my absence. Anyone who recollects the late Thomas May at work at Templebrough during the winter of 1917, with a steam-navvy less than twenty yards behind his back, hurriedly advancing over a hitherto unexplored site, will understand that it was impossible to apply normal procedure to the excavation of Cardurnock. Further, with all their kindness and consideration, Messrs. Laing could not lend us their most experienced workers, and, but for the presence of our highly-skilled foremen, and of the inspiring example in the person of Mr. William Johnstone, who,

by my father. 'A blind farmer went to view a farm and told a boy to "tie me powny to a yak" (oak) "and fetch me a bit of muggort" (ragwort). "There's nae yaks hereabouts, and Ah divvn't see ony muggort." So the man did not buy the farm, because "land that wunnot grow yaks or muggort 'll grow nowt!"' The characteristic salt-marsh or waste flora, *Aster tripolium*, *Rubia peregrina*, *Erodium*, and *Erythraea centaurium*, so abundant in other parts of the field, was almost absent from the Roman site. K.S.H.

already over 65 years of age, travelled from Gretna daily, the results would have been quite inconclusive. Our predicament is best illustrated by the fact that we were compelled to infer the whole of the west stone channel of the east building, from its rounded south-west corner (Pls. IIa, IIIb.) to its outfall outside the north rampart

The result of the excavation, described below, was to make clear that we were in fact dealing with a system of coastal fortlets and turrets corresponding to the mile-castle-and-turret system of the Wall. Opportunity was therefore now taken to mark down the sites exactly, and to identify more. During the autumn of 1945, when the course of the Vallum between Drumburgh and Bowness-on-Solway was being traced by this Committee, at the request of the Ministry of Works, search was made for the next two mile-fortlets to north and north-east of Castlesteads. The first was located by finding turfwork about 110 yards south-east of the trigonometrical station on Herd Hill; the second, by the same means, immediately beyond the runner north-east of Pasture House farmyard. Before the work began, I walked over the fields in which the two turrets discovered in 1880 (Collingwood's nos. 2 and 3, *ibid.*, fig. 4, p. 151) are situated. When Collingwood wrote in 1928, their positions were not visible (*ibid.*, p. 152). In 1945, masonry had been reached by the plough, and the sites were clearly marked by masonry-debris. Facing stones ploughed up had been deposited at the edge of the field. On May 6th, 1947, the positions of these turrets, for the first time since their discovery sixty-seven years before, were measured by Dr. Richmond and Mr. R. Hogg, in company with Miss Hodgson and Mr. T. Gray. On the same day, the approximate positions of two other turret-sites (Collingwood's no. 1, near Campfield farm, and no. 5 "with a quarry" *ibid.*, pp. 150, and 153), were identified by means of pieces of freestone in the nearest hedge-bottom or on the site. The whole



COASTAL MILE-FORTLET AT CARDURNOCK.

FIG. 2.—PASTURE HOUSE MILE-FORTLET AND ADJACENT SITES.

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series is marked on the sections of the six-inch O.S. map (Cumberland sheet XIV, SE and SW) here reproduced (Figs. 1, 2). Collingwood's casual numbering of the sites is now obsolete. Allowing for the two mile-fortlets between Pasture House and Bowness, it is possible to commence a systematic numbering of the system, from Bowness southwards towards St. Bees Head.

One component of the coastal-patrol works remains to be considered, namely, a military road. That road has already been discovered near Grune Point on the south shore of Moricambe Bay (CW, 1, i, 40). Further Ferguson's 1880 Report, observes that "A paved causey can still be seen between Bowness and Campfield. There it is lost, but its direction would take it [by the two signal-stations to Cardurnock] . . ." (*ibid.*, p. 130). These remains do not appear on the ground to-day, but it should be noted that, in general, the course of the modern road in the Pasture House—Cardurnock sector is strongly reminiscent of that of the Military Way behind the Wall, in that it runs close behind the line of occupied points, although at Pasture House fortlet it is certainly not on the Roman line, since it impinges upon the south rampart. In Cardurnock village it follows the south-eastward turn made by the Roman line in order to reach Castlesteads field. Continuing towards Solway House (O.S. Map, see fig. 1), it turns further to the east, but an older version formerly continued straight on through "Old Road Plantation." In Roman times, before the estuaries of the Wampool and the Waver had been merged into Moricambe Bay as we know it to-day, it is highly probable that the road would have to be carried eastwards on just such a course as that of the old road near Solway House, in order to effect a crossing.

## II. THE EXCAVATIONS, by F. G. SIMPSON and KATHARINE S. HODGSON.

The subsoil at Cardurnock mile-fortlet is normally a fine whitish sand, which merges with a grey marsh silt at the north-east angle. At the south-west angle, however, a ridge of very hard compacted yellow gravel and coarse sand crosses the site diagonally, and the discovery of this ridge by the Roman reconnaissance party was no doubt one reason for the choice of the site, on firm ground above the reach of the highest tides. Further, the slight elevation which it affords gives an excellent view, northwards to the Scottish coast, covering in particular the mouth of the Nith, and southwards both to the Grune and across the low ground east of Silloth towards the fort at Beckfoot, 8 miles further down the coast.

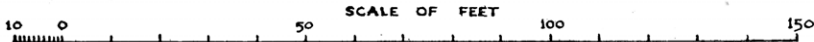
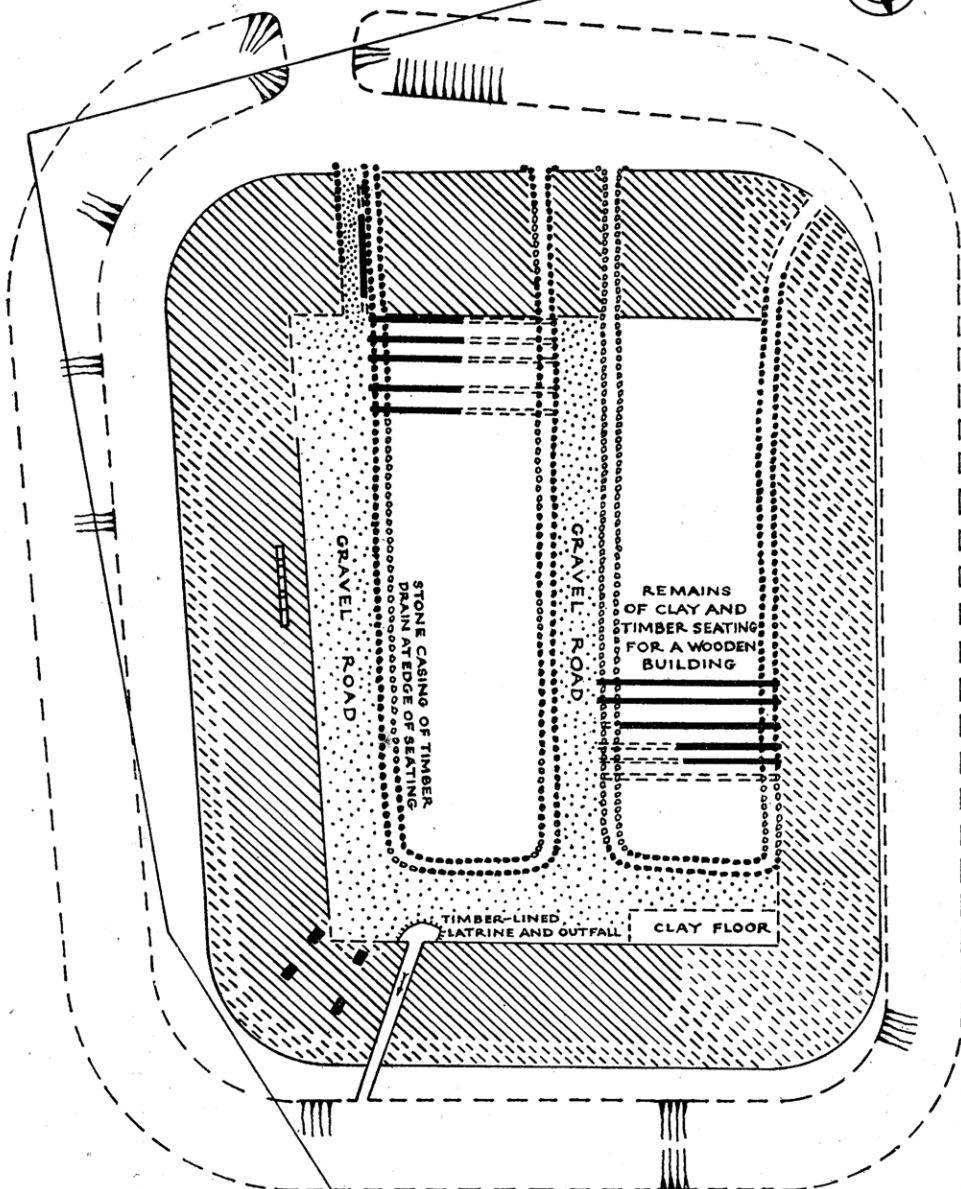
PERIOD I.—The original fortlet (fig. 3) measured 180 feet by 160 feet over its ramparts. These are built of turf, and their width varies between 29 feet on the north side, 25 feet on the south and west sides and 21 feet on the east side. They enclose a not quite rectangular space, 128 feet by 95 feet in size.

An unusually interesting detail in the body of the west rampart was a line of squared turves (Pl. IIIa.), uniformly fifteen inches broad, and extending for 10 feet 4 inches. Individual turves that could be distinguished measured 21 inches, 18 inches, 13 inches and 12 inches respectively. Allowing for squeezing under pressure, this is close to the Vegetian standard dimension of 12 inches by 18 inches. The line of turves lay parallel with the axis of the rampart,  $4\frac{1}{2}$  feet from the back. Along the line, 3 feet 4 inches from its north end, occurred the iron staining left by the head of a spear, which had evidently fallen flat and been lost to sight when the rampart was built over it. Spears were used in the



# CARDURNOCK 1944 PERIOD I

CENTRE-LINE OF MODERN HEDGE



 TURFWORK ACTUALLY TRACED  TURFWORK INFERRED

FIG. 3.

Roman army as minor sighting-poles or ranging-rods (Polybius, *Histories* vi, 41, 7); and the line of turves may be regarded as a preliminary setting-out device, comparable with the lockspit used in marking out a ditch.

Outside the rampart, separated by a berm of varying width, was a ditch, about 18 feet wide and 6 feet 3 inches deep, interrupted by a 13-foot causeway of undisturbed subsoil at the east end of the curve of the north-west angle. Nearly, but not exactly, opposite the causeway there was a narrow passage through the rampart, bounded by a line of large stones on the west and by a sleeper-trench, for a wooden beam or series of uprights, on the east. It seems to have been barely 3 feet 6 inches wide, no doubt to lessen as much as possible the risk of surprise in such an isolated position. A good parallel is offered by the fortlet at Birrenswark, where the long and narrow gateway was designed just over  $4\frac{1}{2}$  feet wide for the same reason (*PSAS*, xxxiii, 225-226).

The position of the gateway, so close to the north-west angle, dictates that the main road or pathway inside the fortlet should run immediately behind the west rampart. To east of it, most of the interior is allotted to two regular plots for buildings, 110 feet long by 28 feet wide, divided by a north-to-south path reached from a gravelled space behind the south rampart. The edge of these building-plots is marked by stone channels (e.g. Pl. IIa), built with two lines of large cobbles and slabs, set vertically on the outer edge and aslant on the inner edge. At their north ends these passed below the rampart in the form of drains, three intact, the fourth missing at the north-east angle. Stone channels of this kind, set in sandy soil, would neither hold water nor form an effective rumbling drain. They are best explained as intended to hold timber drains, probably formed by tree-trunks split in half and hollowed. Their function is explained by the fact that here and there traces remained, of a thick clay layer

covering the plot which they enclosed, which had in turn supported a raft of beams one foot square embedded in the clay (Pls. VI*b*, VIII*b*). Such a raft would carry a timber building and would prevent it both from sinking and from rotting in the sandy soil. A provision of the kind is not without parallels in Roman work. Some blockhouses or towers of the German *limes* are founded in this fashion in sandy terrain (*ORL*, vol. A vi, nos. 6, 15, 17); while at the Augustan double-legion fortress of Oberaden the entire area of many buildings was underpinned with timber rafts set in clay (C. Albrecht, *Das Römerlager in Oberaden*, 1938, p. 20, plate 16, where the resemblance to Cardurnock is striking). The clay and timber mass would itself be virtually waterproof and was intended to be so in order to preserve the timbers, but it would be kept in condition only by effective drains at each edge. Much of the clay and timber has, however, been removed, if it was not taken up by the Romans themselves when the fortlet was remodelled in the second period, as described below (p. 91). Only patches of this exceptionally interesting original arrangement thus remain.

Apart from these buildings, red clay flooring appeared behind the east end of the south rampart, covering a space 30 feet 6 inches long by 7 feet wide and averaging 9 inches thick, though it was very uneven. At one point it was much burnt and had been re-made over a patch of ash; the lower level contained a fragment of Hadrianic Samian ware, of Curle's type 11, while the upper contained an Antonine platter and a mortarium of Docilis (see below, p. 113 and 119). The clay peeled off the back face of the turf rampart as icing peels off a cake, making it possible to measure the batter,  $5\frac{1}{2}$  inches in  $12\frac{3}{4}$  inches, or some 66 degrees. The significance of the floor itself is not easy to interpret. It presumably represents the remains of a narrow timber building behind the rampart, a shed, cook-house or the like.

A timber look-out tower was supplied at the south-west angle. Four large rectangular post-holes, from 3 to 4 feet long and about 2 feet wide and deep, were cut deep into the hard gravel ridge below the rampart. They were tightly packed round the sides with medium-sized cobbles, and more loosely filled with those which had collapsed round the empty holes. They would hold a tower about 14 feet square which, allowing for the difference between stone and timber walling, is as roomy as a Wall-turret or as a coastal watch-tower of the same series.

Just east of the tower, a deep square trench, cut in the gravel, runs askew below the rampart and out to the ditch (Pl. *Va, b*). No doubt it had been a timber-lined culvert, into which, as the wooden roof decayed, the turf of the rampart had subsided, thus preserving its shape. Immediately behind the rampart it widened out into an irregular pit, best explained as the site of a latrine or wash-place, which it was the function of the culvert to drain, as at Milecastle 50 TW (High House). Hence came part of the base of a square-bodied glass bottle.

PERIOD II. The second stage in occupation is marked by a notable reduction in size of the fortlet, to 147 by 120 feet over the ramparts. The west and south ramparts of the first fortlet were retained, but the north and east ramparts were demolished, so that only their heel remained and new ramparts 19 feet wide were constructed, enclosing a smaller rectilinear space some 102 feet long by 75 feet wide (Figs. 4, 5).

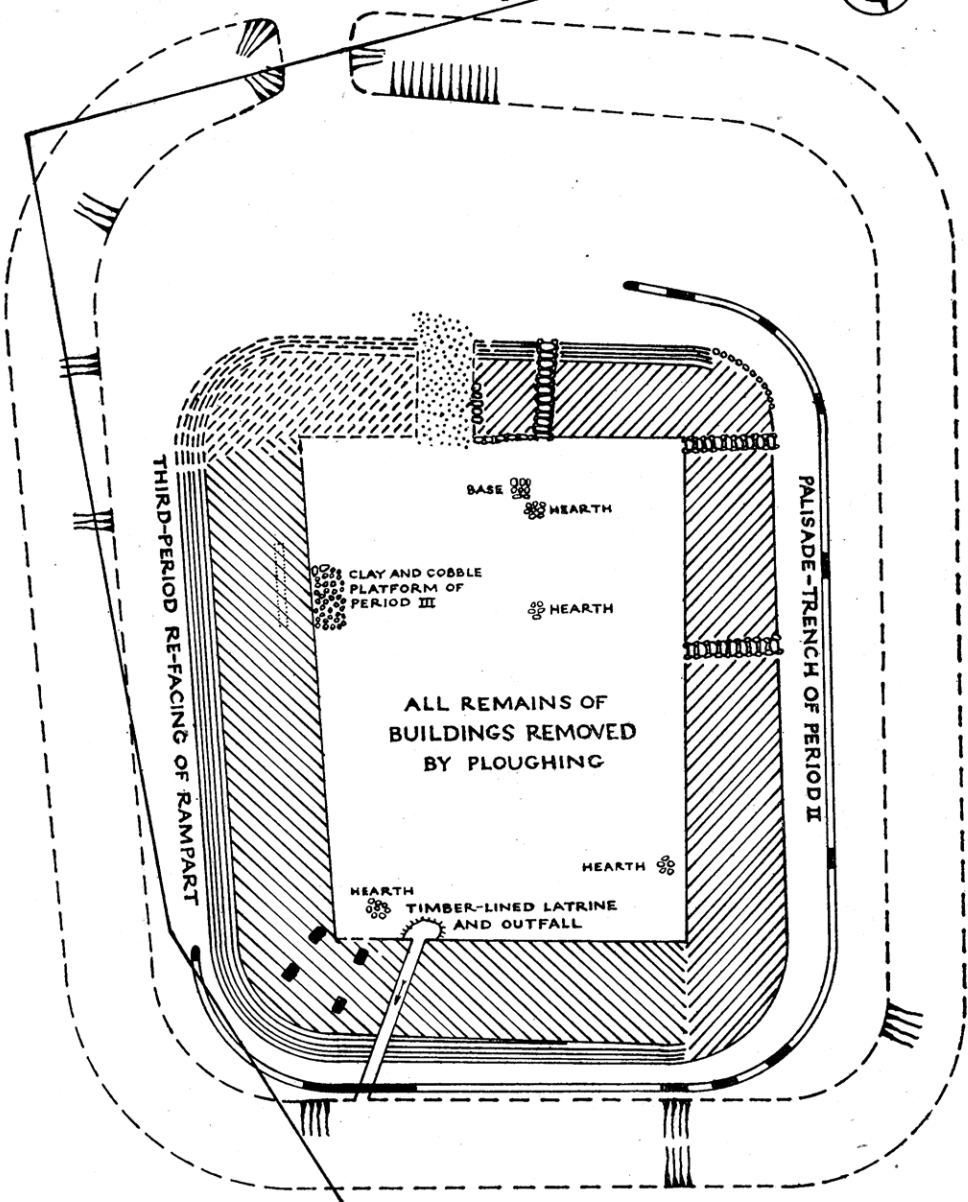
Some stonework, chiefly of sea-shore cobbles, now appears. The outer edge of the new north-east angle, where the ground falls sharply to a marsh, was supported by a kerb (Pl. *VIIb*). Three culverts were built, two through the east rampart and one through the north rampart, to drain off surface water liable to collect behind them (Pls. *VIIa, b, VIIIa*).

A new north gateway was made, considerably nearer

# CARDURNOCK 1944

## PERIODS II AND III

CENTRE-LINE OF MODERN HEDGE



SCALE OF FEET

10 0 50 100 150

- TURFWORK, PERIOD I
- TURFWORK, PERIOD II
- TURFWORK, INFERRED

FIG. 4.

the middle of the new north front than the earlier one. Only the east side of the passage remains, and this is kerbed in large cobbles, which return along the inner face of the rampart for 12 feet, in two courses (Pl. IV*b*). The west side of the entrance has been removed by ploughing, but the spread of road-metal still left in position suggests that it was considerably wider than the early one, and so less abnormal.

It is clear that in this period the clay and timber rafts of the earlier internal buildings were largely removed. The surviving grooves for timber were filled with ashes, stones and debris, or with gravel roadway at the gate, while the stone casings for drains were filled with occupation-earth, containing pottery, and were in due course overlaid by hearths. Three such hearths, probably belonging to this period, can be identified, together with a base of fitted stones near the gateway. No actual building, however, survives, all having been removed by the plough.

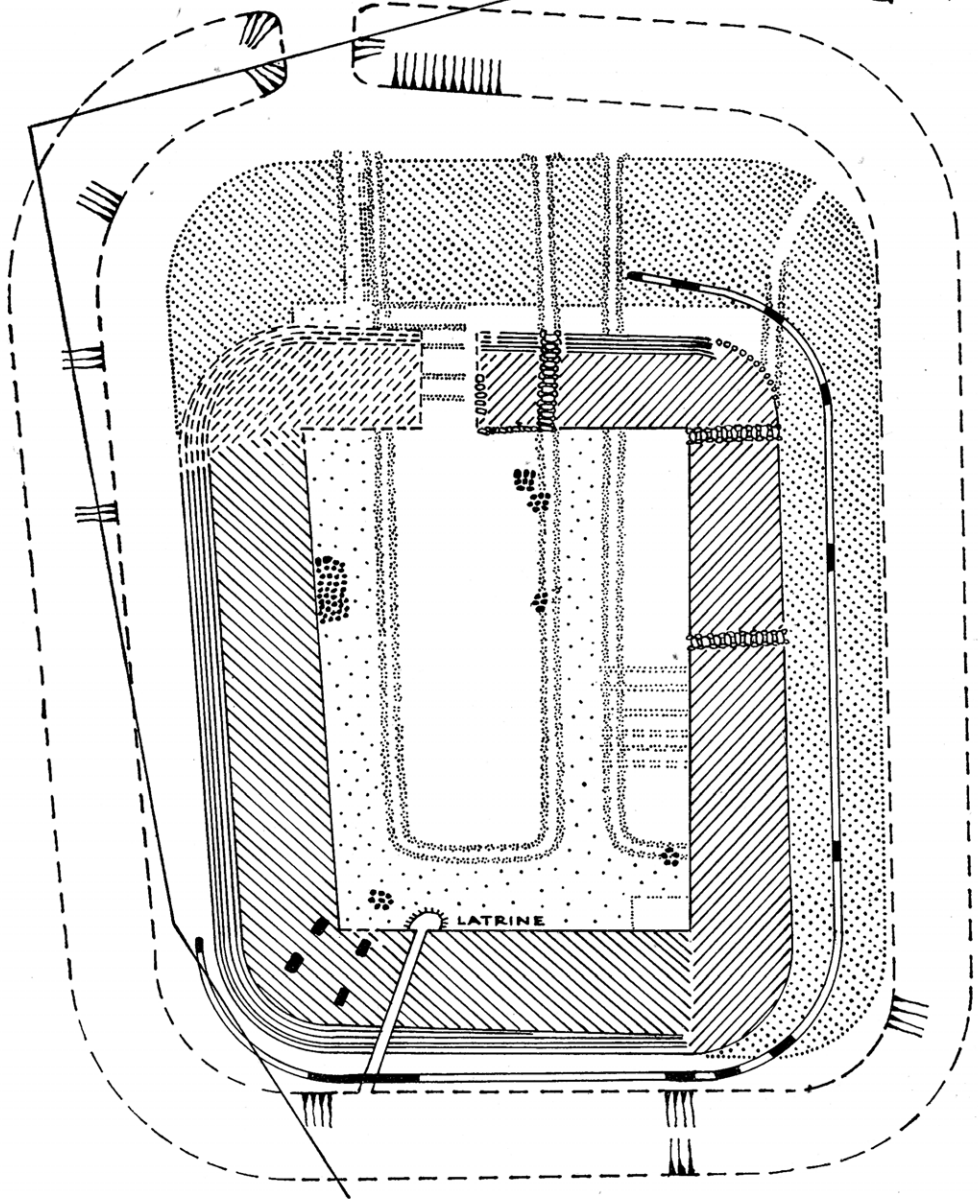
The change in position of the north and east rampart left a 48-foot berm on the north and a 20-foot berm on the east. Unless there were surface obstacles, which have left no trace, the sole structure denying the use of this space to an enemy was a palisade, screening the east and south sides and the north-east and both west angles. This was represented by a palisade-trench, planted on the scanty remains of the levelled earlier east rampart, which had been covered tidily by a gravel spread, through which the palisade-trench in turn was cut (Pl. II*b*).

PERIOD III. The ploughing of the site, which had reduced even the earliest remains to a minimum, had left few structures assignable to the latest, or third, period with certainty. The one feature about which there can be no doubt is the re-conditioning of the rampart, since this affected not only the south and west ramparts, built in the first period, but the north rampart, which was not built until the second period.

# CARDURNOCK 1944

## PERIODS I, II AND III

CENTRE-LINE OF MODERN HEDGE



10 0

50

SCALE OF FEET

100

150

 TURFWORK PERIOD I

 TURFWORK PERIOD II

 DEMOLISHED WORK

FIG. 5.

The outer face of these ramparts was cut back for some  $5\frac{1}{2}$  feet, and a new face was supplied, in whiter turfwork (Pl. Ia). That this feature was a reconditioning, as opposed to an addition, is shown by the fact that it is flush with the older untouched face of the east rampart and with the outer edge of the culvert in the north rampart (Pl. VIIIa). Had it been an addition it would have projected beyond them. The reason for such reconditioning can hardly be in doubt. It affects the sides of the earthwork facing the prevailing storm-winds, and it is easy to picture how the face of the old rampart would sooner or later be eroded by the fierce Solway storms. The new turfwork showed well everywhere, but was clearest at the south end of the west rampart (Pl. Ia).

The sole trace of stone building probably belongs to this period. This is a rectangular block or platform of clay and cobbles, 7 feet from back to front and 13 feet long, with two facing stones in position, which was applied to the back of the west rampart (Pl. VIa), a little north of centre. Its purpose is obscure, but it is like a small edition of the clay-and-cobble *ballistaria* at High Rochester (*Northumberland County History*, XV, 98) and may represent the stand for a small machine intended to dominate the foreshore.

There was also a high-level hearth in the west angle. Two iron knobs, perhaps the remains of a brazier, as at milecastle 50 TW (High House, CW, 2, xxxv, 226), adhered to its stones, while a disc brooch, (see below, p. 95) and some pottery were found just beneath it.

THE APPROACH ROAD. The exact position of the main coastwise road linking the mile-fortlets is not known, though a probable course has been discussed above (p. 84). But it is clear that the Cardurnock fortlet, lying upon an isolated hummock surrounded by low ground, was reached by a branch road, from 9 to 10 feet wide, and



very slightly metallised. After running northwards from the fortlet gateway, this road was found taking a sharp bend eastwards and was later observed, still further east, in a contractor's trench (Fig. 1). It was evidently making for the line once taken by the nineteenth-century road past Solway House. In its eastward course it was flanked on the north by an ancient turf mound of unknown significance.

### III. REPORT ON THE OBJECTS OF IRON, BRONZE, JET, HAEMATITE AND CLAY FROM CARDURNOCK, 1944.

By ROBERT HOGG, B.Sc.

#### A. *Iron objects.*

The iron was for the most part completely oxidised, and little could be attempted in preservation except the mechanical removal of the encrusted clayey matter, and the impregnation of the remainder with spirit shellac, to which was added a little lamp black (Plenderleith, *Preservation of Antiquities*, 45).

Nevertheless even with this simple treatment some interesting identifications became possible.

#### Plate IXa.

- No. 1. Knife blade, 6 inches long. The tang, the greater part of which is missing, is still enclosed in a metal binding used for the attachment of the handle.
2. Knife blade, 5 inches long, tang missing.
3. Tang and support for knife blade, of which part still remains rivetted between the plates of the support.
4. Socketed spear-head, tip missing, 6½ inches long.
5. Socketed spear-head, tip missing, 10 inches long.

#### Plate IXb.

- No. 6. Shackle for chain assembly.

The shackle-pin is rivetted into position; in the modern counter-part the pin is threaded and secured with a nut.

- 7 & 8. Two fragments of uncertain use.
- 9 & 10. Fragments of a loop (4) and buckle (5), both probably from harness fittings.
11. Loop with broken tang, possibly a hinge.
12. Part of a ring, possibly the top binding ring of a wooden-handled tool or instrument.
13. A wall hook.
14. A small cleat.
15. Trace hook for a cart shaft. The greater part of the attachment plate is missing, but one nail head remains. The hook tapers towards its free end and the tip is bent sharply upwards, to prevent the trace from slipping out on a down gradient.
16. Tanged hook, tip turned back.
- 17 & 18. Parts of handles.
19. Fragment of beading. 20. A ferrule.
21. Part of an L-shaped slide key. A small part of the reverted claw remains.

There were also about 30 nails and bolts of various sizes. The nails vary in size from a large square-headed one, 5 inches long, to a small brad-like example,  $1\frac{1}{2}$  inches long. Some of the bolts have moulded heads similar to the bronze examples from the Newstead lock-plate. Relics of this kind go well with the abundant evidence for timber buildings.

Some ten other pieces were too fragmentary for identification.

#### B. *Bronze objects.*

1. Disc brooch,  $1\frac{1}{4}$  ins. in diameter, without ornamentation (cf. R. G. Collingwood, *Archaeology of Roman Britain*, fig. 64, no. 101). Found under late hearth, SW. angle.
2. Small buckle and hinged plate with pierced scroll design for fixing to a strap.

C. *Jet objects.*

1. Three small jet erratics. They have the characteristic sub-angular shape of material derived from glacial boulder-clay deposits, and one specimen bears glacial striae. They represent almost certainly the raw material of commerce, as explained in the note below.
2. Jet gaming counter,  $1\frac{1}{4}$  ins. diameter,  $\frac{1}{2}$  in. thick.
3. Block of jet, roughly rectangular,  $1\frac{3}{4}$  in. x  $\frac{3}{4}$  in. x  $\frac{3}{4}$  in. Apparently an unfinished article.

There is no record of any natural source of jet from this area. The nearest locality from which it has been recorded is the famed Whitby deposits of the Yorkshire Jurassic strata. There the best commercial material is found, not in the strata themselves, but as erratics in the boulder clay of the cliffs, or as pebbles washed up on the shore (Kendall and Wroot, *Geology of Yorkshire*, 364). This circumstance, it would appear from the above material, was equally well known to the Roman trader.

We can, by the evidence of these few pieces, catch a glimpse of the jet trade in Roman Britain: and recent military experiences still fresh in our minds remind us of the sale of 'perspex' by the quartermaster for the leisure-time activities of the troops!

D. *Miscellaneous Objects:*

1. Small piece of haematite, ground into roughly pyramidal shape, and apparently used as a source of dry colour.  
Haematite, sold commercially as 'rud,' was at one time used fairly extensively locally for, e.g. sheep marking, the colouring of house steps, etc.
2. Small gaming counter of Samian ware,  $\frac{1}{2}$  in. in diameter.

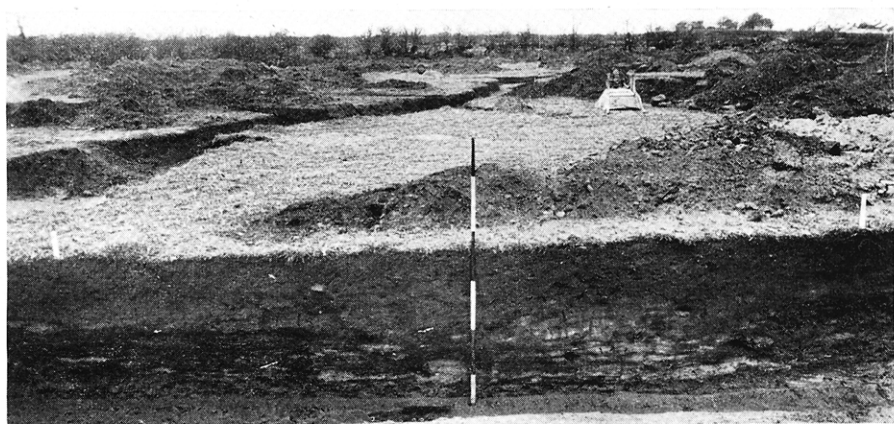
PLATE I.

CROSS-SECTION OF WEST RAMPART AND *INTERVALLUM*,  
CARDURNOCK, LOOKING NORTH, IN THREE VIEWS FROM  
LEFT TO RIGHT, PEGS INDICATING OVERLAPS.

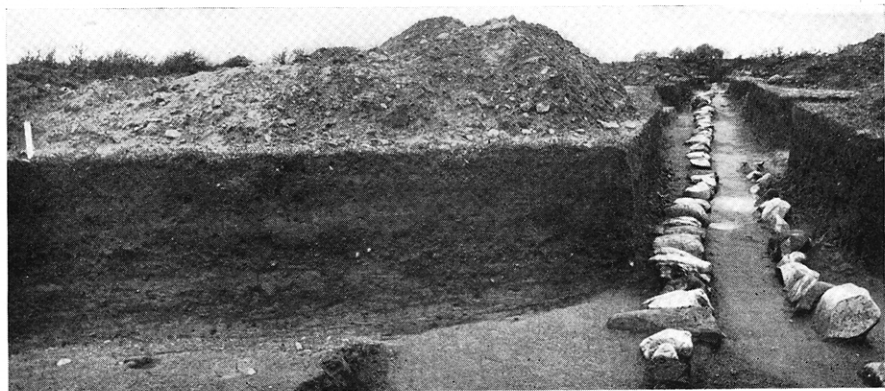
- (a) Front of rampart, with third-period re-facing in lighter shade of turf-work.
- (b) Middle and back of rampart, showing first-period turf-work.
- (c) *Intervallum*, showing gravel road on turf packing and westernmost first-period stone channel for timber drain.



(a)



(b)



(c)

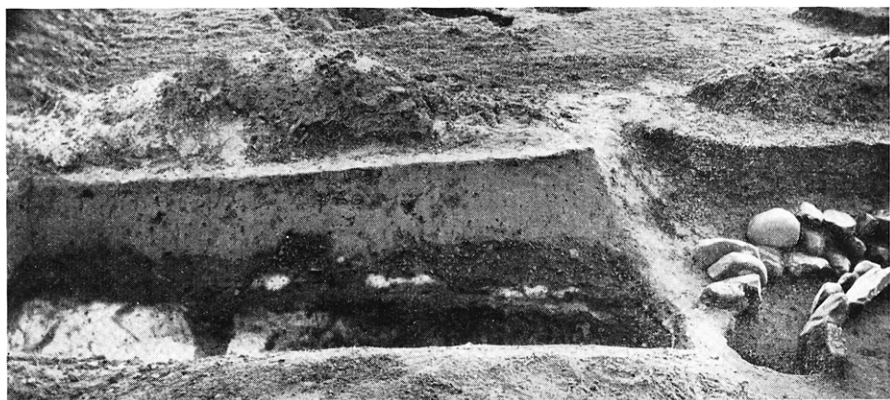
PLATE II.

- (a) South ends of first-period stone channels and central roadway, with stone casing on east side of west building in background.
- (b) South-east corner of easternmost first-period stone channel and turf-work of demolished first-period rampart covered by secondary gravel surfacing and post-Roman accumulation of blown sand. Turf-work and gravel are cut by the secondary palisade-trench.
- (c) First-period stone channel on east side of west building, covered by second-period north rampart of turf and culvert. The outer mouth of the culvert appears to left.

(a)



(b)



(c)



PLATE III.

- (a) Line of squared turves at base of first-period west rampart, with impression of fallen spear (beyond second scale).
- (b) South ends of stone channels defining first-period building plots, looking west.





(a)



tewaas\_002\_1947\_vol147\_100b

PLATE IV.

- (a) First-period stone channel on east side of west building, with its west side removed and its site occupied by a second-period hearth. The channel runs on below the inner mouth of the secondary culvert (cf. Pl. II, *c*).
- (b) Close-up of the same, with fragments of *mortaria* in demolished channel.



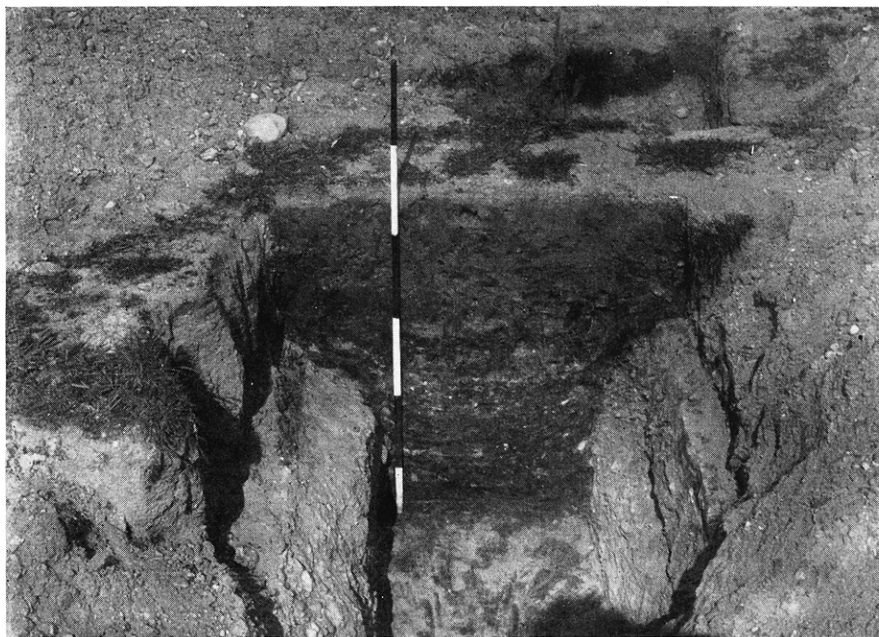
(a)



(b)

PLATE V.

- (a) Outer mouth of trench for first-period timber-lined latrine-culvert, showing superimposed turf rampart collapsed on decay of timber.
- (b) Inner mouth of trench for first-period timber-lined latrine-culvert, showing superimposed turf rampart collapsed on decay of timber.



(a)



(b)

PLATE VI.

- (a) Westernmost first-period stone channel, with third-period rectangular platform of clay and cobble built against the bank of the west rampart.
- (b) First-period clay layer, with beds for timber foundation-raft, at second-period north gate of which the kerbed east side appears in the background. The bed in the foreground is filled with bottoming of the second-period roadway.



(a)



(b)

PLATE VII.

- (a) First-period stone channel on east side of west building continuing northward beyond superimposed second-period culvert and rampart.
- (b) First-period stone channel on east side of east building, covered by culvert and curving front kerb at north-east angle of secondary east rampart, whose turfwork is seen in the background behind kerbing and culvert.





(a)



(b)

PLATE VIII.

- (a) First-period stone channel on east side of east building, with superimposed culvert of second-period rampart, here removed except for turfwork seen in background (by the ranging-pole).
- (b) Second-period stone hearth and culvert of east rampart resting on first-period clay layer with beds of timber foundation-raft.



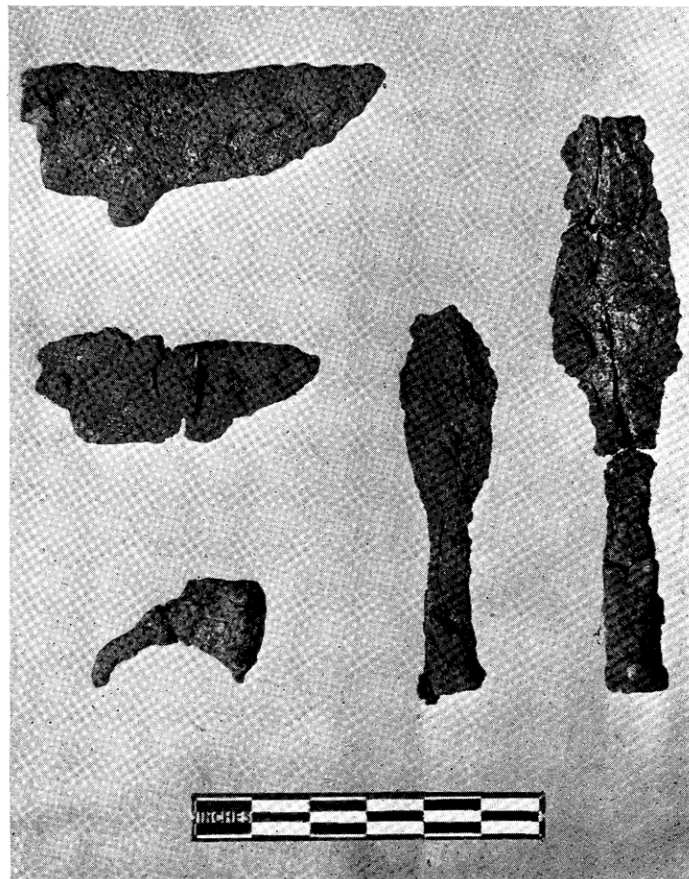
(a)



(b)



(b) Iron objects from Cardurnock



twaaas\_002\_1947\_vol47\_0006 (a) Iron objects from Cardurnock (1-5).

## IV. THE POTTERY.

## A. GENERAL OBSERVATIONS, by I. A. RICHMOND.

The pottery from Cardurnock divides sharply into two homogeneous groups. The vast bulk, whether Samian ware or coarse wares, betokens a second-century occupation. Mr. Eric Birley's study of the decorated Samian ware specifies nos. 3, 4, 5, 6 and 7 as Hadrianic. In his list of potters' stamps on Samian ware item *c* is Hadrianic, while among *mortarium* stamps no. 6 is matched at the short-lived Turf-Wall milecastle 50. There follows a great mass of Hadrianic-Antonine and purely Antonine pieces, but there is also evidence that the occupation lasted until the close of the Antonine period in A.D. 196, for the fact that the beakers 12 and 13 match pieces which fall at the very close of this period at Birdoswald must be given due weight. All this material is associated with both the earlier and reduced fortlets and the removal of the occupation levels makes it impossible to draw a hard and fast line between the two.

Apart from its value for dating the occupation, this mass of pottery has an interest for the social historian. Cardurnock is a relatively remote coastal fortlet, but Samian ware abounded, as did all the everyday types of coarse ware. Only the riveted cooking-pot, no. 11, points to momentary scarcity of these common but most readily breakable vessels. But both in Samian ware and in coarse ware all fancier shapes are almost wholly absent, the sole exception being the Hunt cup in Castor ware, no. 50. It thus becomes clear that the pieces as a whole represent what an isolated patrol-garrison could buy.

The second group comprises highly distinctive fourth-century wares, a complete absence of third-century wares being notable. The proportion of this material is not high in relation to the second-century sherds, but it must be remembered that it is only such material as the

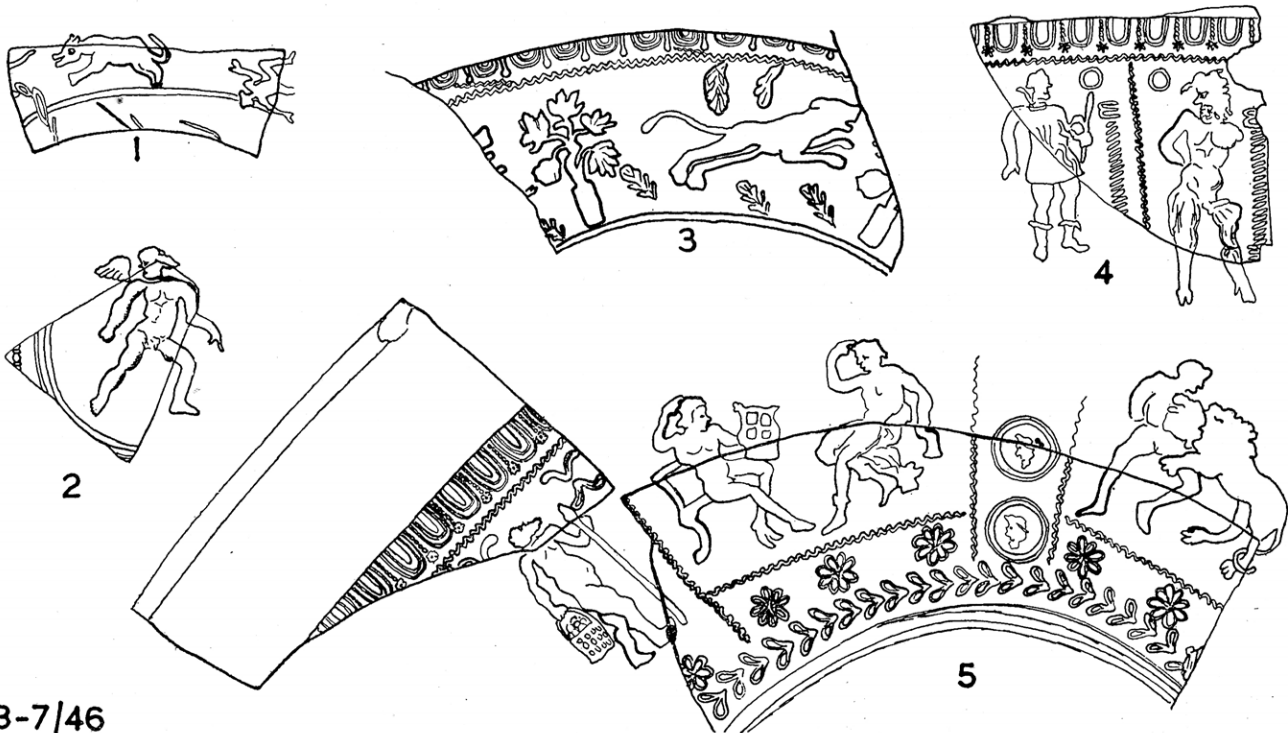
plough has spared and that much more may therefore have perished. The group commences with nos. 16-19, the most distinctive being no. 18, a black cooking-pot with everted rim, of a type which belongs to A.D. 297-367 at Birdoswald and at Bewcastle occurs both sides of A.D. 343. The other three pieces belong to cooking pots of Huntcliff ware without the distinctive internal groove, a type "uncommon" in the Yorkshire signal-stations (*Arch. Journ.*, lxxxix, 243) and therefore to be regarded as typical of the period preceding A.D. 367: it occurs, though not in a stratified deposit, at Bewcastle. The other pieces, comprising cooking-pots (20-24), flanged bowls (40-42) and a platter (51), are all typical of the period A.D. 369-383. The group as a whole thus falls into this epoch. The complete absence of mortaria from the late deposit as a whole should be noted, whether due to chance or to social conditions.

#### B. THE SAMIAN WARE, by ERIC BIRLEY.

##### (i) *Figured samian* (figs. 6, 7).

The small series of figured samian includes several pieces of more than usual interest; particular attention may be directed to the Hadrianic pieces, nos. 3-7. In my study of the Cardurnock material I have been able, through the kindness of Mrs. Stanfield, to make use of the extensive series of drawings, rubbings and notes collected by the late J. A. Stanfield, whose untimely death in 1945 was so bitter a blow to the study of samian ware; he had been working for many years on Central Gaulish potters of the second century, as members of this Society will be well aware,<sup>4</sup> and he had made such progress with that study, in particular with the drawings to illustrate it, and left so valuable a collection of notes, that I hope it will be

<sup>4</sup> Cf. CW, 2, xxxv, 182-205: "A Samian Bowl from Bewcastle, with a note on the potters Casurius and Apolauster," and xxxvi, 135-9: "Samian ware from Voreda."



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FIG. 6. (½).

possible before long to produce a standard work of reference on the subject, if not in his own words, at least substantially as he would have written it; my only regret is that my own drawings fall so far short of his high standard.

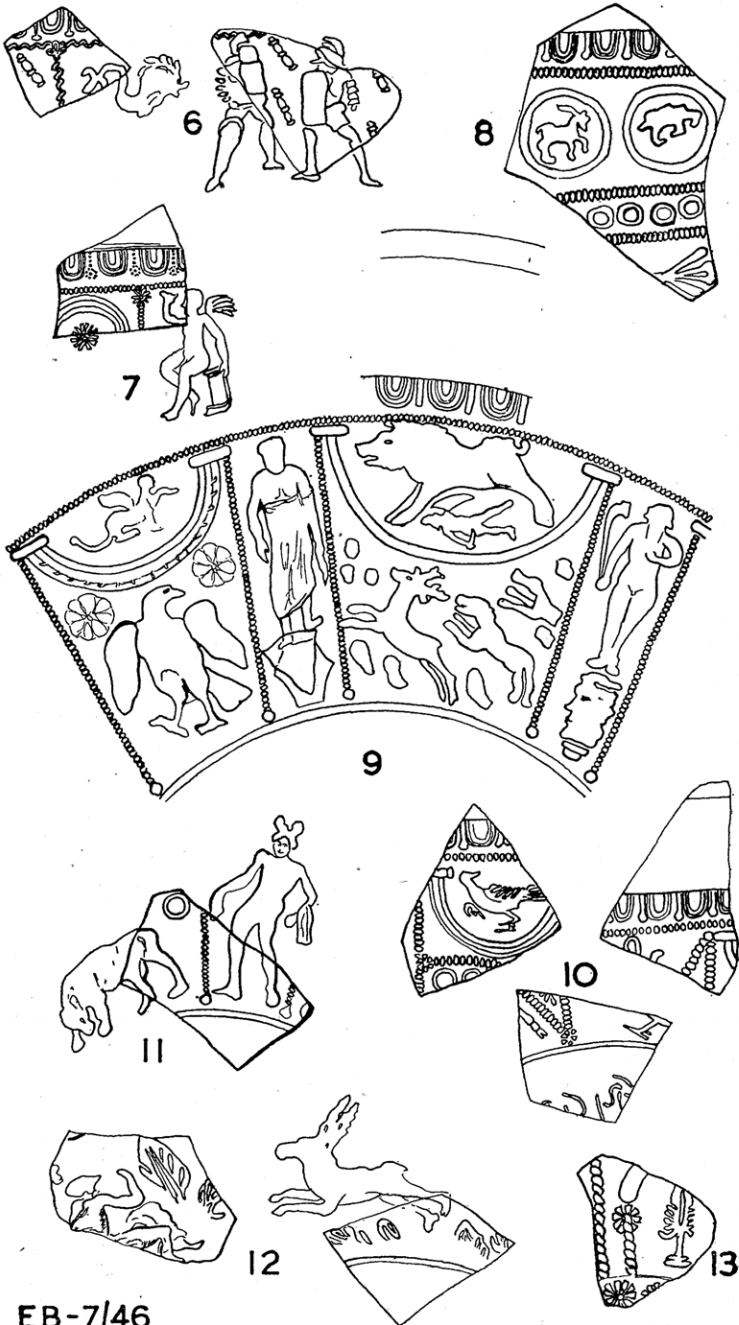
In the following description of the Cardurnock pieces, O. followed by a number refers to Oswald's *Index of Figure-types* (in which cross-references are also given to Déchelette's types); Ricken 1939, to H. Ricken, *Die Bilderschüsseln der Kastele Saalburg und Zugmantel, II. Teil: Mittelgallische Ware*, reprinted from the *Saalburg Jahrbuch IX*, 1939—a most valuable study of the work of a number of Central Gaulish potters, mainly of the time of Hadrian. All the Cardurnock vessels are of Dragendorf's form 37.

1. (From the later gateway, in road-metal). Worn fragment, partly burnt. Types: *man* (O. 687), *beast* (O. 2028) and *acanthus leaf* (impressed, like the man, across the lower border of the decoration); below, traces of a potter's signature, mostly obscured by the attachment of the footstand (cf. also fig. (9), top right); perhaps CR, for CRICIRO (cf. no. 10 below). *Antonine*.

2. (Unstratified). Type: *Cupid* to r. but looking l. (O. 376A), within two concentric circles; to l., part of a vertical *astragalus-row*, as used by several of the later Lezoux potters. *Antonine*.

3. (In road-metal behind S. rampart). Nearly a quarter of a very small bowl, with 1"-rim above the ovolo which its attachment has partially obscured. Types: *panther* to r. (O. 1511) and *tree* repeated; *leaves* in the field and hanging from an upper *wavy line* (which twice runs out into the ovolo, through lack of care on the part of the mould-maker), *ovolo* with slightly swollen terminal to its plain tongue. All the types are matched on signed work of the potter BVTRIO (cf. JRS xx, 1930, 71-77 and especially pl. III, 9) to whom this vessel is to be attributed. *Hadrianic*.





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FIG. 7. ( $\frac{1}{2}$ ).

4. (From behind later North rampart, in gravel of road-metalling). Fragment from a larger bowl, with rim (not drawn) nearly 2" high. Types: *warrior* to r. (O. 154), *Pan* to r. but looking l. (cf. O. 707), layered *columns*, plain *circles* in the field, *wavy lines* unmasked by rosettes at their junction, *ovolo* with corded tongue and rosette terminal. All these types recur on unpublished vessels from Benwell and Corbridge, with additional types which permit their attribution to the group of potters QVINTILIANVS, GRATVS and PATERCLOS. *Hadrianic*.

5. (From E. stone channel of western building-plot). Much of a large bowl, with figure-types in rather high relief. Types: *Silenus* with basket and staff (O. 595), *Apollo with lyre* to r. (O. 83), impressed carelessly in the mould, so that the l. foot is repeated, *seated man* to l. (O. 571), *Hercules and lion* (O. 796), *mask* to l. (cf. O. 1236) within two concentric circles (the inner one very fine); the design is closed by a lower wreath of simple *bifid leaves*, and divided into panels by *wavy lines* without rosettes at their junctions; eight-petal *rosettes* occur in the lower part of the field, and a slightly more curved *bifid leaf* is used in the upper part; the *ovolo* has a beaded tongue and rosette terminal. The figure-types do not help in identifying the potter who made this interesting vessel, for they were used by a succession of potters from LIBERTVS and IOENALIS to ADVOCISVS and DIVIXTVS; but the general style of the decoration suggests a connection with the QVINTILIANVS group. *Hadrianic*.

6. (From within later North rampart, unstratified). Two fragments from a fairly small bowl. Types: *gladiators* to r. and l. (O. 1003, 1004), *dolphin* to r. (O. 2382), *double astragali* in the field, *trifid leaf* masking the junction of vertical and horizontal *bold wavy lines*, *ovolo* with knobbed terminal to its plain tongue. The

gladiators, dolphin, astragali and trifid leaf all occur on vessels by the Trajanic "Anchor Potter", but his ovolos were different, and he invariably used fine bead-rows and never wavy lines. But all the types, including ovolo and wavy line, recur regularly on the work of a potter whose cursive signature was read by J. A. Stanfield as G.IVL.VIBIVS.<sup>5</sup> The bold wavy line and trifid leaf are regular features of that potter's signed work; so are the double astragalus and miniature paired dolphins and shields, used

### TYPES OF G.IVL.VIBIVS

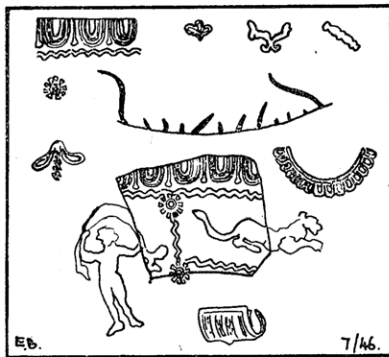


FIG. 8. ( $\frac{1}{2}$ ).

either in the field or (apart from the shields) astride the vertical wavy lines. Dr. Oswald has only one instance of this potter's stamp in his *Index*, from Ahun (Guéret); in Ricken 1939 there are examples from Berghausen in Baden and Rheinzabern, and Stanfield noted and drew signed pieces from Corbridge, York, Holt and Chesterford. The style of G.IVL.VIBIVS is so distinctive that I have felt it worth while to give, as fig. 8, drawings of his determinant types, and of a fragment in his style from

<sup>5</sup> Ricken, 1939, p. 4 and fig. 1, suggests the reading GELENVS or CELENVS, but the examples figured in the Stanfield papers show that that reading cannot be correct.

Housesteads on Hadrian's Wall; and the following site-record, based on the Stanfield papers and on my own researches, will show how widespread a distribution his wares obtained:—

*England*: Benwell, Housesteads, milecastle 48 (Poltross Burn) and Birdoswald on Hadrian's Wall; Corbridge, Carlisle, *Cardurnock*, Malton, York, Chester, Cirencester, Abingdon, Leicester, Chesterford, Colchester, Hambleden, London, Southampton.

*Wales*: Holt, Brecon Gaer.

*Germany*: Saalburg, Zugmantel, Heddernheim, Berghausen, Rheinabern.

The close association with the "Anchor Potter" might have suggested activity in the time of Trajan, but the occurrence of his wares at four sites on Hadrian's Wall, at Cardurnock and at the Saalburg earth-fort, shows that he must be dated somewhat later. *Hadrianic*.

7. (Unstratified). Worn fragment from a small bowl. Types: *seated Cupid* to l. (O. 443A), *large rosette* within double concentric circles, *small rosette* at junction of vertical and horizontal *bead-rows*, *ovolo* with beaded tongue terminating in a beaded rosette. The rosettes, bead-row and ovolo are characteristic of ACAVNISSA,<sup>6</sup> to whom this piece may be assigned with confidence. *Hadrianic*.

8. (From within later North rampart, unstratified). Worn fragment from a vessel made in a worn mould. Types: *goat* to r. (O. 1836), *indeterminate beast* to r. (not recognisable in O.)—both types first used by the Trajanic potter RANTO, but copied by several later potters, such as CINNAMVS—large *bead-row*, plain *circles* in two sizes, *ovolo* resembling one used by DIVIXTVS, to whom this piece may perhaps be attributed. *Antonine*.

9. (From within later North rampart, on subsoil, and from E. stone channel of W. building-plot). Nearly half

<sup>6</sup> Cf. CW, 2, xxx, 184 (Birdoswald); JRS, xix, 120-4 and xxi, 251-5.

of a large bowl, made in a well-worn mould (so that much of the detail is obscure); the drawing includes a certain amount of restoration. There is an unusually large number of types: *sphinx* to r. (O. 853), *eagle* to front looking r. (O. 2167), *man* to front (O. 905), *boar* to l. (O. 1666) over *small warrior* (O. 1059), *stag* to l. (O. 1781), *bear* to l. (O. 1627), forepart of *dog* to l. (O. 1976), *caryatid trumpeter* to front (O. 711) over *Pan mask* to l. (O. 1214)—all these types were used by various potters, but CINNAMVS is the only one attested as using all of them, and the *ovolo* is one of his; the decorative scheme is rather more elaborate than usual in his work, but there is no need to look elsewhere for the maker of this bowl. *Antonine.*

10. (From within the South rampart and the south-east angle). Three fragments from the same vessel; on one of them, below the decoration, is part of the cursive signature of the potter CRICIRO (shown full size in fig. 9, top left). Types: *bird* to l. looking r. (O. 2295A), feet of another *bird* (perhaps the *cock* to l., O. 2348); the field is divided by large *bead-rows*, the junctions of which are masked by rather crude six-bead rosettes; the panel decoration of the present vessel is comparatively unusual for CRICIRO, whose signature occurs most commonly on bowls in free style. *Antonine.*

11. (Unstratified). Fragment only. Types: *bear* to l. (O. 1609), *Mercury* to front (O. 533), plain *circle* in the field, vertical medium *bead-rows* ending in knobs as on the CINNAMVS bowl, no. 9 above; the present vessel has probably been made by the same potter. *Antonine.*

12. (E. channel of W. building-plot and from within later north rampart, on subsoil). Two fragments from the same vessel. Types: *seated figure* to r. (not recognisable in O.), hind legs of *stag* to l. (O. 1780), a variety of leaves in the field. *Antonine.*

13. (Unstratified). Worn fragment from a bowl in

the distinctive style of the Trier potter ALPINIVS; the determinants are the *tree* and the large *rosettes*, used as a lower border to the decoration as well as in the field; note also the corded *vertical line*. *Late second/early third century*.

(ii) *Potter's stamps* (figure 9).

In the accompanying figure I illustrate the five potters' stamps on plain samian, together with the two signatures below the decoration of the figured pieces, nos. 1 and 10 above. Brief notes on the stamps follow.

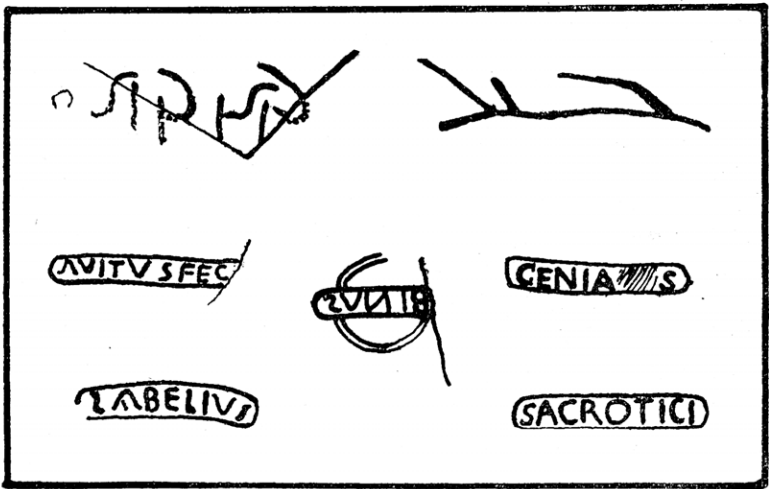


FIG. 9. Potters' marks. ( $\frac{1}{2}$ ).

(a) AVITVS FEC on fragment from the base of a platter, Dr. 31 (unstratified). Cf. Oswald's *Index of Potters' Stamps on Terra Sigillata*, 1931, pp. 34, 355-6, 424: there were at least four potters of this name, the present one working at Ittenweiler and Rheinzabern. His site-record in the north of Britain is as follows:—

*Scotland*: Bar Hill on the Antonine Wall, Newstead (II).

*England*: Corbridge (Antonine period), *Cardurnock*.

(b) GENIA[LI]S on Dr. 31 base (S.E. corner of stone

channel of E. building-plot). Cf. Oswald's *Index*, pp. 133-4, 389, 426; there were three potters of this name, the present one working at Lezoux. His northern site-record is as follows:—

*Scotland*: Bar Hill.

*England*: Carrawburgh and Housesteads on Hadrian's Wall, Corbridge, Chester-le-Street, *Cardurnock*.

(c) SABELIVS on Dr. 18/31 (from within later east rampart, unstratified). Cf. Oswald's *Index*, p. 272; this potter worked at La Madeleine; his stamp occurs in the Hadrianic earth-fort at the Saalburg, and in the north of Britain at South Shields and Stanwix.

(d) SACROTICI on Dr. 18/31R<sup>7</sup> (from within west rampart, on subsoil, and in W. stone channel at south-west angle). For *Sacroticus* cf. Oswald's *Index*, pp. 277, 417; Oswald assigns him to Lezoux, and dates his activity to the period Domitian-Trajan, apparently on the strength of a Dr. 27 by him in the Guildhall Museum; his stamp has not previously turned up in the north of Britain. The present vessel is patently Hadrianic, closely resembling the examples of this form from the Birdswald alley-way (CW, 2, xxx, 185, fig. 11, 1-3).

(e) ]BINVS retrograde on Dr. 33 base (from within later north rampart, on subsoil). This is probably a stamp of the Lezoux potter ALBINVS, for whom cf. Oswald's *Index*, p. 10 (there were at least three other potters of the same name); his northern site-record is as follows:—

*Scotland*: Castlecary on the Antonine Wall.

*England*: Carlisle, Corbridge, *Cardurnock*, Lancaster.

With the exception of *Sacroticus*, who is assignable to the time of Hadrian, all the foregoing stamps have Antonine parallels in the north of Britain, and none of

<sup>7</sup> Cf. CW, 2, xxx, 184, the large variety of this form, with a rouletted circle on the interior surface, immediately over the footstand.

them need be earlier than the Antonine period.

(iii) *Plain samian.*

There is little to say about the remainder of the Cardurnock samian, and it has not seemed necessary to illustrate any of it. The most noteworthy vessel, from the lower level of the clay floor behind the south rampart, was a large flanged bowl of Curle's type 11, with barbotine decoration on the upper edge of the flange, as normally on this type; Oswald and Pryce, *Terra Sigillata*, p. 212, call Curle 11 characteristic of the Flavian period, but persisting into the time of Trajan; but it occurred at Turret 49b (Birdoswald) on Hadrian's Wall, and there is no reason to assume a pre-Hadrianic date for the Cardurnock piece, the flange of which has the sharp downward turn which is never found on Flavian examples of this form.<sup>8</sup> Forms 18/31R and 31 predominate in the rest of the series, closely matching the examples from Birdoswald alley-way; Dr. 27, as at Birdoswald, still persists, being represented by portions of three or four different cups, as against two or three examples of Dr. 33.

#### C. THE COARSE WARE. By I. A. RICHMOND.

The significance of this group of coarse ware has already been discussed in the introductory paragraph. In preparing the following description the most useful basis of comparison has been the pottery from the Birdoswald alley-way (CW, 2, xxx, 187-198) and from Bewcastle (CW, 2, xxxviii, 219-229); but important subsidiary help has been obtained from M. R. Hull's study of the Yorkshire Signal-station wares (*Arch. Journ.* lxxxix, 220-250), and useful parallels from S. N. Miller, *The Roman fort at Balmuildy*, and *The Roman fort at Old Kilpatrick*, J. Clarke, *The Roman fort at Cadder*, J. P. Bushe-Fox, *Third Report on excavations at Wroxeter*, 1914,

<sup>8</sup> Cf. the Birrens example, *Proc. Soc. Ant. Scot.*, lxxii, 1938, p. 321, which is presumably of the same general date.



R. E. M. Wheeler, *Report on excavations at Verulamium*, and V. E. Nash-Williams, *Report on excavations in the Prysg Field, Caerleon, The Pottery*. These are referred to in the text in abbreviated form, under the names of the sites to which they belong. The drawings of the coarse ware have been prepared in their entirety by Miss Hodgson, excepting the mortarium stamps and accompanying rim-sections which illustrate Mr. Eric Birley's discussion of stamped mortaria. Without Miss Hodgson's invaluable and patient help this section, like many of the others, could not have been written.

Fig. 10.

1. French-gray jar, latticed, in hard fabric, wheel-turned throughout. An accident in handling nearly turned it into a "waster." From secondary culvert at NE. angle. *Birdoswald*, 22.
2. Black cooking-pot, latticed, burnt brown in patches by a fire. From within secondary E. rampart. *Birdoswald*, 18 f.
3. Brownish-grey cooking-pot, latticed, in coarse fabric. Find-spot as 2. *Birdoswald*, 18 d.
4. Brownish-gray cooking-pot, latticed, with wavy line on neck. Find-spot as 2. *Birdoswald*, 18 f.
5. Blue-gray cooking-pot, latticed, in hard fabric, with a tendency to minute surface cracks. Find-spot as 2. *Birdoswald*, 18 a.
6. Brownish-grey cooking-pot, latticed, burnt rose-ochre. From clay floor behind S. rampart. *Birdoswald*, 18 d.
7. Rim of cooking-pot, burnt pinkish-brown throughout. Unstratified. *Bewcastle*, 3.
8. Rim of grey jar, in rather soft fabric. From earlier gateway. *Birdoswald*, 22 a.
9. Rim of slate-gray jar, in hard fabric, comparable with no. 1. From within secondary east rampart. *Birdoswald*, 22 b.

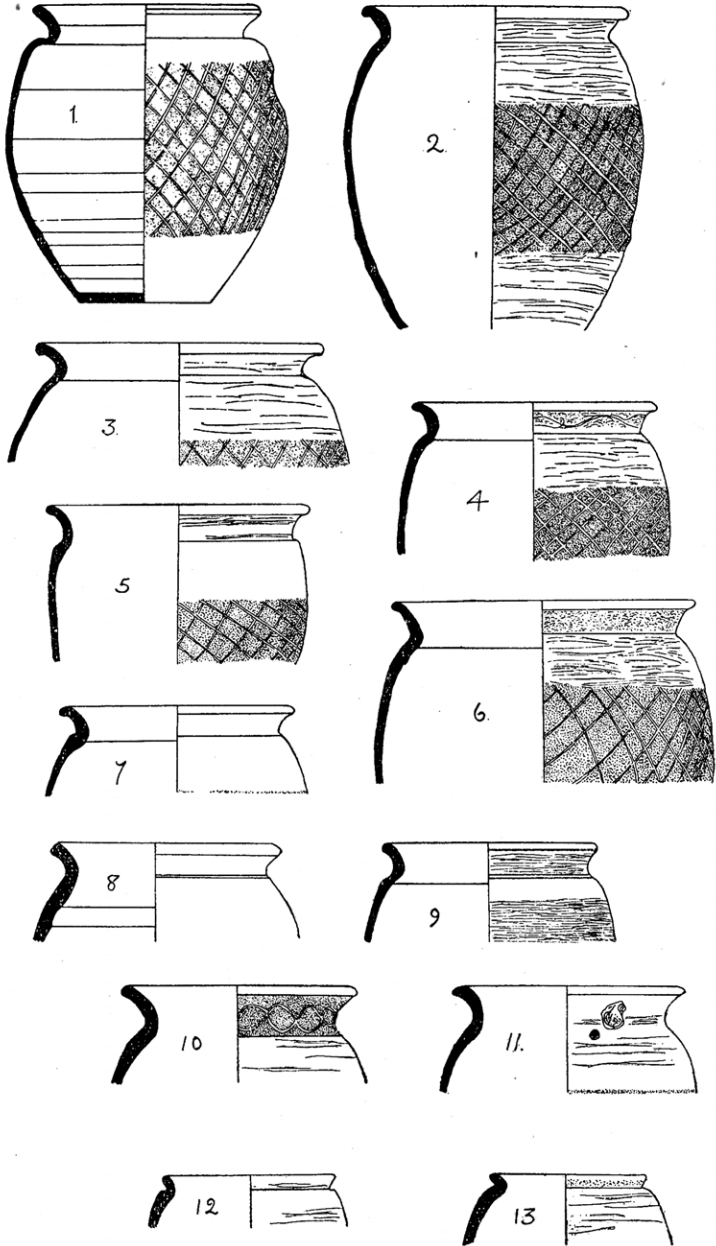
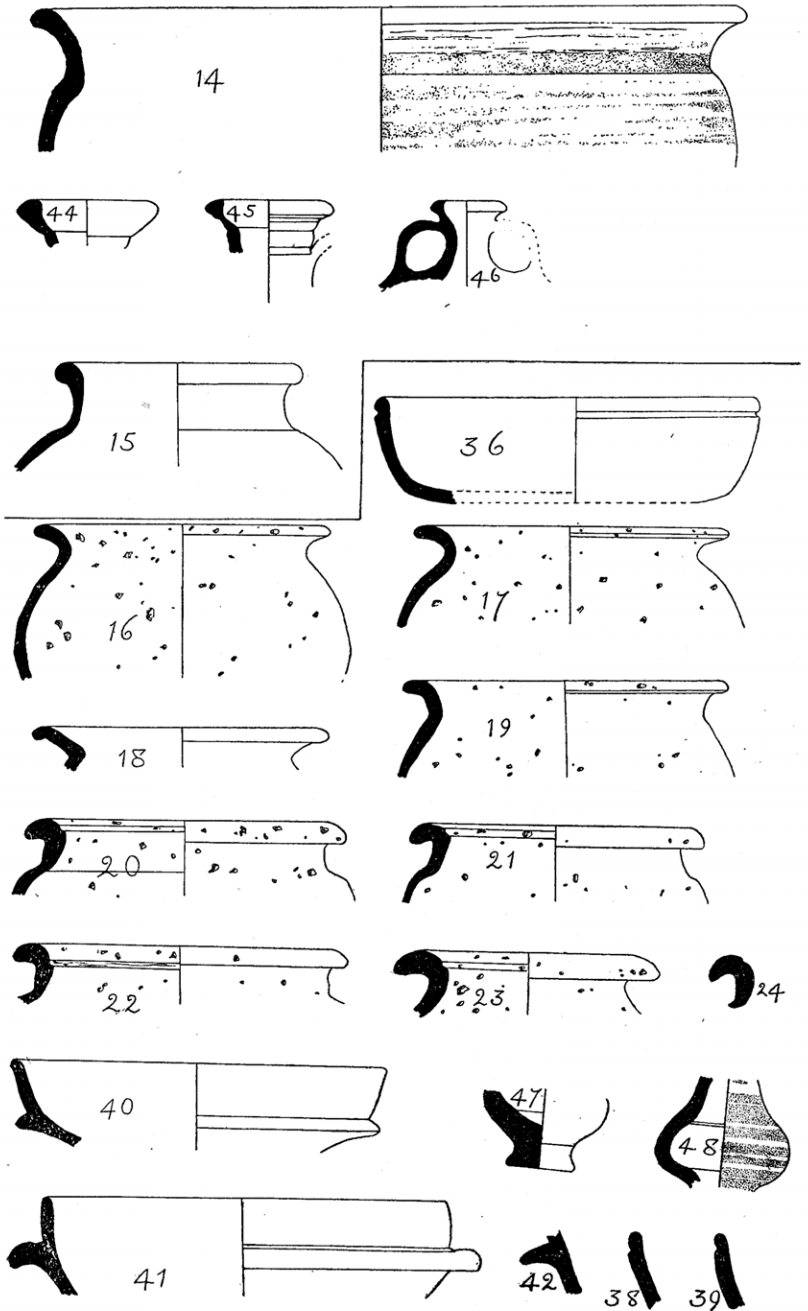


FIG. 10.—COARSE WARE FROM CARDURNOCK (1—13).  
Scale  $\frac{1}{4}$ .

K.S.H.

10. Rim of smoke-grey cooking-pot, with wavy line on everted neck. Unstratified. Akin to *Birdoswald*, 18 h.
11. Rim of black cooking-pot, burnt brownish-grey and rivetted with lead. Find-spot as 9. *Birdoswald*, 18 l.
12. Rim of small mouse-grey beaker. Find-spot as 9. *Birdoswald*, 42 b.
13. Rim of small orange-pink beaker. Find-spot as 9. *Birdoswald*, 37 b.
- Fig. 11.
14. Rim of large orange-pink jar in hard fabric. Unstratified.
15. Rim of blue-grey jar. From the intake of secondary culvert at NE. angle. Akin to *Balmwiddy*, xlv, 1.
16. Rim and shoulder of mole-coloured Huntcliff cooking-pot, heavily pitted but without internal groove. Unstratified. *Bewcastle*, 70.
17. Ditto: not inconceivably the same vessel.
18. Rim of black cooking-pot, burnt to brownish-grey, and heavily everted. Unstratified. *Birdoswald*, 19 c.; *Bewcastle*, 39, 61.
19. As nos. 16 and 17, but certainly not the same vessel.
20. Rim of grey Huntcliff cooking-pot, with internal groove and well-marked shoulder. Unstratified, *Birdoswald*, 20 a.
21. Dark grey Huntcliff cooking-pot, burnt brown, with internal groove and well-marked shoulder. Unstratified, akin to 20.
22. Blackish-grey Huntcliff cooking-pot, with tall straight neck and internal groove. Unstratified. *Signal-stations*, fig. 11, 6.
23. Grey Huntcliff cooking-pot, with internal groove. Unstratified.
24. Dark-grey Huntcliff cooking-pot, with internal groove. Unstratified. Close to 22.



K. S.H.

FIG. II.—COARSE WARE FROM CARDURNOCK  
 (14—24, 36, 38—42, 44—48): Scale  $\frac{1}{4}$ .

Fig. 12.

25. Grey fumed platter, latticed, in hard fabric. Unstratified. *Birdoswald*, 71 a.
26. Grey fumed platter, sparsely latticed. From gravel covering stockade-trench, on north berm. *Birdoswald*, 67 a.
27. Black burnished platter, boldly and carelessly latticed. From subsoil surface behind S. rampart. *Birdoswald*, 73 b.
28. Black burnished platter, sparsely latticed, in hard fabric, burnt orange on base. Find-spot as 27. *Birdoswald*, 65 a.
29. Light-grey fumed platter, widely latticed. Unstratified. *Birdoswald*, 74 b.
30. Brownish-grey platter, once closely latticed, burnt to orange-pink. From upper level in clay floor behind S. rampart. *Birdoswald*, 76 a.
31. Dark grey burnished platter, latticed. Find-spot as 30. *Birdoswald*, 72 a.
32. Dark grey platter, not latticed but scored left to right. From road-metalling of later gate. *Birdoswald*, 75 a.
33. Brownish-grey platter, latticed. Find-spot as 27. *Birdoswald*, 67 a.
34. Brownish-grey platter, latticed, burnt to reddish-brown. Unstratified. *Birdoswald*, 76 a.
35. Light-grey platter, latticed, in hard fabric, with traces of carination. Unstratified. *Birdoswald*, 65 a.
36. Brownish-grey platter, with bead rim in hard fabric. Unstratified. *Balmuilty*, 7. (See fig. 11).
37. Brownish-grey platter, with bead-rim and sparse lattice. From subsoil behind S. rampart. *Balmuilty*, 16.
- 37a. Grey platter, with bead-rim and wide lattice. Find-spot as 9. *Balmuilty*, 16.

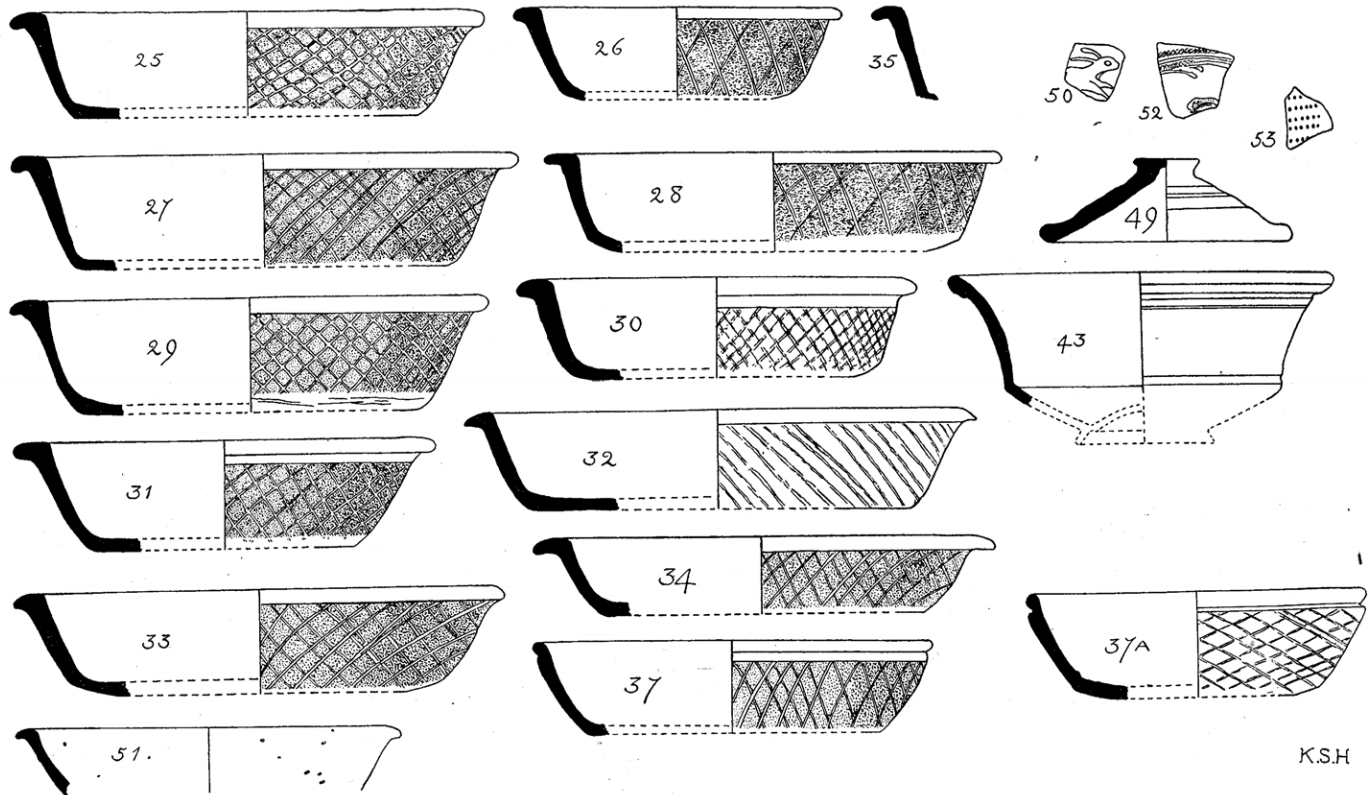


FIG. 12.—COARSE WARES FROM CARBURNOCK (25-37A, 43, 49-53): scale  $\frac{1}{4}$ .

K.S.H

## Fig. 11.

38. Grey platter, in hard metallic fabric. Unstratified. An exact parallel is to seek.
39. Black platter, with bead-rim and close lattice. Unstratified. *Balmuildy*, 15.
40. Reddish-brown flanged bowl. Unstratified. *Birdoswald*, 96; *Signal-stations*, fig. 6, 1.
41. Pink flanged bowl, painted red, and burnt black below flange. Surface find. An exact parallel is to seek.
42. Light-grey flanged bowl, with dark-grey slip. Unstratified. *Birdoswald*, 95.
43. Dark-grey bowl, in hard fabric (see fig. 12). Form derivative from Samian shape 29. From westernmost stone channel. *Verulamium*, fig. 31, no. 37.
44. Rim of pinkish-brown jug, in hard fabric. Unstratified. *Caerleon*, *Prysg Field*, fig. 56, no. 93.
45. Rim of pinkish-grey single-handled jug, with debased screw-neck, very hard fabric. Unstratified. *Old Kilpatrick*, pl. xx, no. 1.
46. Off-white neck of twin-handled jug, with traces of paint on shoulder. Unstratified. *Cadder*, fig. 17, no. 20.
47. Base of brownish-pink unguent-pot, with clumsy footstand. From westernmost stone channel. Comparable with no. 48.
48. Side and shoulder of grey-pink unguent-pot, footstand and rim missing. Unstratified. *Wroxeter*, 1914, pl. xxviii, 84.

## Fig. 12.

49. Grey-black lid. Below fallen turf-work between latrine-pit and the SW. angle. *Birdoswald*, 52 a.
50. Rim of Castor Hunt-cup, with forepart of hare in barbotine. From turfwork of later north rampart.
51. Rim of Huntcliff platter. Find-spot as 9. *Signal-stations*, fig. 31, 3.

52. Shoulder of purplish-brown jug in hard fabric with fawn core and remains of decoration in white slip. Two bands of rouletting below handle. Unstratified. It is almost certainly of fourth-century date.
53. Fragment of grey jar (or perhaps a poppy-head beaker) with five horizontal rows of brown stippled dots. Unstratified. Comparable with *Balmwildy*, pl. xlix, 6.

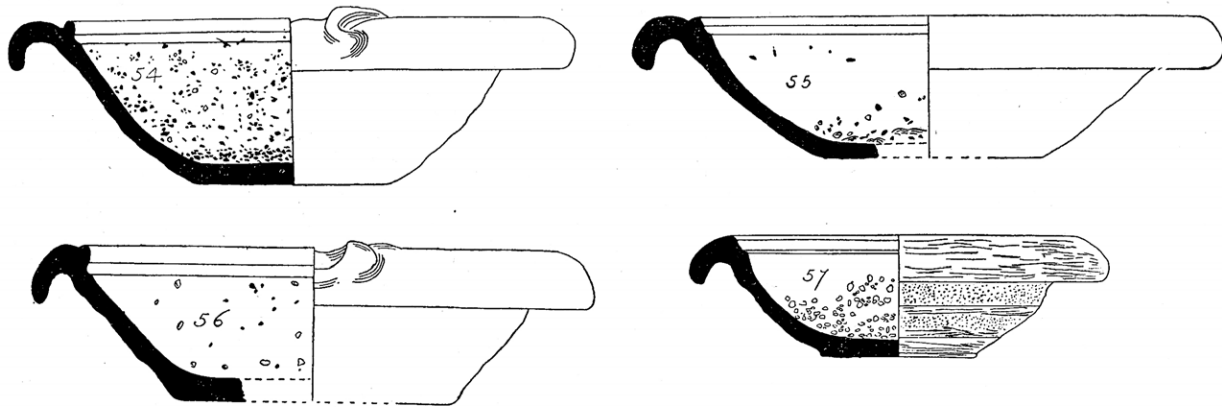
Fig. 13.

54. Buff mortarium, spout, stamp (see no. 2 below), and bold hooked flange. Heavy dusting with dark-red grit and occasional quartz. From eastern stone channel of west building-plot. *Birdoswald*, 6 a, for shape. A second piece of the same vessel came from the subsoil at SW. angle.
55. Orange-pink mortarium, with traces of cream wash. Sparsely dusted with dark-red grit and very occasional small quartz on the side, but with a heavy deposit of dark-red grit, mostly removed by trituration, at the junction of side and base. Find-spot as 54. *Birdoswald*, 7 a.
56. Indian-red mortarium with cream wash, spout, stamp DOC (see no. 3 below, p. 119), and a sparse dusting of pinkish-red grit and quartz. It is heavily blackened below the flange on the left of the spout. Unstratified. No exact parallel is to hand.
57. Iron-grey *mortarium*, heavily dusted towards the base with grey and pink grit and a little quartz. From behind later north rampart. *Birdoswald*, 3 a.

D. THE POTTERS' STAMPS ON MORTARIA (fig. 14). By  
ERIC BIRLEY.

Fifteen potters' stamps on mortaria, representing the work of eight different potters, are included among the Cardurnock material; the series is exceptionally large for so small a site, and includes some pieces of particular interest.





K.S.H

FIG. 13.—MORTARIA FROM CARDURNOCK: Scale  $\frac{1}{4}$ .

1. (Unstratified). Hard, light drab ware, pinkish in fracture; sparse grit, brown, white and grey. Half the spout and part of the rim are preserved, but the rim is too damaged for a satisfactory drawing to be made of it; it carries the stamp ARD followed by what may have been a T—the rest is broken away. I know of no parallels; but the fabric shows some affinities with the work of *Icotascus*, no. 5 below.

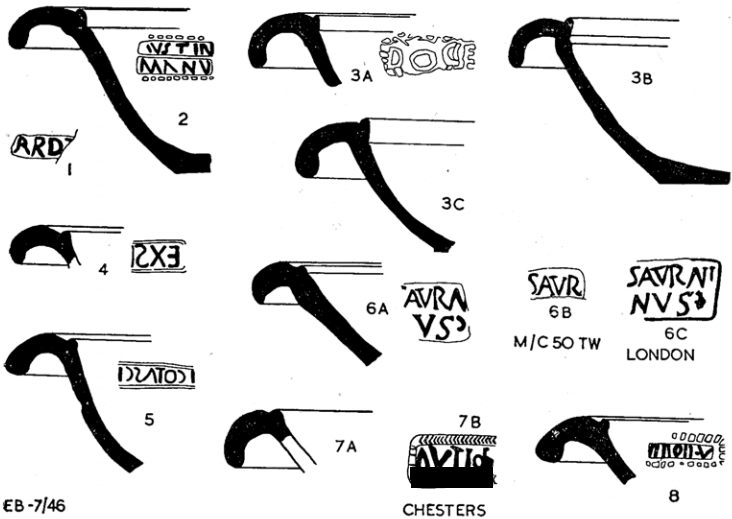


FIG. 14. ( $\frac{1}{4}$ ).

2. (South-west angle, on subsoil). Buff, rather sandy clay; copious grit, mainly fairly large pieces of brown, but including some white. Stamped on either side of the spout, AVSTIN[I]/MANV. No. 54 above, is by the same potter. *Austinus* is a well-known Antonine mortarium-maker, whose stamps occur on the following sites:

*Scotland*: Balmuildy, Bar Hill, Birrens, Camelon, Carzield, Durisdeer, Mumrills, Newstead.

*England*: Ambleside, Cardurnock, Carlisle, Chesters, Corbridge, Lancaster.

As it stands, such a distribution suggests that he worked somewhere in the north-west of England; and his clays and grits differ sufficiently from those of the Midland potters known to me, to suggest a non-Midland origin.

3. A, east end of south rampart, on subsoil; B, south rampart, on subsoil; C, south rampart area, on subsoil. Under this number I illustrate three out of six vessels carrying the stamp of the same potter; the fabric shows little variation, a smooth, reddish buff fabric, cream-washed; the grit is mostly small and variegated, but includes occasional large brown pieces. The potter's stamp is extremely crude, and often difficult to read; I have selected for illustration the most legible impression: I take the reading to be intended for  $\overline{\text{DOCIL FE}}$ , making the potter's name *Docilis*. The same stamp has been noted at the following sites:—

*Scotland*: Balmuildy.

*England*: Birdoswald, *Cardurnock*, Carlisle, Chesters, Corbridge.

A different potter of the same name is represented by stamps from Brecon Gaer and Caerhun in Wales, and from Wroxeter, possibly Eckington (Worcestershire), and Heronbridge (near Chester) in England. The present potter, assignable like *Austinus* to the Antonine period, like him probably worked somewhere in the north-west of England; his rims show little variety in general style, the well-marked interior groove below the bead being the most marked feature. (The three pieces not illustrated come from within the early north rampart, on subsoil; from the upper level of the clay floor behind the south rampart; and from the unstratified material respectively, the last being no. 56, above).

4. (From within the south rampart, toward the south-west angle). Red ware, with cream wash; no grit survives. The rim carries the retrograde stamp EXSI

within a plain frame. I only know of one other instance of this firm's work, namely EXS retrograde, within a more elaborate frame, on a mortarium from the Birdswald alley.<sup>9</sup> What the full name was, I do not know; this is one of the cases in which a mortarium-maker used a die too long for the rims on which he stamped it, so that his clients could never hope to read his name in full.<sup>10</sup>

5. (From within the south rampart, on subsoil). Light drab ware, with sporadic black, brown and white grit. The rim is stamped ICOTASCI retrograde; another piece (not figured), from the north rampart, has a fragmentary impression of the same stamp. *Icotascus* is represented by stamps from the following sites:—

*Scotland*: Newstead, Old Kilpatrick, Rough Castle.

*England*: Ambleside, *Cardurnock*, Chesters, Corbridge, Shenstone (Staffordshire), Wilderspool, York.

His kilns have not yet been discovered, but they should be sought somewhere in the Midlands; the distribution of his stamps shows that he worked in the Antonine period, and within that period his *floruit* may be set *circa* A.D. 160.

6. (6 a; unstratified). Light buff ware, rather rough to the touch; sparse white grit. The rim has been too narrow to take a complete impression of the potter's stamp, SATVRNI / NVS followed by a crude leaf-stop; at 6 c I give a drawing of the complete stamp, after Walters, *Catalogue of Roman Pottery in the British Museum*, M 2803, and at 6 b is an even slighter impression, on a fragment too near the spout for the rim-section to be drawn, from Turf-Wall milecastle 50 (High House), the occupation of which can hardly have lasted more than a few months, *circa* A.D. 124. Several mortarium-makers of this name can be distinguished; one of them worked at Colchester, and another at Corbridge (where one of his dies has been found); but the present *Saturninus* cannot

<sup>9</sup> CW, 2, xxx, 189, no. 7 and fig. 13, 7.

<sup>10</sup> Cf. AA, 4, xv, 271-282.

be equated with either of these, and his place of work still awaits discovery. His stamps occur at the following sites:—

*England: Cardurnock, Dover, London, Milecastle 50 T.W., Silchester.*

I know of no mortarium-maker whose work can be dated more closely, thanks to the discovery of the stamp figured at 6 b. *Hadrianic.*

7. (Unstratified). Fabric resembling that of *Docilis* no. 3 above, but with a more generous cream wash; no grit survives. The rim carries a faint impression of a stamp which I have noted elsewhere only at Chesters, where the impression is clearer than on the Cardurnock piece, and I therefore figure it at 7 b. The first letter seems to be either O or D, and the complete reading might be OVTI OF or DVTI OF, but neither reading really satisfies me. Alike the rim-section and the chevron border above and below the stamp can be paralleled on mortaria of the period *circa* A.D. 70-110, but the fabric of the present piece is characteristic of Antonine rather than pre-Hadrianic deposits. *Hadrianic?*

8. (From the south-west angle, unstratified). Fabric similar to that of *Docilis*, no. 3, above, but rather coarser and softer, and little of the cream wash survives; what little grit is preserved is small, sparse and brown. The rim carries a stamp which is perfectly plain, but unintelligible; the potter who made it was presumably illiterate. I do not recall any parallels.

The most striking feature about the series as a whole is the group of potters represented by nos. 2, 3, 4, 7 and 8, producing mortaria in a fairly uniform reddish buff ware, washed over with a cream slip; products of this group occur freely on Hadrian's Wall and on the Antonine Wall, but I have not noted them further south than Lancaster; it seems possible that their kilns were located somewhere in Cumberland.

## E. POST-ROMAN POTTERY, by JOHN CHARLTON.

One late find—long post-Roman—from Cardurnock calls for comment. In a roughly-constructed 'foxhole,'—dug on the berm just outside the north-west angle of the fortlet an excavation which was not merely the result of stone-robbing or treasure-hunting, but suggested some elementary form of shelter or dug-out—was found a small fragment of brown ware, glazed with a manganese glaze and belonging probably to the late 16th or early 17th century. This sherd may well be a stray and the rude construction itself merely a shelter for shepherds; but another possibility—it is no more—should be mentioned. Cardurnock lay at the west end of the chain of look-out posts belonging to the Barony of Burgh, manned by watchers from each small local community, which, as late as the 16th century, kept watch and ward along the Border from west to east, as their Roman predecessors had done, for marauders from the North.<sup>11</sup> It is, therefore, conceivable that this Castlesteads site, because of its good outlook, which the Romans had recognised of old, was again used in the time of Queen Elizabeth and that this tiny sherd is a relic of such occupation.

HISTORICAL CONCLUSIONS, by F. G. SIMPSON  
and I. A. RICHMOND.

Although neither coins nor inscriptions have afforded evidence for the date of foundation of the milefortlet at Cardurnock, the range of pottery, when compared with the material from the Birdoswald alley-deposit of 1929, leaves little doubt in general as to the Hadrianic date of foundation. This general impression is most powerfully supported by the studies of Mr. Eric Birley, who has distinguished a very considerable body of indubitably

<sup>11</sup> *Leges Marchiarum* or *Border-Laws*, edited by Bishop William Nicolson and published in London, 1705, p. 222, quoting *The orders of the watches upon the West Marches*, of 1553, "Cardronocke shall watch to Bowness."

Hadrianic material among the fragments of figured and plain Samian ware and among the mortarium stamps. While, however, a Hadrianic foundation date for Cardurnock milefortlet is thus proved, it is obviously impossible upon such evidence to decide between the earliest phase of building on the Wall, in and after A.D. 122, and the later phase, in and soon after A.D. 128. But it is obviously an inherent probability that the coastal flank defences belong to the end rather than the beginning of the building programme: and this view is confirmed by the inscription (*CIL* vii 362) from the east gate of the coastal fort at Moresby, which gives to Hadrian the title of *pater patriae* (father of his country) accorded by the Senate in A.D. 128. This title, it is true, is sometimes given in anticipation out of zealous loyalty on non-official inscriptions: but it is hardly likely to appear before its official conferment upon an important military dedication. Likelihood is thus best satisfied by connecting Cardurnock with the later building phase, in and after A.D. 128.

The complete removal of all later floors by ploughing, coupled with the Roman dismantling of the earlier structure, reducing their remains to a mere skeleton, makes it impossible to establish a firm dividing-line between the earlier and later fortlets. There can be little doubt that the reduction in size is somehow connected with the Antonine occupation of Scotland. But when it is recalled that within this Antonine epoch there were important changes, of which the reflection upon Hadrian's Wall is as yet far from clear, it becomes evident that it would be arbitrary to equate the reduction in size at Cardurnock with one Antonine phase rather than another. In other words, while it is possible that the reduction in size coincides with the re-occupation of Scotland in A.D. 139-140, it is also conceivable that the reduced fortlet belongs to later in the same age. Certain it is that potsherds so late within the second century that they

could have overlapped into the third century come from the site. Thus, whatever the second-century vicissitudes, the fortlet had been already reduced in size and was in occupation during the final Antonine period, which closes in A.D. 196-7.

Equally clear is the hint of a third-century abandonment of the site. While potsherds capable of interpretation as belonging to the early years of the third century occur, there are none to which an exclusively third-century date can be assigned. The implication would seem to be that Carcalla's settlement of the territory beyond Hadrian's Wall, including an occupation of Birrens, was so successful as to put a stop to raiding across the Solway. So far we may go with safety: but it will be borne in mind that the Cardurnock sequence is not yet proved to apply to the coastal system as a whole, and may therefore be applicable to its northern end only.

A later occupation of the site is, however, plainly attested by the fairly rich and representative group of fourth-century sherds and is structurally connected with the re-facing of the rampart on those sides which were most exposed to erosion. But since no true occupation-level of this period has survived, nothing can be said about the character of the occupation and the question whether it was closed by evacuation or disaster remains unanswered at Cardurnock. The impression conveyed by the pottery, however, is that it belongs to both sides of the stormy years A.D. 367-9, for types current before this date are present. The weight of material, on the other hand, certainly falls after A.D. 369. It is therefore possible to state that the site was occupied following the restoration of the frontier by Count Theodosius. The difficulty is to assess how much earlier the fourth-century occupation began: for the types of vessel available as evidence are current, for example, in both periods of earlier fourth-century occupation at Bewcastle. Thus, the



meagre evidence would in fact suit an occupation commencing in A.D. 343 just as well as one beginning in A.D. 297. This also, then, is a matter which will call for ultimate decision at another site, where late levels are adequately preserved.

If Mr. John Charlton's suggestion is correct, that the "dug-out" and sixteenth-century pottery connect the site with the Border watch of Elizabethan days, the history of the fortlet-site is twice connected with watch and ward on the Solway shore. Roman reconnaissance first, and local experience later, picked the ridge on which the fortlet stands as the best point of vantage in the vicinity. Nor had the place perhaps passed without notice in the long intermediate age. As Collingwood observed (CW, 2, xxix, 152-153), the name Cardurnock is Brythonic and there is much to be said for the etymological explanation which connects its second element with Old Welsh *durnawc*, going back to a postulated British *durnacon*, meaning "a place of cobble-stones." The whole word would thus mean "the fort of the place of cobble-stones." But if this refers to the Roman fortlet, as is most likely, it must be a name given by local Britons to the deserted fortlet in post-Roman times, and the reference will be to the cobble-stones which are such a feature of the structure of the fortlet and entirely absent elsewhere on the ridge. So we get a Dark-Age nomenclature, associated with the post-Roman realm of Cumbria, when folk perhaps knew the site best as the old fort where cobbles could be got. Later, as the place weathered and became more ruinous, only its fortified character remained apparent, lasting long enough to give the Middle English name of Castlesteads to the deserted site.

## APPENDIX.

NOTE ON THE OCCURRENCE OF A REFLECTED RAINBOW NEAR  
CARDURNOCK. By F. G. SIMPSON.

On December 21st, 1943, the very rare phenomenon of a reflected rainbow was observed over the Solway by Miss Hodgson and myself. The occurrence is recorded here because it illustrates the very low-lying situation of the fortlet and of the adjacent coast, and thus emphasises the extreme vulnerability of the Solway flank of Hadrian's Wall to sea-borne attack from the northern shore.

The appearance occurred about midday, with the sun over Skiddaw and the rainbow therefore over Cummertrees, where the Solway is more than two and a half miles wide. It was also

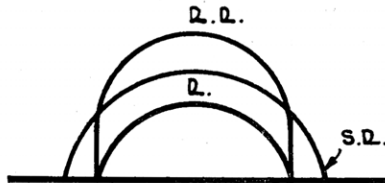


FIG. 15.—DIAGRAM OF REFLECTED RAINBOW,  
seen from Cardurnock, December, 1944.

[R = Rainbow: SR = Second Rainbow: RR = Reflected Rainbow].

about high tide, and it was this great expanse of water that made the complete reflection possible. There was little or no wind and the surface of the sea—though we could not see it from Castlesteads field owing to the higher ground at Cardurnock village—must have been quite calm.

The display was very highly coloured. I am told by our member, Mr. T. L. Macdonald, F.R.A.S., F.R.S.E., of Carlisle, who explained the cause of the phenomenon to us, that the exceptional brightness was due to ice particles instead of rain, over the Solway. The reflected rainbow (RR), cutting across the normal bow (R) and a normal second or outer bow (SR), is illustrated in the accompanying diagram (fig. 15). There was also, below the main bow, some extra colouring. That, says Mr. Macdonald, was part of a "supplementary" bow, which is usually colourless, or only faintly coloured. The "reflected" rainbow is, of course, much more likely to be seen at sea than from the land, but even there it appears from the records to be a very rare occurrence.

The phenomenon is worth recording for another reason, namely, the effect of meteorological phenomena upon the emotions of early man. My own mind on that occasion was in a relatively "primitive" state, in the sense that I was absolutely ignorant that any other than the normal single, or double, rainbow was possible. The impact of that wonderful sight, produced an emotional experience, the mixed character of which I lack the skill to analyse, but which certainly included a feeling of apprehension. If a modern mind can thus react to the abnormal in nature, the effect of an unfamiliar natural phenomenon upon the minds of primitive men may not easily be overestimated: