

## IV.

## EXCAVATION OF CASTLECARY FORT ON THE ANTONINE VALLUM.

## PART I.—HISTORY AND GENERAL DESCRIPTION.

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The attention of the Society having been called to the risk of public works being erected close to Castlecary Fort, the Council resolved that, in continuance of their investigations of Roman sites, the next work to be undertaken should be there. Permission to excavate having been freely granted by Lord Zetland, the proprietor of the ground, and every facility given by Mr Charles Brown, the factor, the direction of the work was committed to Mr J. H. Cunningham, C.E., and Mr Thomas Ross, architect. Mr Mungo Buchanan again volunteered to fill the arduous post of surveyor; and with Mr Alexander Mackie as clerk of works, an efficient staff was made up, every member having had a large experience in conducting operations of the kind. As previously, not more than two or three workmen were usually employed at a time, in order to ensure a strict supervision of the output. Ground was broken early in March 1902, and the work proceeded, with but little interruption from bad weather, till the following November.

*Position of the Fort.*—The Roman fort of Castlecary, so named, perhaps, from the ancient keep of Castlecary near it, is situated about six miles west of Falkirk. Remains of eight forts on the line of the Antonine Vallum still exist to the west of it, and of only one to the east. But filling in the blanks supposed to have been caused by the total disappearance of the others, necessary to complete the chain, Castlecary would originally be the twelfth from the west and the eighth from the east, according to Stuart's chart in *Caledonia Romana*.

The position has considerable natural strength, and is thus described by Mr Buchanan, who has also drawn up the accompanying map, fig. 1, to illustrate it. The fort stands upon a rounded knoll, which is the highest part and the western end of a low ridge, rising slightly above

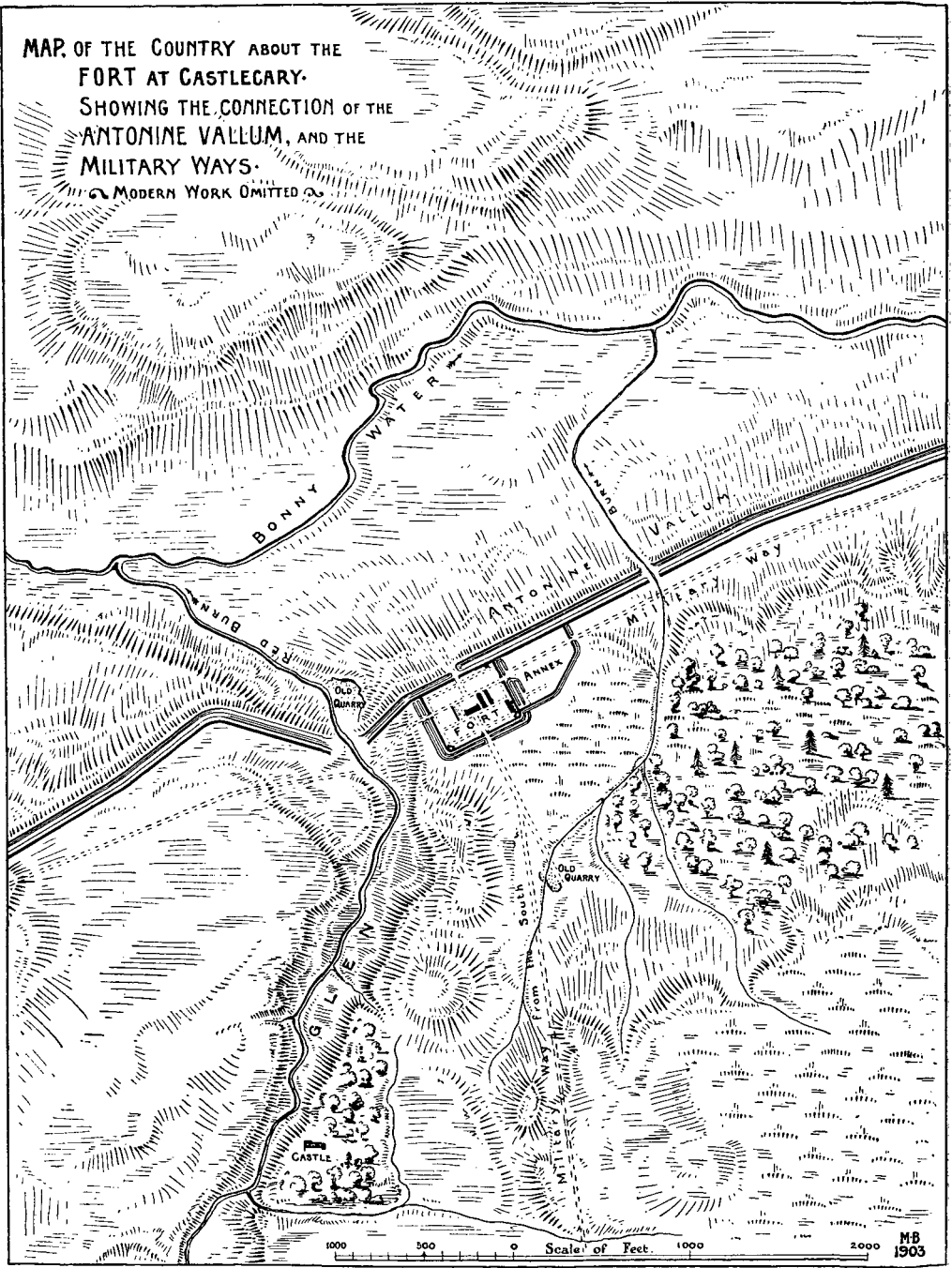


Fig. 1.

the 200 contour line. The centre of the fort is 227 feet above the sea, and the ground falls away in all directions. On the east, or along the ridge, the depression is very gradual and uniform, but on the west it is rapid to a deep ravine through which the Red Burn has its outlet from the Glen. On the north, a low-lying valley stretches out, along which the Bonny Water winds, at a distance from the fort of about 400 yards, and at a lower level by nearly 100 feet. On the south the slope terminates about 100 yards from the fort in what has formerly been a morass enveloping nearly the whole of the southern front.

#### FORMER NOTICES OF THE FORTIFICATIONS.

The earliest notice of Castlecarry is probably in an anonymous letter of 1697, describing an excursion to the west of Edinburgh (*Historical MSS. Commission*, xiii. App. ii., Portland MS. ii. 56), but the author tells us nothing more than that the fort is a large castellum of hewn masonry, containing many stone buildings.

Sir Robert Sibbald (*Historical Inquiries*, 1707, 30) is even more curt, being content with calling Castlecarry "a great fort with much building."

Pennant, Pococke, Stukely, Clerk of Eldin, and Camden do not mention it at all.

Alexander Gordon (*Itinerarium Septentrionale*, 1726) calls it a magnificent fort "which seems to have been surrounded with a wall of hewn freestone, whose vestiges still appear." "On the south end of this wall are triple ditches and four rows of ramparts." His plan, however (fig. 2, reproduced here on a smaller scale from his Plate xxiv.), gives only two ditches and three ramparts on that side, as well as on the east and west. The defence on the north side is the only one represented as of stone, and is figured as a single wall, separated from the Antonine Vallum by a few yards' interval. The only entrance shown is from the south.

Horsley (*Britannia Romana*, 1732, p. 170), who explored the Antonine Wall not long after Gordon, tells us that the Vallum as usual formed the north rampart of the fort, that the other three sides

had a triple rampart and ditch, and that the ramparts have been built of stone and mortar. His only other observation is that the fort seems to have been well supplied with water. His small plan (reproduced in fig. 3) agrees with the description, and shows two entrances, one on the

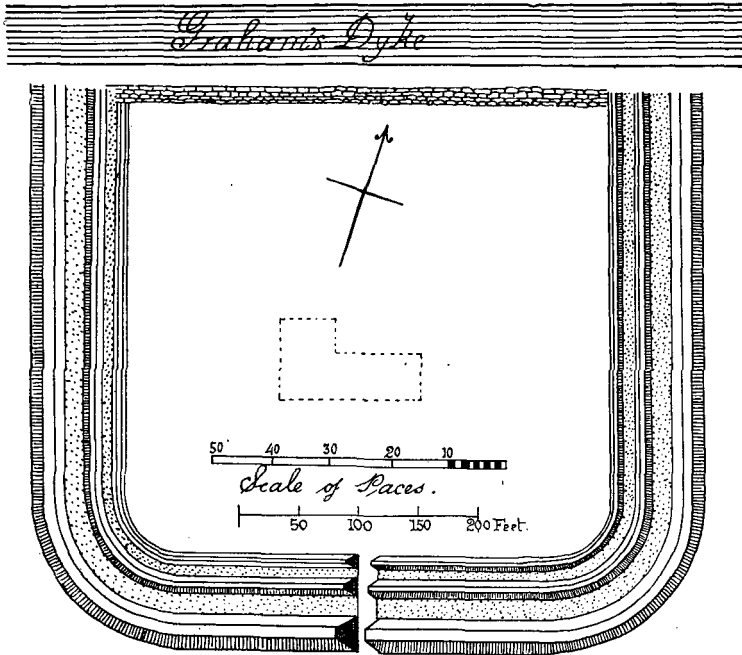


Fig. 2. Gordon's Plan of Castle Cary Fort.

east, the other on the south. His chart of the Vallum shows, emerging from the north side of the fort to join the Bonny Water, a streamlet, of which there is now no trace.

Maitland (*The History and Antiquities of Scotland*, 1757, i. 173) follows at no long interval. He gives the fort triple ramparts and ditches on the south side, and says that no doubt they existed formerly

on the east and west sides also. He does not seem to have seen any stone wall, as he says that the innermost rampart *is said* to have been faced with stone walls "of a height not mentioned, but," as he rather obscurely remarks, "I take them to have been about four feet high and three feet thick, like that facing the lower part of the northern side of the wall adjoining the ditch, out of which the last time I was there they were digging stones to erect out-houses at the mansion-house of

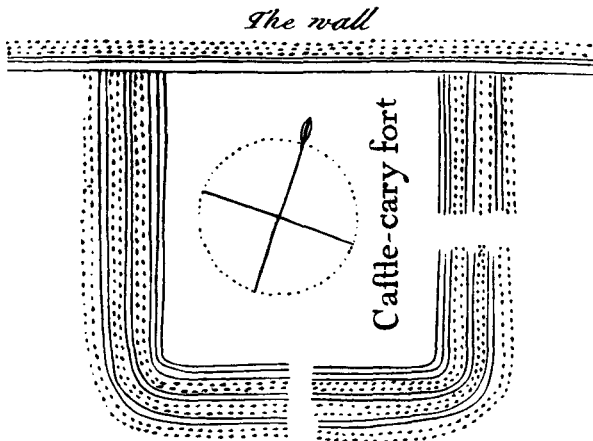


Fig. 3. Horsley's Plan of Castle-cary Fort.

Castle-cary. This wall was of rough ashlar, consisting of large freestones laid in clay running along the face of the rampart as a security to the foundation."

Roy (*The Military Antiquities of the Romans in North Britain*, p. 123) only tells us that Castle-cary "has been one of the principal stations on the Wall of Antonine, as is evident from its dimensions, and the number of antiquities found, and finding there every day." His plan (fig. 4, on a reduced scale) gives the Wall of Antonine as the northern defence, directly up to which run the east and west ramparts and ditches. On these sides, as well as on the south, there are two

ramparts and two trenches. On the east side the outer rampart is less distinct. "Walls," at the south-east angle, is the name of a cottage that stood there at the time. Roy does not specially describe the ramparts, but elsewhere states generally that although the forts on the Vallum were probably originally of earth, "the Romans, no doubt wishing to

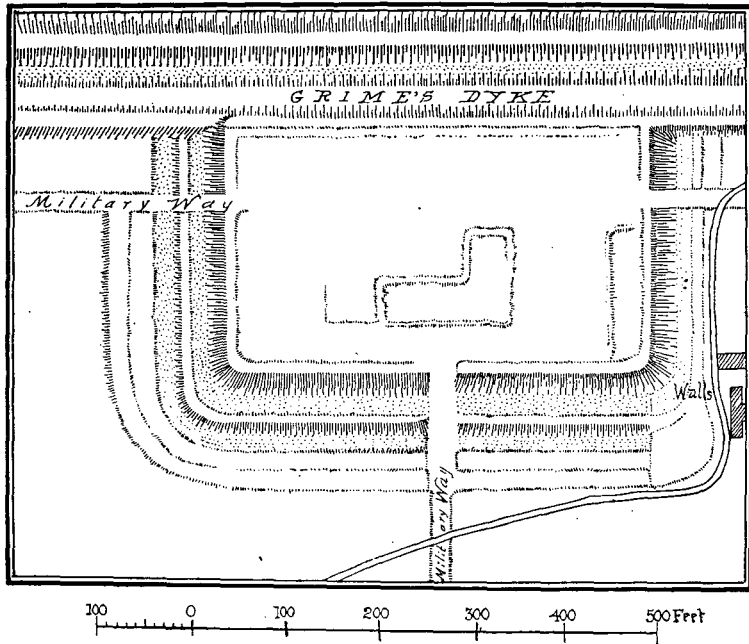


Fig. 4. Roy's Plan of Castlecary Fort.

render these points of appuy more respectable and permanent, appear at some future period to have almost universally reveted them, or at least their inner ramparts, with stone."

The Rev. William Nimmo (*History of Stirlingshire, 1777*) says that the fort "is surrounded with a wall of stone and mortar"; also that "the outer wall hath been surrounded with a double ditch or vallum

still filled with water on the south side, where the entry hath been by a large causeway intersecting the ditch." He gives a very small, meagre plan, which is not the least like the place, and by no means tallies with his own description.

The *Old Statistical Account of Scotland*, 1797, merely says that the site is still to be seen, and the *New Account*, 1845, that it covers six acres, is vaulted underneath, and that "part of the foundation still continues."

Stuart (*Caledonia Romana*, 1852, p. 344) states that scarcely a vestige existed when he saw it, and attributes the destruction, first, to improvements of the highway; secondly, to the removal of stones in 1769, and again in 1771 during the construction of the Union Canal; and thirdly, to the operations of the North British Railway in 1841, whereby the line was carried on an embankment obliquely across it. His plan is taken from Roy.

#### GENERAL DESCRIPTION OF THE FORTIFICATIONS.

According to most of the early observers, the Antonine Vallum, modified perhaps to a certain degree, was the sole defence of the north side. Gordon alone represents a stone wall, in addition, close in rear of the Vallum. The other three sides are variously described as having two, three, or even four ramparts and ditches. All the accounts agree as to the remains of mortared walls of hewn masonry, but without any clear reference to their position. Our excavations, however, although confirmatory in a general way as to the north front, proved that the three free sides had but one rampart or wall, most probably a wall, and only two trenches, except for about half the length of the east side, where there were three.

*Rampart or Wall.*—Only one small stretch of masonry was found on the *enceinte* in which so much as three courses remained *in situ*; and as nearly the whole of the loose stones had been plundered, the means of determining whether the original structure was a wall proper, or a reveted earthen rampart, were very limited. On the whole, however,

the evidence in favour of the former view seems pretty conclusive, as regards the three free sides at least. In the first place, no trace of an earth backing was found; secondly, the close proximity of a building on the east side left no room for one; and thirdly, the fine quality of the masonry on the inner face, as well as the presence of an offset, are unnecessary in a revetment, and in fact are not met with in the revetment walls of the German *Kastelle*. The width of the wall above the plinths was six feet six inches; and as all the remaining loose stones were square-surfaced, there seems to have been no batter in the wall, so that there would be ample room at the top for the battlements and wall-walk.

The circumstances of the north wall are different. The fall here was so steep that the ground had been cut into a perpendicular face three feet high, so that the wall up to that height must have been a revetment. Was it carried up above this as a battlemented wall; or did it stop here; and was the rampart of the Vallum, with which it is strictly aligned, carried along its top to form the northern rampart of the fort?

The latter supposition seems unlikely, because no trace of the stone bottoming, invariably met with in sections of the Vallum rampart, was found, although the ground had been little disturbed, as was shown by the perfect preservation of a stone kerb running along six feet in rear of the wall. This kerb marks out, along with the outer face of the wall, a space of 14 feet wide, corresponding with the width of the rampart of the Vallum, but there is nothing to explain its object. Possibly it marked a space six feet wide, between itself and the stone wall, within which some construction was made for reaching the top of the wall.

*The Angles.*—The south angles were no doubt both rounded, but only the south-west one was proved to be so, as the other was covered by the railway embankment. The north angles could not be completely examined, but were traced so near their junction with the Vallum as to show that they were not rounded.



*Angle Tower.*—Within the south-west angle, the foundations of the first Roman wall-tower met with in Scotland still remained, and no doubt the south-east angle, now concealed under the railway embankment, was provided with one also. Three sides were left, and they were straight and right-angled. The fourth, which had been on the curve of the wall, had been entirely removed.

Some special defence must have been provided also at the north angles to hinder an enemy from running along the wall from the Vallum and jumping into the fort; and a widening of the stone foundation layer from the ordinary width of 8 feet to 11 feet, for a length of 45 feet, indicates some special construction for the purpose. As the foundation course of the fort wall, although in strict alignment with the foundation stone layer of the Vallum, was three feet higher, the supposed defence would have all the greater command over the approach from the latter.

*Entrances.*—From one to three entrances were noticed by the early writers, but the real number proved to be four. Those in the north and south sides are central, but the other two are considerably nearer the front or north than the rear. Three of them were sufficiently preserved to show that the almost invariable mode of defending the entrances of Roman stone forts by square towers was not used at Castlecary. Instead, the gateways, which were single and only 10 feet wide, were flanked by returns inward of the wall, forming a passage 14 feet in length. As these returns were 8 feet thick at the base, the walls would be strong enough to carry an archway over the passage, with some tower, or other superstructure, over the gate for its defence.

*Trenches.*—The two trenches on the three free sides of the fort were each 14 feet wide and 7 feet deep, and were separated by a level space or platform 10 feet wide, amply sufficient as a line of defence; but no evidence of a breastwork or palisade could be found.

*Berm.*—A berm 5 feet wide separated the wall from the scarp of the

inner trench on the three free sides of the fort ; but on the north side the berm had a width of 21 feet, or the same as that of the Vallum; with which it was continuous.

#### HISTORICAL DESCRIPTIONS OF THE INTERIOR.

The early authorities of 1697 and 1707 (*op. cit.*) only mention the ruins of many stone buildings in the interior, and Gordon (1727) merely says that "the place of the general's tent" with vestiges of other buildings were still visible. His plan (fig. 2) marks the "general's tent" as a rectangle, situated in the middle of the area with a rectangular projection northward at its west end. No other building is shown. Nimmo (1779) states that the whole area was full of ruined buildings, which raised the earth 8 or 10 feet above its natural surface, and gave the fort the resemblance of a hill-top, surrounded with a sunk fence, also that "the rubbish above the stones hath often been plowed except the middle, where it is overgrown with nut bushes and briars." He also mentions the discovery in 1770 by Sir Laurence Dundas, proprietor of the ground, "of sundry apartments built with stone and lime," conjectured to be a *balneum*, and gives a plan, which on a reduced scale agrees with the one in Roy.

Roy's plan of the fort (fig. 4) shows a foundation like that represented by Gordon, but with the projection at the opposite or east end, and another foundation in the south-east angle. At p. 161 this is said to have been cleared of rubbish in 1769, disclosing "a very elegant plan of a house, in the style of Palladio," with a sudarium (Pl. xxxix., reproduced here in fig. 5). The greater part of this building is now partly destroyed, partly covered by the railway embankment, but enough remained to prove the accuracy of the old plan.

The only additional information in Stuart, who reproduces from Roy the plan of the sudarium, is that more ruins of buildings were discovered in 1771.

Much was made by the early authors of the discovery of nearly 100 quarters of wheat, hard and black, mixed with charred wood, as a proof

that the fort had been stormed and burnt; but as the wheat lay in the hollow of a rock, outside the fort near the north-west angle, and north of the Vallum, its connection with the fort seems questionable.

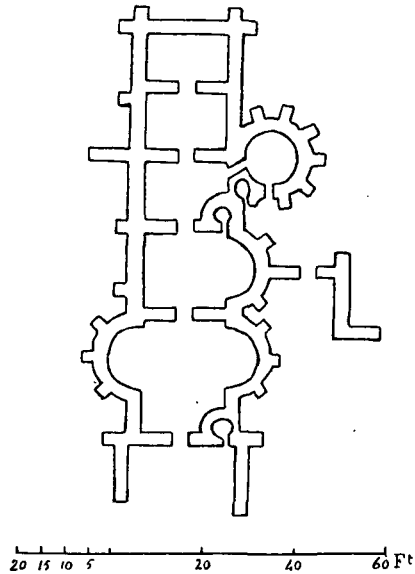


Fig. 5. Roy's Plan of Foundations of Buildings discovered at Castlecarry in 1769.

#### GENERAL DESCRIPTION OF THE INTERIOR AFTER EXCAVATION IN 1902.

Unfortunately a large part of the area is covered by the railway embankment, which, entering at the south-east angle, passes obliquely across the fort and emerges on the south side of the west entrance. The results of the excavations in the accessible parts, however, showed that the general plan of the interior closely corresponded with that of all the Roman forts hitherto investigated in Scotland.

The Via Principalis is much nearer the Pretorian than the Decuman gate, its centre being 115 feet from the Porta Pretoria and 230 from the

Porta Decumana.<sup>1</sup> It is therefore nearer the front than the rear by one-third. Again, in agreement with the other Roman forts in Scotland, the Pretorium is in rear of the Via Principalis, and it so happens that it is exactly in the centre of the area. As usual, also, in Scottish Roman forts, the space on either side of the Pretorium has been occupied by long, narrow buildings, running parallel with it. The only exceptional characteristic at Castlecary is that the Portæ Pretoriæ and Decumanæ are on the long instead of the short sides of the fort, the object perhaps being to show as wide a front as possible in the only direction from which attack was much to be dreaded.

The other important structures discovered were an interesting buttressed building, with apertures, splayed inwards, between the buttresses; the part of the building with the bath that still remained uncovered by the railway embankment; and near the south-west corner of the fort, a well-preserved latrine. No well was discovered. Probably it was under the embankment, but the provision for drainage and for flushing the latrine indicates an ample water supply, and Horsley's map shows a streamlet actually taking its origin in the fort. A deep pit, at first taken for the well, seemed to be for refuse, and was conveniently placed behind the Pretorium, where three streets met.

#### THE ANNEX.

The existence of an annex at Castlecary was quite unsuspected until it was revealed by our excavations. It lies on the east of the fort, and is pentagonal. The northern face is formed by the Vallum, the western by the east side of the fort. These two faces were therefore strongly protected, but the rather short east end and the south side (the western part of which looks south, the eastern south-east) had been defended merely by an earthen rampart on a stone foundation about 8 feet wide, and a trench 14 feet wide and 7 feet deep. It was unfortunate that

<sup>1</sup> We have accepted for convenience the nomenclature of the parts long in use, although it is now doubtful how far the correspondence between the interiors of the forts and temporary camps was carried, and in particular whether the central building in the forts corresponded with the Pretorium of the camps.

for farming reasons the area of the annex could not be excavated. There was no evidence of buildings on the surface, but interesting remains might have been found, in confirmation of Stuart's statement that "so many foundations have been discovered in the neighbourhood (of the fort) that a Roman colony must have stood here under the protection of the fort."

#### COMPARISON WITH OTHER ROMAN FORTS, AND PROBABLE DATE.

One of the most interesting questions on which we hoped that our excavation would throw some light, was whether any evidence could be obtained of the presence of Agricola at Castlecary. Inscribed stones had long ago proved the occupation of the place considerably after his time; and although we could hardly expect to find inscriptions to Agricola, as none such have been found in Britain, notwithstanding the prominent part he played in it for seven years, it was possible that we might at least find some proof of an earlier occupation.

The mere fact that Castlecary appears to have been a stone fort does not necessarily exclude the possibility of its having been constructed by Agricola, as the transition from earth to stone in Roman forts appears to have begun about his time. The period over which this transition lasted is not yet thoroughly worked out, but it appears to have occupied a considerable time, and not to have taken place simultaneously throughout the Empire.

Recent excavations at Haltern in Westphalia show that no stone was used in the extensive Roman works there, which it has been ascertained subsisted only between 11 B.C. and 16 A.D. There the ramparts uniformly consisted of earth upheld between two rows of wooden posts<sup>1</sup> On the German Limes, only three *Erdkastelle* have been discovered, one (Waldmössingen) beneath a stone fort, another (Hofheim) close to one,

<sup>1</sup> *Aliso. Führer durch die Römischen Ausgrabungen bei Haltern*, Dr Carl Schuchhardt, 1903.

A similar rampart defended *Gellygaer*, an early Roman fort believed to date *circa* A.D. 75, recently excavated in Wales, except that the earth was upheld by stone walls instead of palisades. *Gellygaer*, J. Ward, 1903.

and the third (Heldenbergen) within an *Erdlager*. Hofheim is stated to date from the first half of the first century, the other two from near the end of that century. Heldenbergen is rectangular, but Hofheim is irregularly nine-sided, and Waldmössingen irregularly hexagonal, and these two *Erdkastelle* do not seem to differ essentially from the *Erdlager* of Heldenbergen. All of these works seem to have been fortified merely by a single trench and palisaded rampart, and no postholes were discovered. It is remarkable that so few earth castles have been met with on the Limes, and that their plan is so irregular, and so ill adapted for the orderly arrangement which we have been accustomed to consider as essential in a Roman camp or fort.

Very different is the character of the earthen forts in Britain, and the transition there seems to have been from stone to earth rather than from earth to stone. Not only did the stone wall of Hadrian precede the turf Vallum of Antonine, but as far as the evidence goes it seems to have also preceded the nine forts excavated or being excavated in Scotland, all of which prove to have been earthworks, with the single exception of Castlecary. In their complex designs and invariable rectangular plan<sup>1</sup> the Roman earth forts in Scotland contrast strongly with the very primitive defences of the Continental works. This points to a later date, which is also indicated by their following the Hyginian and not the Polybian arrangement of the interior, unlike some even of the earlier stone *Kastelle*. This is true of the stone Castlecary as well as of the earthen forts, the sole exceptional detail being that the *Portæ Principales* are in the short instead of the long sides at Castlecary, the object perhaps having been to turn the long side to the direction from which attack was alone likely to take place. As far as structure goes, therefore, Castlecary appears to be of about the same period as the earth

<sup>1</sup> There is one reputed polygonal Roman camp in Scotland, Raedykes in Kin-cardineshire, which has ten very unequal sides. It measures on Roy's plan 2300 by 1200 feet, is fortified by a slight rampart and trench, and has six entrances, provided with detached straight traverses in front of them. The site is very rough with rocks and loose stones, and is overgrown with whins. As far as is known it has never been excavated, and no finds have been recorded from it.

forts, one of which, Birrens, we know to have been repaired, if not originally built, in A.D. 151. The inscribed stones and coins found at Castlecary also agree in period with those of the forts. But a still closer estimate of the age of Castlecary may be arrived at: when we consider the regular manner in which the fort joins on to the Antonine Vallum, and that the angles at the junction are square, whereas the free angles are rounded, it seems fair to conclude that the fort, as we now find it, did not precede the Vallum, but would be probably of about the same date, or *circa* A.D. 142.

We must now inquire whether any structural evidence of a previous occupation was found. Nothing of the kind was met with in the fortifications, but Mr Buchanan draws attention to the inferior quality of the masonry, and to other characteristics which differentiate the western from the eastern of the two chambers into which the "Pretorium" is divided. However this may have happened, it seems unlikely that the original design did not include both chambers, as with them the building is exactly central, and the whole symmetry of the interior would be thrown out if the east chamber stood alone.

One difference between Castlecary and the earthen forts remains to be noticed. According to the generally received opinions of Roman castramentation—although it is perhaps too much taken for granted that the arrangements in the forts follow those of the camps—the side opposite the Pretorium should always represent the front and be turned towards the foe. Now Castlecary obeys this law, but the independent earthen forts do not, as they face to the rear, at least on the ordinary supposition that they were constructed by an invading and not a retreating force.<sup>1</sup>

<sup>1</sup> The same apparent abnormality occurs, according to Professor Naegele, at Waldmössingen and several other *Kastelle* of the German Limes, and it seems to require investigation whether such cases should be considered as belonging to a distinct class in which the *Decumana* becomes the front, or whether they are due to some exceptional cause, such as the nature of the ground. The evidence in Scotland is contradictory. The nature of the ground might explain why Ardoch and Lyne faced south, but the similar conditions of the ground at Birrens would lead us to expect it to face north instead of south as it does.