

## V.

THE ROMAN CAMPS AT RAEDYKES AND GLENMAILEN.  
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A year ago I was able to lay before the Society an account of certain excavations which a Research Grant from the Carnegie Trust for the Universities of Scotland had enabled me to make along the line of the Roman Wall from Forth to Clyde.<sup>1</sup> In normal circumstances this investigation would ere now have been completed. But, since the momentous autumn of 1914, progress has of necessity tended to become increasingly slow; in the present national emergency it seems wrong to ask even a single workman to devote his energies to unproductive labour, except on the rare occasions when seasonal conditions preclude the possibility of more useful employment. It is true that the thread has not been lost. On the contrary, a good deal of interesting material is gradually being accumulated. In the meantime, however, the further report which I had hoped to be in a position to bring forward must be postponed. I propose to substitute for it a brief statement of the results obtained in a kindred enterprise, the means for which were supplied through the same munificent benefaction.

Professor Haverfield long ago suggested that information of real importance for the history of Roman Scotland could in all probability be secured by the organisation of what he termed an excavators' 'flying column.' The idea was that a number of sites, on which the presence of the Romans was suspected, might be visited and a few exploratory cuttings made on each. In many cases a comparatively brief examination would not improbably suffice to determine once for all the question of origin, while it was just conceivable that here and there a stroke of good luck might produce fairly definite evidence of date. Although the difficulties in the way of forming such a flying column have so far proved insuperable, the principle underlying the suggestion was put into practice in July 1913 at the camp of Glenmailen near Ythan Wells, and again in the following summer at the camp of Raedykes near Stonehaven. On the former occasion Professor Haverfield was fortunately able to be on the spot himself and to take a leading part in the operations. For the work at Raedykes I alone was responsible. In the discussion and description that follow, it seems preferable to deal with Raedykes first.

<sup>1</sup> *Proceedings*, 1914-15 (vol. xlix.), pp. 93-138.

## I. RAEDYKES.

This camp, whose name is variously spelt as Raedykes, Raedikes, Readykes, Re-dykes, and even Rhé-dykes,<sup>1</sup> lies in the parish of Fetteresso in Kincardineshire, its defences enclosing the greater part of the Garniehill or Garrison Hill, some three miles to the north of Stonehaven. As one moves north through Strathmore, the range of the Grampians draws nearer and nearer to the coast. Beyond Stonehaven the sea and the mountains almost meet, so that for a considerable distance the railway has to cling to the top of the cliffs in order to find a reasonably easy passage. Garrison Hill stands among the rolling uplands, about three miles back from the beach. The view from the highest point (628 feet) is singularly picturesque, particularly towards the west, where one looks up a broad valley to the mountains of Deeside, or again towards the east, where the eye sweeps over the moor and up the long slope of the Kempstone Hill to catch the distant sparkle of the sea and follow it south to Stonehaven Bay. The surface of the hill itself is broken and irregular. In that respect the position is one which a Roman general would hardly have occupied except under stress of circumstances. Any Roman camp pitched there would emphatically have been one of those *quæ in loco necessario [constituuntur], unde et necessaria castra dicuntur*.<sup>2</sup> We do not know who rediscovered it, but its earliest mention seems to be that in Maitland's *History of Scotland*, published in 1757. The description there given<sup>3</sup> may be quoted in full:—

“This camp is about three quarters of a mile square, or three miles in circumference, fenced with a high rampart and a very deep and broad ditch; and each of the gates, which are six in number, are fortified with a rampart and ditch, at the distance of about twenty-four yards without the said gates. This is the largest Roman camp I have seen, or can learn that there is in Scotland.”

Like so many eighteenth-century antiquaries, Maitland was hot on the scent of Mons Graupius, and was confident that it had been run to earth at last. He believed that Raedykes was Agricola's camp, and that “there is not the least room to doubt of this place's being the spot whereon the battle was fought.” Just twenty years after the appearance of Maitland's *History* we find the then proprietor, Mr Robert Barclay of Urie, keenly interested. It is possible that his attention was drawn to the matter by certain chance discoveries made about this time in the immediate neighbourhood. A contemporary writer tells us that, when stones were

<sup>1</sup> Professor Watson, whom I have consulted, writes that the etymology is difficult. He suggests, however, that the name may possibly be the Englished form of a Gaelic (*an*) *Ràth Dige*, the fosse-rath, or “earthen fort with a ditch.” Other variants are Ree-dikes and Ri-dikes.

<sup>2</sup> Hyginus, *De Mun. Castr.*, 56.

<sup>3</sup> Vol. i. p. 202.

being carted off for enclosing a field, "several urns were turned up," while "in a moss, hard by, two Roman *hastæ* were found entire, and several others in a decayed state."<sup>1</sup> However that may be, in the summer of 1777 Mr Barclay, who was a prominent public man and long member of Parliament for the county, carefully examined the site in company with General Robert Melvill and "his respectable friend Lord Monboddo."<sup>2</sup> In the following year the band of inquirers received a fresh recruit in the person of Mr John Stuart of Inchbreck, afterwards (1782) Professor of Greek at Marischall College, Aberdeen, who surveyed the ground and produced a plan of the enclosure.<sup>3</sup> Finally, in 1784, the eccentric founder of our Society, Lord Buchan, took the subject up, doubtless at the instance of Mr Barclay, who seems also to have been responsible for the enlistment of Professor Stuart.

As a result of all this activity we have quite a considerable body of 'literature' with Raedykes as its theme. It is noteworthy that none of the contributors accepted Maitland's view as to the enclosure being the veritable camp which Tacitus describes, an attitude of mind which is probably to be accounted for by the influence of Melvill, whose authority would naturally carry great weight. When this distinguished soldier and student of military history was brought upon the scene in 1777, his verdict was quite uncompromising.<sup>4</sup> "From every circumstance," he came to the conclusion that the camp at Raedykes "could not be *that* occupied by Agricola's forces immediately before the battle." So sweeping a declaration might be interpreted as a refusal on the part of Melvill to entertain the idea of the entrenchment being of Roman workmanship at all. But it is at least equally possible that he took the Roman origin of Raedykes for granted, and that his words mean no more than they say. At all events, in so far as he condescends upon details, his main objection seems to be to the theory that the actual battle took place on the Kempstone Hill: he "finds himself obliged to conjecture, both from the locality and the remains, that the conflict there has been between the Scotch and the Danish, or other northern invaders."

Scottish lairds have always displayed a not unnatural reluctance to relinquish the ownership of the battlefield of Mons Graupius, and Mr Barclay was no exception to the rule. He continued to believe that the struggle had taken place on the Kempstone Hill. But he did yield

<sup>1</sup> Francis Douglas, *A General Description of the East Coast of Scotland from Edinburgh to Cullen, etc.*, p. 261. The book was published in 1782, and the discovery is said to have taken place "some years ago."

<sup>2</sup> See Gough's edition of Camden's *Britannia*, vol. iii. (1790), p. 416\*, footnote, for an account of this visit.

<sup>3</sup> See *infra*, p. 325.

<sup>4</sup> See Gough's Camden, *l.c.*

an important point to Melvill. He abandoned the notion that it was from Raedykes that the troops of Agricola had issued to measure swords with the host of Galgacus. Arduthy, two or three miles nearer Stonehaven, seemed to him to satisfy the conditions much better, and in the eighteenth century there were still visible there the remains of entrenchments, long since vanished, out of which it required no great effort of imagination to reconstruct a Roman camp. Raedykes retained its Roman character, but its existence now demanded a fresh justification. Nor did that prove hard to discover. "The Roman general," it was suggested, "might, for various reasons, have been unable to pursue the advantages he had gained, and chosen to encamp upon the *Garniehill*, or *Raedykes* . . . an eminence which commands a prospect of the whole neighbourhood."

The views just summarised were set forth at length in a communication addressed by Mr Barclay to Lord Buchan, and subsequently printed in *Archæologia Scotica*.<sup>1</sup> Although the communication is undated, we know that it was read at a meeting of the Society on 11th January 1785,<sup>2</sup> and there is good reason to believe that it was penned but a few days previously. Some four weeks later Lord Buchan utilised it as the basis of the second of two letters which he addressed to Nichols, the publisher, over the fictitious signature 'Albanicus.' Next year Nichols printed both in No. xxxvi. of the *Bibliotheca Topographica Britannica*<sup>3</sup> under the heading, "Remarks on the Progress of the Roman Arms in Scotland, during the Sixth Campaign of Agricola." In the second letter, which is dated 8th February 1785, 'Albanicus' intimates that the local information which forms its groundwork had reached him after his first letter was written—that is, after 10th December 1784. The most probable date for Barclay's communication is therefore December 1784, for that the local information referred to is identical with the communication from Barclay will not be doubted by anyone who places the two documents side by side.

A large part of the second letter of 'Albanicus' is, in fact, neither more nor less than a *réchauffé* of what Barclay had said. The thesis maintained is identical. Indeed, the very language is often the same. The illustrations, however, are new. Barclay's communication to Lord Buchan had been accompanied by a "rude sketch" of the surrounding country, which is here reproduced as fig. 1. An "exact plan" of the camp itself was promised, it being explained that in the meantime no proper measurements could be taken "on account of the depth of the snow." The 'Albanicus' letters in the *Bibliotheca* are illustrated by three plates. The first of these is a map showing Scotland according to 'Richard of

<sup>1</sup> Vol. i. pp. 565-70.

<sup>2</sup> *Op. cit.*, vol. iii., Appendix, p. 157.

<sup>3</sup> Pp. 1 ff.



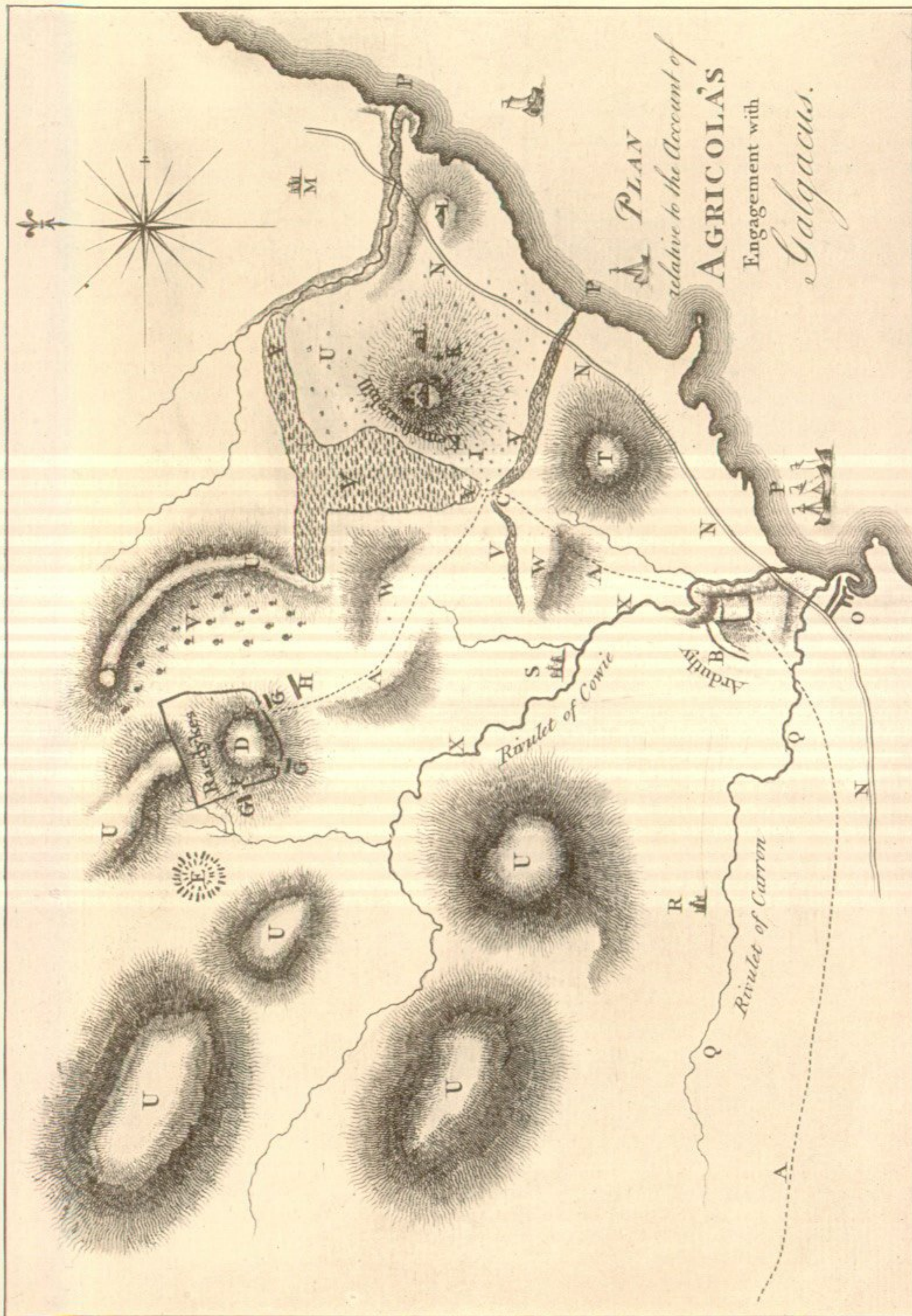


Fig. 1. Sketch of the Country round Raedykes, from *Archæologia Scotica*, vol. i.  
 (For the lettering, see p. 322 *infra*.)



Cirencester,' which need not further concern us. The second is an improved and slightly extended edition of Barclay's "rude sketch," the improvement consisting in the substitution of what will turn out to be a fairly accurate outline of Raedykes for a very rough square. As this plate gives a good general idea, not only of the relative position of the camp, but also of its shape, and as it furnishes a valuable clue to the solution of a problem we shall have to face presently, it is reproduced here as fig. 2. The dotted line (A A A) represents the supposed route of the Roman soldiery from Strathmore to their camp at Arduthy (B), thence to the position (C) which they took up before the battle, and finally to Raedykes (D), where they rested on their laurels after the victory was won.<sup>1</sup> The third *Bibliotheca* plate will be referred to later.

Meanwhile Professor Stuart's share in the discussion calls for a brief notice. As has been already stated, he made his first acquaintance with the site in 1778, when he surveyed the ground and drew a plan of the camp. The opinion he arrived at then—an opinion which was confirmed by many subsequent visits—was that Raedykes was not Roman at all. It was a "camp of the Caledonians . . . totally unlike those of the Romans in Scotland, which are universally rectangular, whereas in this one there is not a single right angle in its whole extent." Its attribution to the Romans was due to the fact that it was "an awkward imitation of their mode of encampment, fortified with a wall and ditch, and having several gates with traverses in front of them." This reads like the language of an antiquary in whom there lingered no trace of Roman fever. But, with it all, Stuart could not succeed in freeing himself from the spell of Mons Graupius. He was as unwilling as Barclay had been to acquiesce in Melvill's criticism. For him, too, the Kempstone Hill remained the battlefield, and the fragmentary entrenchments at Arduthy were transfigured into the camp of Agricola. Raedykes, however, was surrendered to Galgacus. It became the camp in which the Caledonian chieftain had delivered, or at least composed, his memorable oration.

Such was Stuart's theory as expounded in his "Observations upon the Various Accounts of the Progress of the Roman Arms in Scotland, and of the Scene of the Great Battle between Agricola and Galgacus," published in *Archæologia Scotica* in 1822.<sup>2</sup> This paper does not seem to have been read to the Society in the form in which it was printed. But it doubtless embodies the substance of a communication entitled "Observations on some Remains of Roman Antiquity in the North of Scotland," which

<sup>1</sup> It would be mere waste of space to supply a complete 'key' to the lettering. PP, for instance, is 'the sea,' and UUU 'the Grampian Hills.'

<sup>2</sup> Vol. ii, pp. 289 ff., reprinted in the author's posthumous *Essays* (Aberdeen, 1846), pp. 69 ff. Stuart's theory has recently been revived by Mr Crabb Watt, K.C., in *The Mearns of Old* (1914), pp. 64 ff.



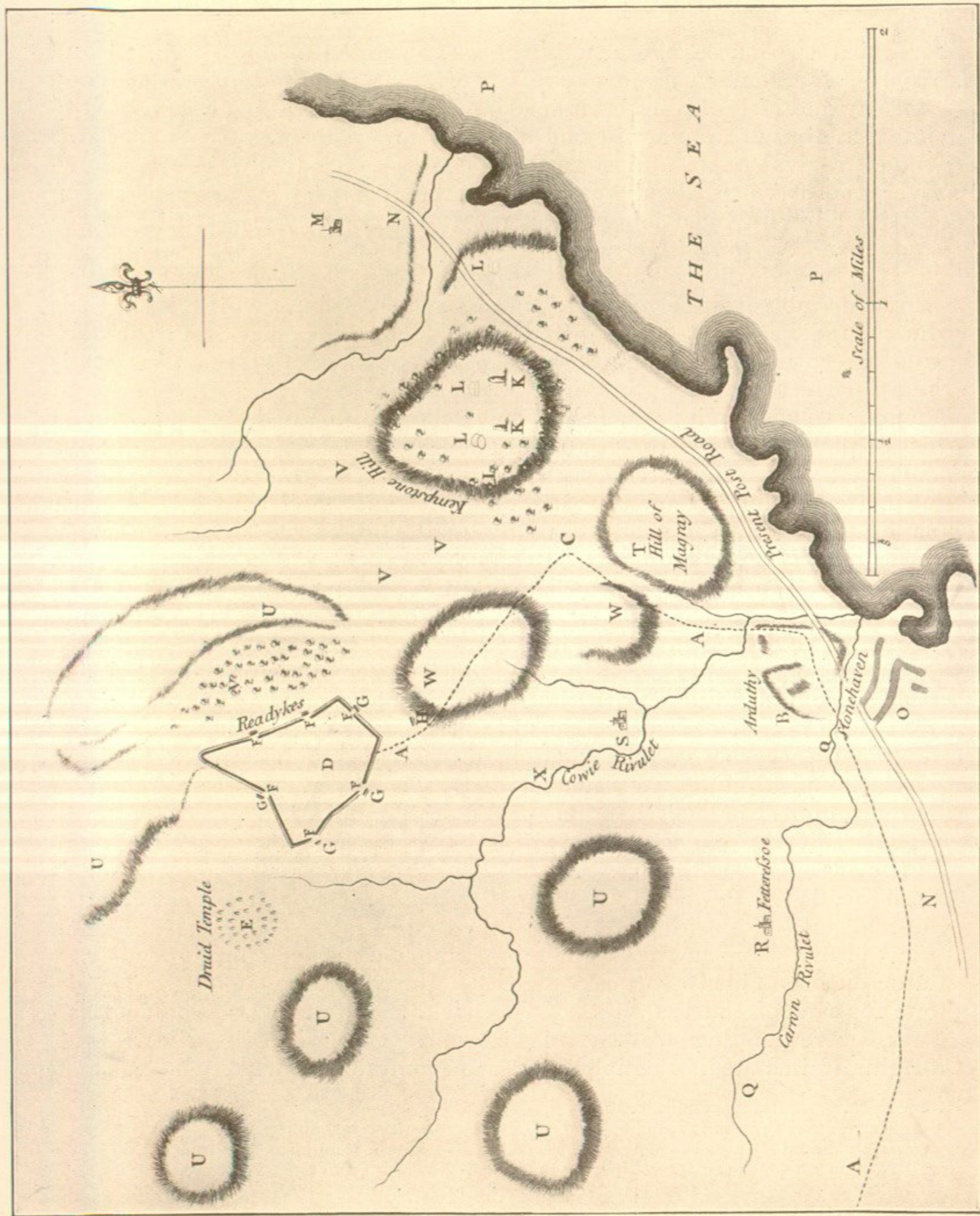


Fig. 2. Map of the Country round Raedykes, from the *Bibliotheca Topographica Britannica*, No. xxxvi.  
 (For the lettering, see p. 322 *supra*.)



occupied two successive meetings in the winter of 1819 (Jan. 26 and Feb. 8),<sup>1</sup> forty-one years after Stuart's original examination of Raedykes. Barclay and Melvill were both dead, and Lord Buchan had long ceased to interest himself actively in the Society's proceedings.<sup>2</sup> The paper was thus a revival of an almost forgotten discussion. In the interval, however, the claim of Raedykes to a genuine classical ancestry had been fortified by its inclusion in General Roy's *Military Antiquities of the Romans in North Britain*, where a plan of it appears on plate L.

It is practically certain that Roy himself had never seen Raedykes. He seems not even to have known of its existence until his book was, as he thought, completely finished. There is no allusion to it in the text, and a scrutiny of the manuscript copy in the British Museum—which is more perfect than that in the library of the Society of Antiquaries of London—shows quite conclusively that it had no place in the original list of plates. I hope to set forth in detail elsewhere the evidence I have collected as to the circumstances attending the composition and the ultimate production of the *Military Antiquities*. Meanwhile it must suffice to say that the book was ready for the press in 1773, between which date and 1777 a few unimportant changes were introduced by the author. Thereafter the MS. lay untouched until it was posthumously published in 1793 at the expense of the London Society, one or two additional drawings having accumulated in the meantime. From the language used in their report to the Council of the Society by the Committee that had been appointed to supervise the issue, one might naturally enough infer that this Committee had restricted their energies to the task of securing diplomatic accuracy of reproduction, and had scrupulously refrained from any attempt to edit.<sup>3</sup> As a matter of fact, however, a close examination reveals unmistakable indications of editorial handiwork.

The editorial change that is of most immediate interest to us here is the insertion of Raedykes in the Map of Roman Scotland,<sup>4</sup> where it is accompanied by the description "*Cast. Agricolaë*." It would seem that after he had put the finishing touches to the text—that is, after 1777—Roy had for the first time heard of the camp, and had either simultaneously or later on been able to secure a plan. Of this plan two copies were made, one for each of the two MSS. of the book. They are water-colour drawings, corresponding exactly in size and style with the illustrations originally included. Possibly they are from Roy's own brush. If not,

<sup>1</sup> *Arch. Scot.*, iii., Appendix, p. 172.

<sup>2</sup> He resigned the Vice-Presidency in 1790 (*Arch. Scot.*, iii., Appendix, p. 1).

<sup>3</sup> In the prefatory note that follows the second title-page the Committee say, quoting their own report, "that it had been judged proper to publish the work from the manuscript, without any commentary, or deviation from the style and orthography of the original."

<sup>4</sup> Plate L. in the *Military Antiquities*.



they must have been executed under his personal supervision. In either case their presence in the collection is clear proof of an intention to revise the work once again, incorporating Raedykes. The action of the editors in reproducing the plan, and in inserting the camp on the Map, was thus fully justified. Nor did they go beyond their duty in adding the description "*Cast. Agricolaë*," for Roy's own opinion was plainly expressed in the headline which appears on each of the drawings: "Plan of Agricola's Camp called Rae Dykes near Ury about 3 Miles from Stone-Haven."

One cannot help wondering how Raedykes was brought to Roy's notice. It may very well be that the first information came to him from Melvill, who (it will be remembered) had seen the camp in 1777. The two were old acquaintances, and they must have met from time to time in London, where both were resident for a number of years before Roy's death in 1790. On such occasions the conversation must now and again have turned upon Roman antiquities, which formed the original bond of union between them, and it is difficult to believe that Raedykes was left unmentioned. Even if it were, however, so keen a topographer as Roy cannot possibly have missed the 'Albanicus' letters when they appeared in the *Bibliotheca* in 1786, especially as, in their more general aspect, they dealt with the very subject upon which the whole antiquarian world was just then expecting him to throw a flood of light.<sup>1</sup> We may, therefore, conclude that by 1786 at latest Roy was alive to the importance of Raedykes, and had made up his mind that it was Agricolan.

It is less easy to guess whence and when he procured his plan; but an analysis of the material may bring a solution of the mystery. The most convenient starting-point for our inquiry will be a quotation from Stuart, whose survey of 1778 has already been referred to. Writing in *Archæologia Scotica* in 1822, the Professor says:—

"A drawing of this Scottish camp, originally made by the author in 1778, was sent by him to the late General Melville, an eminent antiquary, and early associate of General Roy; and another furnished some years after by the Earl of Buchan was published by Nichols in the 36th number of his *Topographia Britannica*. There is also an engraving of it, though by no means accurate, in General Roy's *Military Antiquities*."<sup>2</sup>

From this passage it is clear that Stuart believed in the existence of three distinct plans of Raedykes—(1) his own drawing of 1778; (2) another sent to Nichols by Lord Buchan about 1785; and (3) the original of Roy's plate L., which cannot be later than 1790, the year of Roy's death. The adverse criticism here passed upon the accuracy of the last of these makes it certain that Roy's plan cannot have been copied from Stuart's

<sup>1</sup> Contemporary references show that it was well known that Roy's book was finished and might be published at any time.

<sup>2</sup> *Arch. Scot.*, ii. p. 301.

drawing. On the other hand, the absence of any such criticism of the *Bibliotheca* plan justifies the assumption that in all essentials there was complete correspondence between it and Stuart's. We may go further. Fig. 3 shows the third of the three plates used to illustrate the letters of 'Albanicus.' It will be observed that it is entitled "Camp of Rhé Dykes 1785," as if the year mentioned were the one in which it had been executed. But in a postscript to the second letter it is described more explicitly as a "*Plan of the Camp at Rae Dykes, on the Estate of Ury, in the Shire of Kincardine, as furnished by Robert Barclay of Ury, Esq.; from an actual Survey, to Lieutenant General Melvill, in 1778.*"<sup>1</sup> And the more explicit description is amply confirmed by what Melvill himself says in his contribution to Gough's Camden. After speaking of the visit he had paid to the spot in 1777, he proceeds:—

"Mr Barclay having been pleased very obligingly, in the following year, to transmit to General Melvill a very accurate drawing, from an actual survey, of the camp called Raedykes, it was inserted in the XXXVIth Number of the *Bibliotheca Topographica Britannica.*"<sup>2</sup>

The sequence of events thus becomes plain. The "actual survey" of 1778 was Stuart's—we know from himself that it was in that year that it was carried out,—and the drawing which he made was subsequently forwarded to Melvill through their common friend Barclay. Stuart's plan and the *Bibliotheca* plan are, therefore, not merely in agreement: they are identical. One link only is wanting to complete the chain: we have still to discover what part Lord Buchan played in the transaction. This we are fortunately able to do. It is revealed in the following letter, written by the Earl to Nichols<sup>3</sup>:—

"To-morrow I shall send you the continuation of Albanicus's Remarks on the progress of the Roman arms in Scotland during the sixth campaign of Agricola, accompanied by a sketch of Richard of Cirencester's Itinerary, and a Topographical Map of the country adjacent to the remains of encampments at the north-eastern pass of the Grampian hills.<sup>4</sup> Lieutenant-General Melville I find is possessed of a drawing of the camp at Rea-Dykes or Garnacahill,<sup>5</sup> described in the account given of it by Albanicus in his second letter to the printer of the Gentleman's Magazine, and I have written the enclosed letter to that brave, humane, and learned General, the rival of the Marquis de Bouillé,<sup>6</sup> who will probably permit you to use it for the purpose of rendering Albanicus's communication more satisfactory."

<sup>1</sup> *Bibl. Topograph. Brit.*, xxxvi. p. 15.

<sup>2</sup> Gough's ed. of Camden's *Britannia*, iii. (1790), p. 416\*, footnote.

<sup>3</sup> Printed in Nichols's *Illustrations of Literature*, vi. p. 508. It appears under the date "1784" but may not have been written till early in 1785.

<sup>4</sup> These are respectively plates i. and ii. of *Bibl. Topograph. Brit.*, xxxvi.

<sup>5</sup> A mere misprint for "Garniehill" or "Garrisonhill." So, too, "*Garniehill*," *supra*, p. 320.

<sup>6</sup> That is, as a commander of troops in the West Indies.



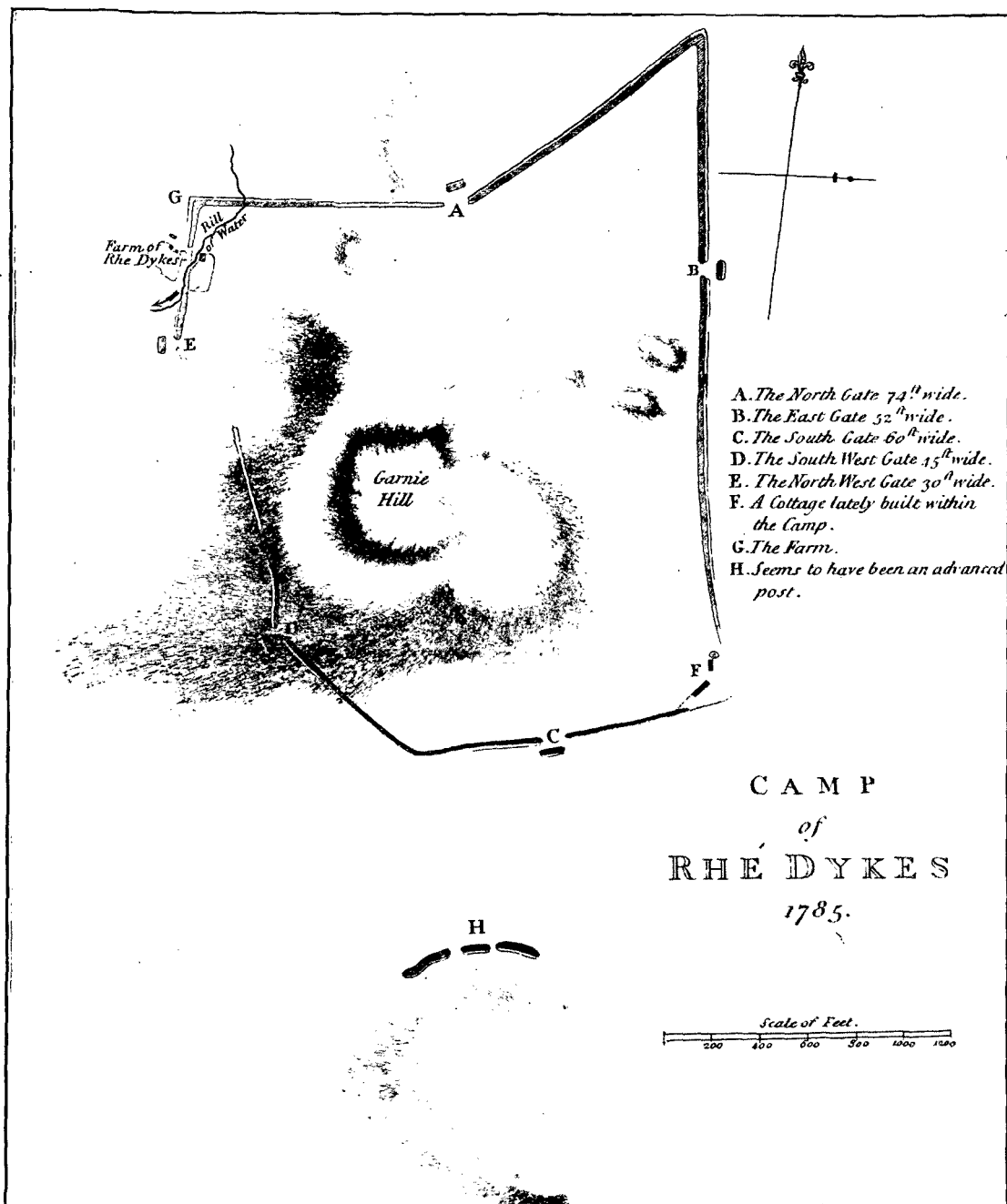


Fig. 3. Plan of Raedykes, from the *Bibliotheca Topographica Britannica*, No. xxxvi.

The identity of Stuart's drawing with the *Bibliotheca* plate being satisfactorily established, we may turn next to the engraving in Roy's *Military Antiquities* (plate L.). The most important part of it is shown here as fig. 4, the original scale being maintained. The first impression which it leaves is that of a country almost Alpine in its ruggedness, a picture very far removed indeed from the reality.<sup>1</sup> In fairness, however, it ought to be explained that the engraver alone is responsible for the precipitous character of the hills; no such abruptness of relief is suggested by the original water-colour sketch. This feature, therefore, may be disregarded. Concentrating attention upon the camp, one cannot but be struck by the different manner in which it is represented here and in the *Bibliotheca* plate (fig. 3). Thus, fig. 3 shows only a single gate in the east side, while fig. 4 shows two. Or compare, again, the position of the gates marked C and E in fig. 3 with that of the corresponding gates in fig. 4. Small wonder that Stuart, with whom the correctness of his own drawing would naturally be an article of faith, felt impelled to condemn Roy's engraving as "by no means accurate," especially in the light of the confirmation which he supposed that his own version received from the *Bibliotheca* plate, whose true origin he failed to recognise.

But the particular plate we have been discussing is not the only plan of the camp that appears in the *Bibliotheca*. The plate that immediately precedes it—illustrated here as fig. 2—is obviously a reproduction of the "Topographical Map" which the Earl of Buchan promised to send to Nichols along with the second 'Albanicus' letter.<sup>2</sup> And that will be found to contain a representation of Raedykes which differs so radically from the larger plan of fig. 3 as to exclude the possibility of its having been based upon Stuart's drawing. On the other hand, if it be looked at alongside of fig. 4, the resemblance to Roy's plan will be at once apparent. Indeed, when allowance is made for the difference in scale, the agreement between them is too remarkable to admit of any other explanation than that both have been derived from a common source. This conclusion brings the end of our quest appreciably nearer. If we can discover the origin of fig. 2, we shall know where Roy's plan ultimately came from.

Fig. 2, it will be remembered, is merely an improved edition of fig. 1, the improvement consisting mainly in the obvious effort made to delineate the outline of the camp more precisely. Further, we have seen that Barclay was responsible for fig. 1, and that, in forwarding it to

<sup>1</sup> The impression produced by the whole plate is naturally much stronger than that produced by the necessarily limited portion of it shown in fig. 4.

<sup>2</sup> See *supra*, p. 326.



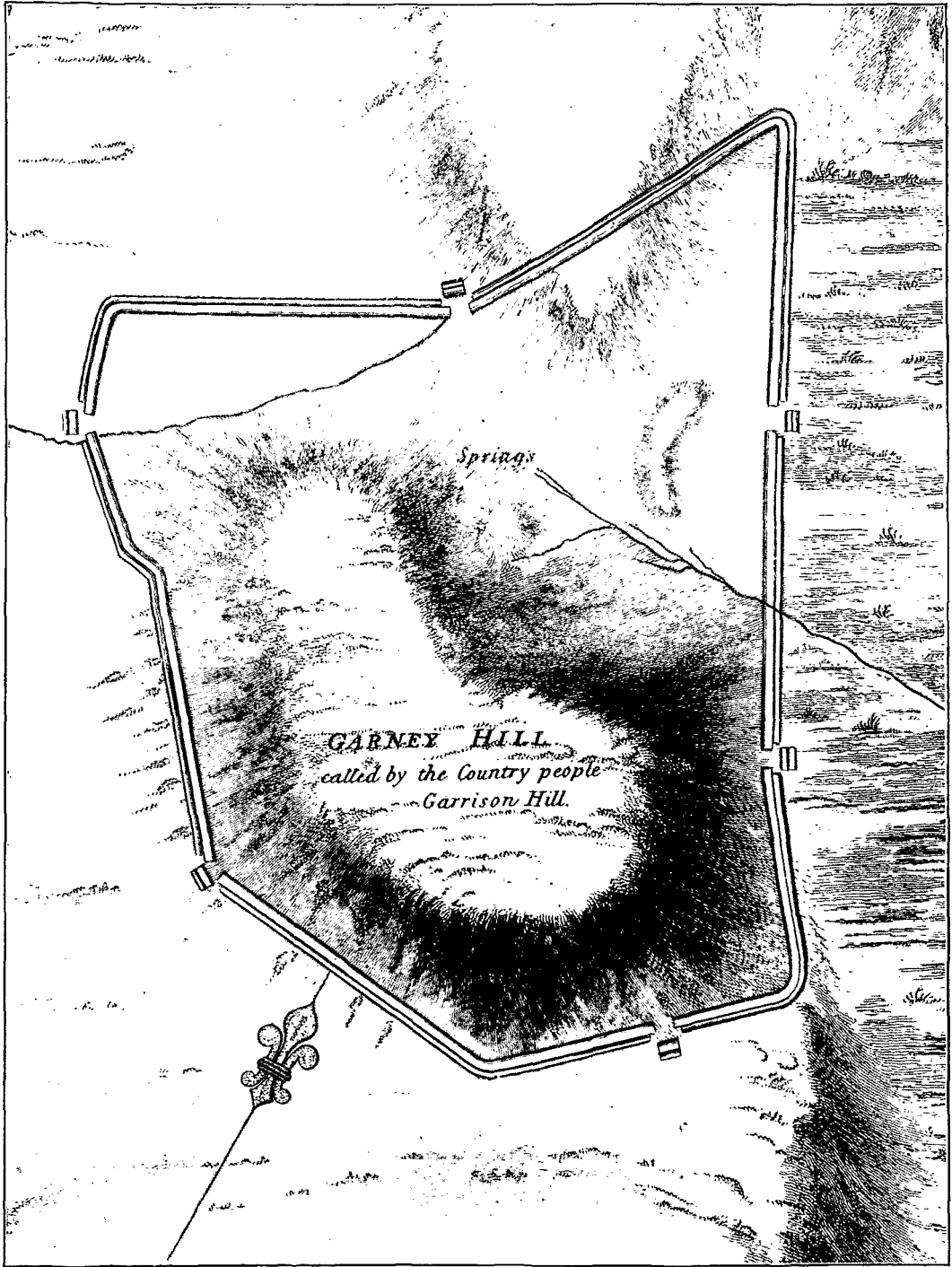


Fig. 4. Plan of Raedykes, from Roy's *Military Antiquities*.



Lord Buchan, apparently in response to a direct request, he took occasion to apologise for its imperfections, promising to let him have something better when the weather conditions improved. His *ipsissima verba* are:—

“I had the honour to acknowledge the receipt of your Lordship's letter. Since that time I have been at the camp of *Raedykes*, but could not take an exact measure of it, on account of the depth of the snow. As soon as the ground is clear, I will send to your Lordship an exact plan of it. I suppose, it contains about an hundred acres; but this is conjecture. At present, I transmit to your Lordship a rude sketch of the country near it, which, if it can be understood, will convey the ideas I have formed.”<sup>1</sup>

This letter, as we have already learned, was written either in the end of December 1784 or in the beginning of January 1785.<sup>2</sup> The survey which it contemplates would therefore be made early in the latter year; for snow never lies long so near the sea. Its outcome would certainly be ready in ample time to be inserted in Lord Buchan's "Topographical Map" (fig. 2), possibly not before that was first sent to Nichols on 8th February, but at all events before it was engraved for the *Bibliotheca*, where it did not appear till 1786. Set alongside of this the fact that the small outline of *Raedykes* in the "Map" must be based upon an actual survey, since (as will be shown in the sequel) it reflects the reality a good deal more faithfully than does Stuart's drawing (fig. 3). What is the inference? Surely that in fig. 2, and consequently in Roy's plan, we have the result of a survey carried out by Mr Barclay's directions in the late winter or early spring of 1785. Stuart, as the author of an earlier plan, would naturally hear from Mr Barclay of this fresh survey and of its immediate purpose. In the circumstances it is not at all surprising that he should have been led astray by the arbitrary insertion of the date "1785" in plate iii. of the *Bibliotheca* (fig. 3), and should have mistaken his own drawing for the new plan.

It may be urged that Stuart ought to have been kept right by the postscript to the second 'Albanicus' letter, which gives a correct account of the provenance of the plate in question. Against this it must be borne in mind, firstly, that he was writing in 1822, thirty or forty years after the event; and, secondly, that he may never have seen the *Bibliotheca* itself at all, his knowledge being in that case derived from the summary in Gough's *Camden*, where the postscript is less prominent. George Chalmers apparently fell into the same mistake, for it seems clear that it is to fig. 3, and not to fig. 2, that he refers in one of his footnotes, the circumstantiality of which affords convincing proof of a fresh survey

<sup>1</sup> *Arch. Scot.*, vol. i. p. 565.

<sup>2</sup> See *supra*, p. 320, where it is indicated that December is the more probable.



having been made for the benefit of 'Albanicus,' and at the same time supplies us with a detail of considerable interest by revealing the name of the person who carried it out. The words of the footnote are:—

“See an Account and a Plan of this Roman camp, from an actual survey by George Brown, land-surveyor, in the *Bibl. Topograph. Brit.*, No. 36; Gough's *Camden*, v. iii. p. 416, pl. xxviii.; Roy's *Milit. Antiq.*, pl. 1. And see a plan of this remarkable ground in the *Transactions of the Antiq. Soc. of Scotland*, v. i. p. 565.”<sup>1</sup>

Our analysis of the material has thus led us to a quite unmistakable conclusion. The ultimate source of the engraving in the *Military Antiquities* was the plan which Brown prepared, on Mr Barclay's instructions, early in 1785. Incidentally, this fully explains its superior accuracy, of which we shall have an opportunity of judging in the sequel: Brown was a professional surveyor, while Stuart was an amateur. How Roy obtained access to it, will probably always remain uncertain. But it seems obvious that it must have been sent to him either by Mr Barclay or by Lord Buchan, possibly through the agency of Melvill, whom we know to have been in correspondence with both. It has already been pointed out that Roy cannot have missed the 'Albanicus' letters in the *Bibliotheca*. It may be conjectured that, in studying the illustrations, his trained eye was struck by the inconsistencies between the outline of the camp as it appears in plate ii.—our fig. 2—and the more elaborate plan that occupies plate iii.—our fig. 3—and that he was prompted to institute inquiries. Such a hypothesis makes everything plain.

Before we quit the older authorities, it may be useful to draw attention to the extraordinary differences between the various estimates that were formed regarding the superficial area of Raedykes. When every allowance has been made for the chance that some of the writers may be thinking of the Scots acre of 6084 square yards, and others of the English acre of 4840, the discrepancies remain sufficiently startling to serve as a warning against the too ready acceptance of eighteenth-century statements as to the size of now vanished entrenchments. Maitland's guess of “three-quarters of a mile square, or three miles in circumference,”<sup>2</sup> seems to suggest a total of about 370 acres. At the opposite extreme is the next description to be published—that of Francis Douglas, issued in 1782,—according to which the camp “is an oblong square of twenty-one acres, has four outlets, with redoubts before them, and many of

<sup>1</sup> *Caledonia*, vol. i. p. 177, footnote (e). The careful distinction drawn here between a plan of the camp and a plan of the ground makes it certain that it was plate iii. of *Bibliotheca* (i.e. fig. 3) which Chalmers believed to rest upon Brown's survey. Plate ii. (i.e. fig. 2) is virtually identical with the plan of the ground which he cites in the last sentence. See *supra*, p. 322.

<sup>2</sup> *History of Scotland*, vol. i. p. 202.

the trenches are still pretty deep.”<sup>1</sup> Twelve years later Douglas’s language was borrowed *verbatim* (without acknowledgment of any sort) in the notice of the parish of Fetteresso in Sir John Sinclair’s *Statistical Account*,<sup>2</sup> although the writer, who was the parish minister, might have satisfied himself of its inaccuracy by half an hour’s personal inspection or by five minutes’ talk with Mr Barclay. Barclay’s own estimate of the extent of Raedykes comes nearer the truth than that of any of the others. He puts it at “about a hundred acres.”<sup>3</sup> The Earl of Buchan increases it to “about 120,”<sup>4</sup> while Stuart cuts it down to “forty or fifty.”<sup>5</sup> The real figure is ninety-three and a half.

The main facts as to the rediscovery of Raedykes having now been put on record, we are free to turn to the excavations of 1914. In connection with these it is a pleasure to bear witness to the ready courtesy with which permission to dig was granted me by Mr Alexander Milne, factor on the Urie estates, as well as by the two tenants who were immediately concerned, Mr James Burnett (Newbigging and Broomhill) and Mr Francis Gibson (South Raedykes). It should be added that I was specially fortunate in securing the services of Mr William Middleton, Stonehaven, as leader of our little working party. Such success as attended our operations was in large measure due to the keen personal interest which he took in the whole enterprise. Description of the results will be facilitated if attention be drawn at the outset to a somewhat unusual feature that emerged at an early stage in our examination of the defences.

A glance at Professor Stuart’s plan (fig. 3) will show that the line by which the boundaries of the enclosure are represented is not of a uniform thickness throughout. Speaking generally, one might say that it is broad towards the north and east, narrow towards the south and west. No such difference is apparent in Brown’s plan as reproduced in Roy’s *Military Antiquities* (fig. 4). Yet the variation which Stuart’s drawing displays corresponds more or less accurately to a real and important distinction. Digging revealed the fact that the engineers who constructed the camp had made use of two well-marked types of ditch and rampart, the choice of type for each particular section being obviously determined by the nature of the ground that happened to lie immediately in front.

Wherever the conditions were at all favourable to an attacking party, the ditch assumed the character which we are accustomed to associate with fortifications of Roman origin. That is, it was V-shaped, with a width of about 15 feet and a depth of about 7. Usually it was faced with

<sup>1</sup> *General Description of the East Coast of Scotland, etc.*, p. 260.

<sup>2</sup> Vol. xii. p. 596.

<sup>3</sup> *Arch. Scot.*, vol. i. p. 565.

<sup>4</sup> *Bibliotheca Top. Brit.*, xxxvi. p. 15.

<sup>5</sup> *Arch. Scot.*, vol. ii. p. 300.

puddled clay on one side or on both. The cuttings which yielded no evidence of this precaution were, indeed, so few in number as to justify the supposition that its apparent absence was purely accidental, a consequence of natural decay. It seemed to have been applied with special care and elaboration at all points where the unevenness of the surface suggested the risk of a sudden rush of water after a heavy fall of rain. And that, no doubt, supplies the clue to its ultimate object. One instance was particularly striking. As it approaches the N.E. corner of the camp from the west, the ditch follows a route that could not but make it a natural drain for a fairly extensive area. In a section cut across it a few feet before the actual turn was reached, scarp and counter-scarp were found to be firmly plastered with a layer of puddled clay about 2 inches thick. This clay was hard—some of it so hard as to be almost like baked brick,—while much of it was of a peculiar red colour, quite unlike anything that the immediate neighbourhood would furnish. Mr Burnett, the tenant, was of opinion that it must have been brought from a bed nearly a mile away.

In the section of which we have been speaking the initial angle of descent of scarp and counter-scarp was maintained with approximate uniformity until the two met at the bottom and formed a V. Elsewhere the ditch, when cleared out, presented a phenomenon closely analogous to one noted at Bar Hill on the Antonine Wall.<sup>1</sup> About 9 inches above the lowest level, the two sides suddenly became perpendicular, the result being to leave a flat bottom, generally about a foot and a half wide, sometimes fully two feet. In one very exceptional case the depth of the perpendiculars was as much as 18 inches, while the width of the flat bottom was actually 4 feet. This, however, was where the ditch abutted on the edge of the roadway issuing from one of the gates, so that the conditions must be regarded as somewhat abnormal. Comparing Raedykes with Bar Hill, we may note that the various ditches at the latter (which was, of course, a permanent fort) had an average width at the top of rather more than 16 feet and an average depth of from 6½ to 7½; and that the perpendiculars at the bottom measured 18 inches, the flat space between them ranging from 2 feet to 8 inches in breadth. The general effect was as shown in fig. 5.

Thus much for the first type of ditch. The second type, which occurred wherever the nature of the ground was such as to render a sudden onset exceedingly unlikely, was totally different in character. It was only 8½ feet wide, and its depth in the centre was seldom more than a foot and

<sup>1</sup> See *The Roman Forts on the Bar Hill*, p. 28 (*Proceedings*, vol. xl. p. 430), where an English analogy is cited. Cf. also the sections of the ditches at Newstead, many of which display the same feature (Curle, *A Roman Frontier Post*, p. 30).



a half. The shape, too, was distinctive. It bore no sort of resemblance to a V, but had merely been scooped out in a more or less perfunctory manner. In other words, it was not a "*fossa fastigata*." Still less could it be classified as a "*fossa punicata*," the one other variety which the *Liber de Munitionibus Castrorum* is disposed to recognise.<sup>1</sup> Similarly, its dimensions were only in partial conformity with the standard set up by Hyginus, who prescribes<sup>2</sup> a minimum breadth of 5 feet and a minimum depth of 3, even for a ditch which is dug "*loco securiori*," as this was. These facts must be noted, but it would be a mistake to regard them as constituting an insuperable objection to the view that Raedykes was of Roman origin. After all, the manual of Hyginus had no more authority than any other practical text-book; it could not fetter the discretion of individual commanders.

It is less easy to speak with confidence regarding the rampart, which has in most places been seriously destroyed. It seemed clear, however, that it also, like the ditch, was of two well-defined types. Wherever the ditch had been deep, the rampart had apparently been high, and had been formed of the earth thrown up by the diggers.

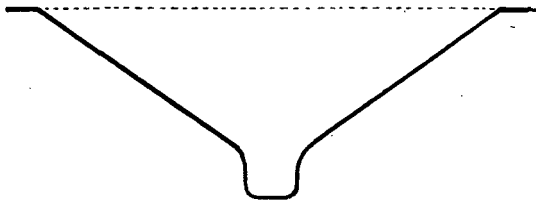


Fig. 5. Section, showing shape of ditch at Bar Hill.

There was no substratum of stones or of clay. Instead, a black layer, immediately above the original surface, indicated decayed vegetation, and proved that the excavated material had simply been tossed on to the grass or heather as it grew. It is impossible to give any estimate of the original size of the mound. Where it is best preserved, its greatest height to-day is about  $4\frac{1}{2}$  feet, while the black layer extends continuously backwards for a distance of 19 or 20 feet from the inner lip of the ditch. The figure just mentioned cannot, however, be assumed to represent the actual breadth of the base; for, as the mound crumbled, the black layer would inevitably tend to spread. It should be added that there appears to have been no berm, the outer face of the rampart rising in almost a direct line with the inner face of the ditch.

Turning to the second type, one may say that, wherever the ditch became narrow, the available evidence suggested that there had been a corresponding change in the character of the barrier behind it. To begin with, where it is best preserved it is now no more than  $3\frac{1}{2}$  or 4 feet high, and this may be a somewhat more reliable index to the original size than

<sup>1</sup> *Op. cit.*, c. 49.

<sup>2</sup> *Ibid.*

was the  $4\frac{1}{2}$  feet of the earthen mound, for the material used had consisted of large, loose boulders, evidently gathered from the hillside, so that the natural process of disintegration would be relatively less rapid. Again, the apparent breadth at the base was only about  $8\frac{1}{2}$  feet, as compared with 19 or 20; and here too it is probably unnecessary to make much allowance for "spread." Even so, however, the second type of rampart, like the second type of ditch, must have fallen distinctly short of the requirements formulated by Hyginus, who lays down a minimum breadth of 8 feet and a minimum height of 6 as suitable for a *vallum*.<sup>1</sup> That, however, was "*loco suspectiori*," and it is, therefore, hardly a fair test.

We pass next to a more particular description of the camp as a whole. The irregularity of its outline is so pronounced that there is no geometrical term which could convey an accurate idea of its general configuration. That can only be gained by referring directly to the plan (fig. 6).<sup>2</sup> For our immediate purpose it will be convenient to treat four of the angles (P, Q, R, and S) as principal angles, and therefore to regard the enclosure itself as a quadrilateral. Nor is it only considerations of convenience that suggest such a course as desirable. If attention be paid to the position of the six gateways, as indicated on the plan by the first six letters of the alphabet, it will be observed that they fall naturally into three groups, each of which may not unfairly be called a pair of opposites—*A* and *E*, *B* and *D*, *C* and *F*. Once this fact has been realised, it needs no great effort of imagination to see in Raedykes a Roman camp of ordinary form, with its sides deflected from their normal lines as the result of an endeavour to accommodate themselves to the sinuosities of the ground. This is a point to which we shall have occasion to return.

The north-eastern angle of the camp projects like a huge salient into the moor. On both sides of the salient the ditch has suffered comparatively little from the neglect of centuries, while considerable stretches of the rampart remain in fairly good preservation. Although the actual corner (P) has been partially obliterated by a farm-road running north and south across the defences, enough of it is left to show that it had originally been rounded in the usual Roman manner. The general conditions, in short, seemed to indicate this as a suitable spot for beginning our excavations, and it therefore becomes a natural starting-point for a statement of their results.

The ground along which the eastern side of the defences (P Q) runs slopes gently from north to south. Immediately in front is a stretch of flat, open moorland, towards the southern end of which there rises a

<sup>1</sup> *Lib. de Mun. Castr.*, c. 50.

<sup>2</sup> In the preparation of the plan I have received very valuable assistance from Mr J. Mathieson of the Ordnance Survey Department.

group of low hills, having between them and the camp what was in earlier times apparently a bog. The total length of the line from P to Q is about 2626 feet, inclusive of the gaps for entrances at A and B.<sup>1</sup> For about three-quarters of that distance it is virtually straight. Immediately beyond gate B, however, it swings slightly to the east, and continues to follow the altered direction until Q is reached. From P to gate B it forms the boundary between the farm and the uncultivated moor. Here, accordingly, the ditch remains distinctly visible, while (as already indicated) there are still extensive traces of the rampart, especially between P and gate A. With the change of direction comes another change: not only is the rampart completely levelled, but even the course of the ditch can no longer be readily determined. The explanation lies partly in the fact that the ground here, though it has now reverted to moorland, has at one time been under cultivation.<sup>2</sup> But there is also a further reason. All the way from P to gate B the ditch has been of the deeper or more formidable type. It has continued to be so for some 60 yards beyond gate B towards Q. Thereafter it has rapidly grown shallower, soon merging into the second or slighter type described above. There is no evidence to show whether the rampart underwent a like transformation, but it is natural to suppose that it did.

The distance from P to Q, as shown on the 25-inch Ordnance map of 1903, approximates very closely to the measurement given above. Exact comparison between the two is, however, impossible, partly because of the difficulty of fixing an identical starting-point at P, and partly because the position of Q on the Ordnance map is avowedly conjectural. Besides, the officers of the Survey have taken no notice of the gates, and their reason for ignoring them is plain. Although gaps in ditch and rampart are apparent both at A and at B,<sup>3</sup> there is nothing on the

<sup>1</sup> It may be interesting to compare the details of this measurement with the surveys of Brown (1785) and Stuart (1778), as recorded in the plates of the *Military Antiquities* and of the *Bibliotheca* respectively. Owing to the smallness of the scale on which they are reproduced, the margin of possible error in connection with these, particularly the latter, is large; and the danger is, of course, specially great where the distances concerned are relatively minute, as is the case with the spaces for the gates. It has further to be remembered that Stuart failed to notice gate B at all. The following table brings out the facts, the distances at the extremities being reckoned from the middle of the ditch:—

	Macdonald.	Brown.	Stuart.
From P to A =	917'	840'	930'
Gap at A =	64'	110'	52'
From A to B =	938'	910'	} 1480'
Gap at B =	41'	90'	
From B to Q =	666'	660'	
	<u>2626'</u>	<u>2610'</u>	<u>2462'</u>

<sup>2</sup> Probably during the first fifty or sixty years of the nineteenth century.

<sup>3</sup> That at B is much more indefinite, owing to the greater extent of damage done. The distances from P and Q and from one another are given in footnote 1, *supra*.



surface to make their purpose clear. Since 1785, when the plan reproduced in the *Military Antiquities* was made, the *tutuli* or covering ditches have entirely vanished. They were easily recovered with the assistance of the spade, and were examined with some care. A particular description of them seems desirable.

The exact width of the gap in the rampart at *A* cannot now be determined. But the width of the gap in the ditch was 64 feet. The interval was covered with puddled clay, which sloped gently down into the ditch on either hand. Opposite to it, and at a distance of 38 feet from the outer edge of the line of the ditch, was the inner edge of the *tutulus*. This latter was 61 feet long, 11 feet broad, and 5 feet deep. Both sides had had a covering of puddled clay. They sloped inwards until within about 9 inches of the bottom, when they suddenly became perpendicular, forming a trench about a foot and a half wide. The analogy with the ditch of the main camp does not need to be emphasised, but it should be recorded that, about a foot and a half from the bottom, a line of decayed vegetable matter of considerable thickness was noted, indicating perhaps the depth to which the *tutulus* had been open in 1785, subsequent to which date it was probably filled up of set purpose when the ground was put under cultivation. The *tutulus* at gate *B* (which was almost directly opposite the farmhouse of Broomhill) proved to be similar in shape and construction, while its distance in front was exactly the same, 38 feet. It was  $12\frac{1}{2}$  feet broad and 4 feet 8 inches deep, with clay upon the sides; but it was no more than 39 feet long, a figure which perhaps justifies us in estimating the gap in the ditch at 41 feet. From the fact that no layer of black mould was observable, we may conclude that this *tutulus* was filled up very early. It is obvious that it was barely visible in the eighteenth century; for, although Maitland and Brown detected it, Douglas and Stuart missed it completely.<sup>1</sup> As they also missed the gate itself, the inference is that, at this point, rampart and ditch were then in much the same condition as that in which we find them to-day, the ruin being so considerable that the gap for entrance is no longer properly distinguishable. The corner at *Q* was cleared out with the spade, and proved to be rounded as *P* had been.

The stretch from *Q* to *R* represents the shortest of the four sides. It is also the side which is most difficult to trace. As a rule, it is accessible, from the outside, only after climbing a long slope, with the result that the slighter type of defence has been deemed adequate throughout. The plough, therefore, which at one period or another has been busy over all save a fraction of its length, has found the task

<sup>1</sup> For Stuart and Brown see figs. 3 and 4 above; and for Maitland and Douglas see the quotations on pp. 318 and 331.

of obliteration fairly easy. Except in two short sections, nothing whatever is visible upon the surface. This lack of obvious evidence finds its reflection in the differences between the surveys. According to Brown the length of Q R is only 960 feet, while according to Stuart it is as much as 1380. As the two are in general agreement regarding the position of Q, it is plain that the disturbing factor must be the uncertain position of R. The measurements taken in 1914, based as they were upon investigation by the spade, go to prove that Stuart was approximately right: they give a total distance of some 1300 feet between Q and R. At the same time they furnish a convincing explanation of the error into which Brown fell. It will, therefore, be convenient to make the record somewhat detailed.

The point Q lies 110 feet east of a well-marked angle in the wall forming the eastern boundary of the farm-road leading to Broomhill. In its progress towards R the line of the defences is at first entirely obliterated. By and by, however, the track of the ditch becomes quite apparent, and behind it runs a series of boulders representing the remains of the rampart. These traces are first noticeable about 88 feet from the spot where the wall is intersected, this spot being in its turn about 170 feet south of the angle mentioned above. So soon as the wall is crossed the clue disappears entirely. The line is lost beneath the farm-road, and it fails to emerge in the cultivated land beyond. Digging, however, showed that it continued to run almost straight on. It was found that, after traversing diagonally the corner of the first field (O.S., 1903, No. 2301), the ditch presently enters a second (O.S., 1903, No. 2302), the boundary between the two being crossed 65 feet out from the western margin of the farm-road. A short stretch of 24 feet then led to the gap at gate C. This gap turned out to be 58 feet wide. About 20 feet in front of it lay a *tutulus*, 56 feet long, but otherwise presenting exactly the same characteristics as were shown by the main ditch throughout the whole length of the side Q R. That is, it was about  $8\frac{1}{2}$  feet wide, and about a foot and a half deep in the centre. It is clear that it can never have been intended to be a serious obstacle, and that an attack from this quarter was regarded as in the last degree improbable.

Beyond gate C the course already set was pursued with little or no deviation. For some 250 or 260 feet there is nothing to be seen. Then the rampart suddenly reappears, shortly after the line has reached a rough corner of the field where tilth and moorland merge one into the other without any wall to divide them. It remains in good condition for about 190 feet, only stopping short a foot or two on the hither side of a third field (O.S., 1903, No. 2304), beyond the boundary wall of which the surface once more resumes its normal aspect. The boulders used to form

the barrier are here exceptionally large, some of them being from  $2\frac{1}{2}$  to 3 feet long, with their other dimensions in proportion. No doubt the difficulty of moving such unwieldy blocks accounts for their survival *in situ*, their fate forming in this respect a curious contrast to the obliteration of their companion ditch, the presence of which in front had to be verified by digging. We must suppose that elsewhere along Q R the rampart has been deliberately destroyed, by organised effort, in the interests of cultivation. At the farther extremity of the section we have been describing, a few of the displaced stones have been thrown into the moor behind, giving the spot something of the appearance of a corner.

This last feature is without doubt responsible for the most serious blemish that disfigures the general accuracy of the plan reproduced in Roy's *Military Antiquities* (fig. 4). A comparison of measurements makes it clear that Brown took it for granted that the line swung to the right here and proceeded straight through the moor to gate *D*. He was obviously misled by the displaced stones that have just been referred to, perhaps because in carrying out his survey he approached the spot from the north-east, precisely as we have done. Had he come to gate *D* first, a careful search in its neighbourhood would probably have given him a hint that would have enabled him to avoid the mistake into which he actually fell. Digging amply confirmed Stuart's diagnosis. Instead of swinging to the right at the point in question, the line ran on straight ahead, passing through the corner of the third field (O.S., 1903, No. 2304), crossing a fourth (O.S., 1903, No. 2308), and finally entering a fifth—the steeply sloping field immediately above the farmhouse of Garrisonhill (O.S., 1903, No. 2307)—about 109 feet from its eastern edge. Within the northern half of the last-named field the point R undoubtedly lies. The state of the crops precluded any endeavour to fix its exact position by excavation. On the other hand, it was easy to determine it approximately, by conjecture, as the point of intersection of two adjacent sides whose general direction was known. The distance from the nearest side of the gap at gate *C* must have been about 832 feet, giving a total length of about 1300 feet for the side Q R.<sup>1</sup>

If Q R was the shortest and most regular of the four sides, R S, while not the longest, was certainly the most irregular. The ground which it

<sup>1</sup> The following comparison is on the lines of that made in footnote 1 on p. 336:—

	Macdonald.	Brown.	Stuart.
From Q to C =	410'	370'	760'
Gap at C =	58'	90'	60'
From C to R =	832'	500'	560'
	<u>1300'</u>	<u>960'</u>	<u>1380'</u>

Note that, while Stuart's total is approximately right (allowance being made for the difficulties mentioned in the former footnote), he blunders seriously regarding the position of the gate.



traverses is at once undulating and high, with a steep fall towards the outside. Hence the otherwise unintelligible turns which the line displays as laid out upon the plan, and hence also the use of the less formidable type of defence for some six-sevenths of the entire distance. From the angle R (which we may safely assume to have been rounded) as far as gate *D* the course followed appears to have been straight. The shallow ditch was recovered by digging at three intervening points:—firstly, where it returns to field No. 2308, about 340 feet west of the point at which it had entered it; secondly, where it passes from field No. 2308 into field No. 2309, about 60 feet from the northern extremity of the wall that separates the two; and thirdly, where it once more reaches the open moor, about 118 feet west of the extremity just spoken of. Even on the moor the track is at first extremely hard to pick up. For 145 feet the surface indications are of the faintest. Still, a close scrutiny will detect them,<sup>1</sup> and it was probably their discovery that enabled Stuart to steer clear of Brown's mistake, and that has made it possible for the officers of the Ordnance Survey to reconstruct the outline of this portion of the camp with such a near approach to accuracy.

At the end of this almost obliterated stretch of 145 feet comes the gap at gate *D*. The break in the ditch was 45 feet long.<sup>2</sup> At a distance of some 30 feet in front of it was a *tutulus*, which resembled in general character the corresponding defence at gate *C*. That is, it was of the same breadth and depth as the shallow type of ditch, clearly because the nature of the ground was here of itself sufficient to provide immunity against serious attack. As a result, it has now disappeared entirely. It was, however, recovered by excavation, when it proved to be 33 feet long, or 12 feet less than the opening which it was supposed to cover.<sup>3</sup> For rather more than 1000 feet beyond the gap no difficulty whatever presents itself. After an initial inclination towards the right, ditch and rampart, in spite of the fact that they have been of the slighter type, remain conspicuous for nearly 300 yards as they run almost in a straight line across the shoulder of the hill. Boulders peeping out from the overgrowth of whin and heather serve to show how compact has been the structure of the *vallum*. When the steep slope, now occupied by the cultivated fields that lie around the deserted homestead of Mid-Raedykes, is well within sight, there is a sudden swing to the left, no very obvious explanation of which can be suggested. Just where the descent begins to become pronounced, there are indications of an attempt to remove the rampart: the

<sup>1</sup> In 1914 they were almost wholly obscured by whins. On revisiting the camp in 1916, I found that the whins had been burned in the interval, and the task of following the line was consequently somewhat easier.

<sup>2</sup> This is Stuart's figure. Possibly it may have been rather less, seeing that the covering *tutulus* was only 33 feet long.

<sup>3</sup> But see preceding footnote.

boulders are scattered about in a confused way, as if an unsuccessful endeavour had been made to clear the ground for agricultural purposes. Fortunately, the ditch maintains the clue intact. Recovering something like its former direction as it passes through the corner of the first enclosure (O.S., 1903, No. 2284), it enters the second (O.S., 1903, No. 2283) about 40 feet below the upper end of the dividing line between them.

The section that immediately follows turned out to be more difficult to trace than any other, and in the end the hope of discovering gate *E* had to be reluctantly abandoned. This is scarcely matter for surprise, since it is plain from fig. 3 that even in 1778 the defences at this point had almost completely vanished. Digging in 1914 showed that Stuart's conception of their course was fairly sound—a good deal sounder than Brown's, although his measurements were much less accurate. Fig. 4 represents them by a broad straight line running direct to gate *E* from the point that was reached at the close of the preceding paragraph. Fig. 3, on the other hand, ventures only on faint and somewhat sinuous markings. The spade revealed ample justification both for the faintness and for the sinuosity. All the way through field No. 2283 the ditch continues to be of the slighter type, so that it was peculiarly ill fitted to resist the erosive forces that would naturally attack it as it traversed the face of the steep slope and dropped gradually down to the level. Consequently the traces it has left are very indefinite. It was, however, possible to make out that it had crossed the field diagonally, with at least one distinct deviation from the straight, and had finally passed out of it immediately above the north-west corner. By this time it has reached the level, where further investigation is barred by the interposition of the farm-road.

Even had it seemed prudent to tamper with the roadway, the chances of a successful search beneath it would have been almost infinitesimal; the slighter type of ditch could hardly have survived the extensive 'making up' to which the ground has been subjected. Here, therefore, recourse must be had to conjecture. A firm basis for it will be found by crossing the road to a point directly opposite the door of the deserted farmhouse. Nothing is visible on the surface of the field beyond. But trenching showed that it was just here that the ditch emerged, and showed, too, that when it did emerge it was of the deeper and more formidable type. There is thus no doubt that the gap at gate *E* lies under the farm-road, and that (as fig. 3 seems to indicate) it was at this gap that the character of the defences changed. The reason for the change is self-evident: the terrain that lies in front is flat and well adapted for the massing of an attack.

Leaving the gate for the moment, we may follow the ditch as far as the corner S. No surface-signs were available for guidance; but by the

aid of cuttings it was traced through the field in front of the farmhouse (O.S., 1903, No. 2279), about 80 feet from the north-east angle of which it passes into the next field (O.S., 1903, No. 2258). The point S lies about 158 feet beyond the dividing wall, or about 360 feet from the spot where the ditch reappears at the edge of the road. Curiously enough, if we turn to fig. 4 we shall see that 360 feet is as nearly as possible the distance by which S is there represented as being separated from the gap at gate *E*.<sup>1</sup> We thus reach by another route the conclusion at which we had already arrived as to the site of gate *E* being buried beneath the farm-road. In all probability the *tutulus* is similarly concealed. At all events, search for it elsewhere was fruitless, and there is abundant room in the suggested hiding-place. It must be borne in mind that the *tutulus* at *E*, while it may have been deep, was exceptionally short, the gateway there being very narrow, much narrower than any of the others. This we know from Stuart, who gives it at 30 feet, and whose record, being a verbal one,<sup>2</sup> may be all the more confidently relied upon because of its comparative accuracy in regard to other gates.

The condition of the crops unfortunately prevented the actual location of the corner at S by digging. But, in the light of the two eighteenth-century surveys, its position can safely be determined by producing the two adjacent sides till they meet. Equally, the general trustworthiness of Brown's plan justifies us in assuming that the angle was rounded, just as P, Q, and presumably also R, had been. It was apparently rather larger than a right angle. For some distance after quitting it the line of the ditch has been completely obliterated. Presumably, however, it continued to be of the deeper or more formidable type. That is what the nature of the ground requires, and what Stuart's plan suggests. Moreover, the presumption becomes a certainty when the surface-indications appear again, as they do about 360 feet beyond S, as the line begins to ascend an uncultivated slope. Some 160 feet farther on, the terrain in front once more becomes difficult for an assaulting party, with the result that the character of the ditch promptly changes, continuing shallow for a stretch of some 550 feet—that is, until the gap at gate *F*, which stands on the brow of the hill, has been reached. The alteration is evident enough to the eye. But to make assurance doubly sure, it was verified by excavation.

Rampart and ditch have been a good deal disturbed in the immediate

<sup>1</sup> Stuart makes it about 600 feet, whereas at the outside it can hardly have been more than 380 feet or 400 feet. He is thus nearly as far astray here as he was at gate *C*. In view of the doubt as to the position of gate *E*, it does not seem worth while giving a comparative table of measurements for the side RS. The main differences will be apparent from the text.

<sup>2</sup> See the notes at the side of the plan reproduced as fig. 3. This explains why, in the comparative tables, Stuart's reckoning for the gates is always so much more accurate than Brown's, whose real estimate cannot fairly be judged from such a small-scale plan as fig. 4.

neighbourhood of gate *F*. It was, therefore, impossible to ascertain the precise width of the gap. Stuart, whose information on the point has some appearance of precision, makes it 74 feet. On the other hand, the now filled-up *tutulus*, which lay about 28 feet in front, was cleared out and shown to have been no more than 56 feet long. With a breadth of 10 feet, it had a depth of  $5\frac{1}{2}$ , while the sides sloped to within 9 inches of the bottom when they became perpendicular and so reached the lowest level a foot and a half apart. These dimensions show that the defences are entering a fresh danger zone. When ditch and rampart begin on the farther side of gate *F*, they are once again of the more formidable type, and this persists without a break as far as the corner P. The defences had need to be strong here, for they actually faced upwards towards a gentle incline. To-day they serve as a boundary between field and field, and consequently they are fairly well preserved for virtually the whole of the 1071 feet included in this section. The rampart is seldom less than 3 feet high on the inner side, and it rises gradually until it reaches a culminating point at P.<sup>1</sup> We are back now at the spot from which we started, and have next to consider what historical deductions, if any, we shall be justified in drawing.

Wherever the ground was opened, the earth was turned over very carefully, in the hope that it might yield some coin or some fragment of pottery which would serve as a clue to the history of the camp. The result was disappointing. The only object found was a shapeless mass of iron, which was recovered from the bottom of the ditch in a section cut across it a little distance to the eastward of gate *F*. The subsequent application of preservative treatment brought to light certain features which suggested that this mass may once have formed part of the hub of a wheel. And it is curious that wheels already figure prominently in the very meagre list of 'finds' that have been recorded from the area of Raedykes. Professor Stuart, for instance, writing in 1822, says that "a few years since" there had been taken out of the ditch "a small hoop or ring of iron, of the rudest workmanship, and much corroded, being about four inches in diameter, and very thick, which could be imagined useful for no other purpose than to contain the axle of one of their war chariots."<sup>2</sup> It is still to be seen in the Museum of King's

<sup>1</sup> As the data for the side SP are complete, I give a comparative table of measurements, corresponding to those already given for PQ and QR:—

	Macdonald.	Brown.	Stuart.
From S to <i>F</i> =	1070'	1040'	1060'
Gap at <i>F</i> =	58' (?)	80'	74'
From <i>F</i> to P =	1071'	1080'	1200'
	<hr/> 2199'	<hr/> 2200'	<hr/> 2334'

<sup>2</sup> *Arch. Scot.*, ii. p. 301.

College, Aberdeen.<sup>1</sup> Again, some time between 1822 and 1845, when the *New Statistical Account* was published, a complete wheel was dug up within the enclosure and transferred to Fetteresso Castle.<sup>2</sup> A special case was constructed to contain it, but no precautions were taken against decay and corrosion. To-day its remains are represented by three portions of the iron tyre, sadly rusted but still about an inch and a half broad. To judge by the dimensions of the case, the original diameter had been fully 3 feet.

It is by no means impossible that the three wheels, whose existence is thus indicated, may have belonged to the Roman period; wheels of an elaborate and highly finished type have been discovered on more than one Roman site in Scotland.<sup>3</sup> But even the acceptance of such a view would not carry us very far, since it is always open to us to attribute them to the Celts. Nor do we get more substantial help from the vague statements that have come down to us as to the finding of other objects at Raedykes. The "urns" of which Francis Douglas spoke<sup>4</sup> were almost certainly native. And the rest of the evidence he brings forward is equally open to question. When he speaks of "Roman *hastæ*" and "a Roman spear,"<sup>5</sup> he is using the adjective after the loose and unscientific manner which was customary in his own day, when antiquities of the bronze age were almost universally supposed to be Roman. Indeed, the case is unwittingly given away by Professor Stuart, who, referring doubtless to the very objects that Douglas had in view, mentions "heads of spears of mixed brass, as almost all those in Scotland ascribed to the Romans are."<sup>6</sup> The more circumstantial report of Lord Buchan amounts to little more, although we know, as a matter of fact, that the two last among the articles he enumerates were of iron. He says:—

"Several Roman weapons have been found in this camp, particularly a *hasta* and helmet, of which the former is in the lawyers' library at Edinburgh; and lately a fragment of another *hasta* and a *malleolus* have been dug up."<sup>7</sup>

As there are no associated objects which throw a clear light upon the origin of Raedykes, we have perforce to fall back upon the testimony of

<sup>1</sup> *Proceedings*, xxii. (1888), p. 358, where the diameter is given as 8 inches. Doubtless this refers to the outer diameter, and Stuart's measurement to the inner.

<sup>2</sup> *N.S.A.*, vol. xi. *Kincardineshire*, p. 250.

<sup>3</sup> *Proceedings*, xl. (1905-6), pp. 494 ff., where the possibility of a Celtic origin is discussed. Also Curle, *A Roman Frontier Post*, pp. 292 ff.

<sup>4</sup> See the passage quoted *supra*, p. 319.

<sup>5</sup> *General Description, etc.*, p. 261.

<sup>6</sup> *Arch. Scot.*, ii. p. 301.

<sup>7</sup> Nichols's *Bibliotheca Topographica Britannica*, No. xxxvi. p. 13. The *malleolus* and the fragment of the *hasta*, which were of iron, were presented to the Society of Antiquaries of Scotland (*Arch. Scot.*, iii., Appendix ii. p. 38). But they seem to have long since perished.



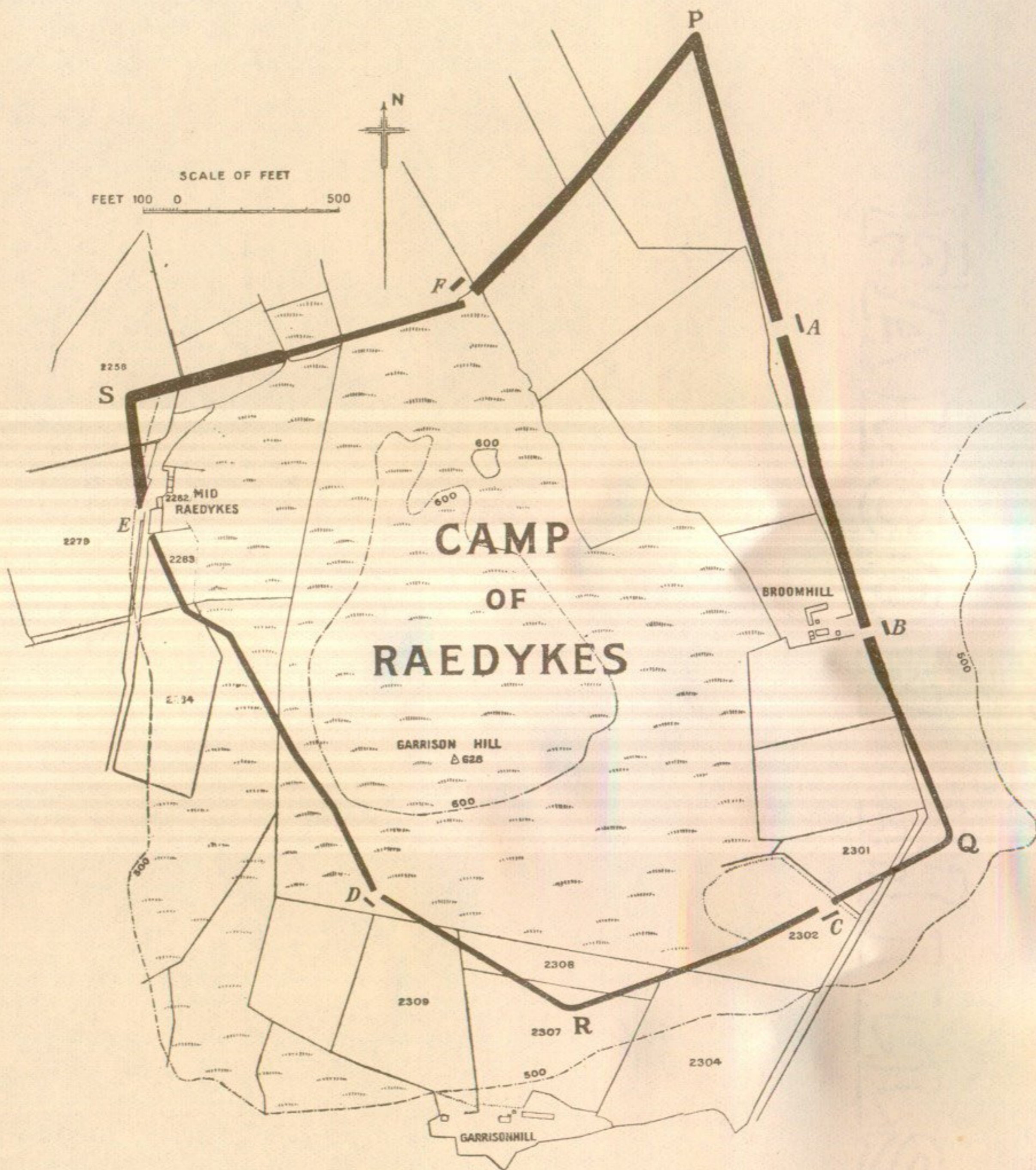


Fig. 6. Plan of Raedykes, based upon the excavations of 1914.



the entrenchments themselves. And here the eye is at once caught by a feature that is highly suggestive of Roman methods. Scotland offers no example of a camp of demonstrably native construction which has its entrances protected by traverses. In this case, however, each of the six gates has in front of it a *tutulus* such as the Roman military manuals prescribe, and such as are found in indubitably Roman forts like the Antonine fort at Bar Hill.<sup>1</sup> It may be argued that there was nothing to prevent the Caledonians from adopting devices which they saw in use among the invaders: *fas est et ab hoste doceri*. The possibility must be allowed, but the likelihood can hardly be admitted. Even the little excavation that has taken place has revealed facts that are inconsistent with a theory of imitation. The workmanship is too thorough. The shape of the deeper type of ditch, the care bestowed upon its formation, and in particular the elaborate strengthening of its sides with wrought clay, all bear witness to the activity of experienced military engineers. Raedykes was no amateur improvisation. But for its marked irregularity of outline, few would have had much hesitation in accepting it as Roman. It therefore becomes important to inquire what weight should be attached to the objection just indicated.

Attention has already been drawn to the fact that the six gates can be regarded as constituting three pairs of opposites, and to the consequent possibility of seeing in Raedykes a Roman camp of ordinary form, the sides of which have been deflected from the normal as the result of an effort to accommodate themselves to the sinuosities of the ground. The suggestion will hardly appear extravagant to those who are familiar with the fruit of recent investigations, as revealed in the reports of the Limeskommission or in Professor Ritterling's masterly account of the early Roman camp at Hofheim in the Taunus. These prove clearly that current notions as to the rigidity of the principles of 'castrametation' are only partially founded on fact.<sup>2</sup> The rules were more elastic than antiquaries have been disposed to allow. It is, of course, beyond question that the typical Roman fort or camp was approximately rectangular with rounded corners, and that the great majority of known examples conform more or less strictly to the type. But it is equally beyond question that, when in the field, commanding officers felt themselves at liberty to discard the precepts of the text-book, if particular circumstances seemed to them to render drastic modification desirable. This is especially true of the days of the Republic and of the early Empire. And of all varieties of modifying circumstances those connected with the character of the terrain were naturally the most

<sup>1</sup> *Proceedings*, xl. (1905-6), p. 432.

<sup>2</sup> See Ritterling, *Das frühromische Lager bei Hofheim im Taunus*, p. 4.

compelling. Two or three concrete illustrations should suffice to show that the irregular outline of Raedykes need not prevent us from recognising it as Roman.

In 1898 there was discovered at Heldenbergen in the Wetterau, some little distance north-east of Frankfort-on-the-Main, the ditch of a large Roman camp of first-century date, which had stood on a bluff above a knee-like bend of the river Nidder.<sup>1</sup> No exact comparison with Raedykes

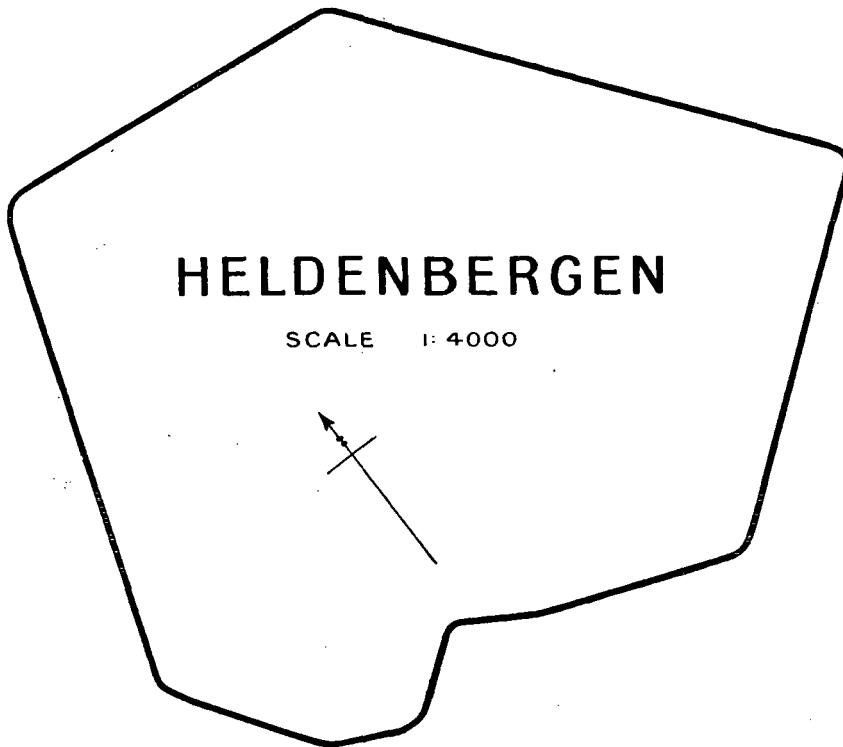


Fig. 7.

is possible. The outline had to be determined by the aid of sections cut at intervals, all surface traces having vanished completely, and the excavators were not fortunate enough to ascertain the whereabouts of any of the entrances. But the plan, so far as it was recoverable, takes the form of an irregular polygon (fig. 7), and bears no recognisable resemblance whatever to the typical Roman entrenchment of writers on 'castrametation.' That it represents the handiwork of Roman soldiers is none the less indubitable. The evidence of finds was conclusive.

<sup>1</sup> See *Der Obergermanische-Raetische Limes des Römerreiches*, Nr. 25 (Lief. xiii.).

Again, at Hofheim in the Taunus Professor Ritterling and his colleagues, after ten or twelve seasons of patient investigation, have been able to unravel the history of two first-century Roman forts that lay one within the other.<sup>1</sup> In form (fig. 8) they were much more nearly oval than rectangular. The outer one, only a single entrance of which has so far been located, apparently belongs to the Flavian period. The inner, our knowledge of which is much more detailed, was probably constructed as early as the reign of Caligula. Three of the gates have been identified with certainty (A, B, and C), while strong indications of the position of a fourth have come to light at D. It will be seen that these fall into pairs of opposites in much the same way as do the six at Raedykes. It should be added that, as at Raedykes, the configuration of the ground supplies a ready explanation of all the deviations from the normal.

Finally, the life of the fort at Waldmössingen in Württemberg has been shown by the Limeskommission to fall into two stages, the last of which came to an end in the earlier half of the second century.<sup>2</sup> This throws the first stage back at least

as far as the Flavian period, when the fort was of earth. Even when it was subsequently rebuilt in stone, it was of strangely irregular shape. Its original outline, however, was much more remarkable (fig. 9).<sup>3</sup> Being a permanent station, garrisoned only by a detachment of troops, it was naturally very much smaller than Raedykes, which was meant to hold an army. Otherwise, there is a curious resemblance, extending even to the manner in which the north-east corner is flung forward into the open. This resemblance is none the less significant because it is purely fortuitous, the character of the terrain being in both cases the determining factor.

Fortified by these Continental analogies, the number of which could readily be added to, we need not hesitate to set aside the main objection to the recognition of Raedykes as Roman. And, once that has been disposed of, the conclusion seems fairly obvious, if due weight be attached to

<sup>1</sup> See Ritterling, *op. cit.*

<sup>2</sup> See *Der Obergermanische-Raetische Limes des Römerreiches*, Nr. 61<sup>b</sup> (Lief. vi.).

<sup>3</sup> The gates in the earth fort at Waldmössingen have not been satisfactorily traced. But no doubt there were four of them, just as there were in the stone fort that succeeded it.

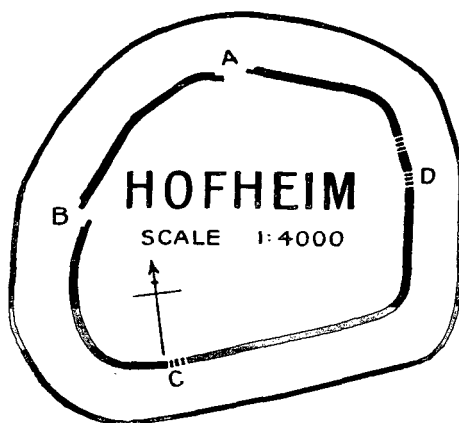


Fig. 8.

the considerations that have been already adduced.<sup>1</sup> Beyond the general statement, however, it is not in the meantime possible to go. We have heard that Roy assigned the camp to Agricola; Chalmers was equally confident that its builder was Lollius Urbicus; and others have preferred to regard it as the work of Severus. Each of these dates is possible. But there is no material on which to base a decision between them. It is true that one champion of Severus has appealed to the irregularity of shape as constituting a presumption in favour of his case.<sup>2</sup> But, if this

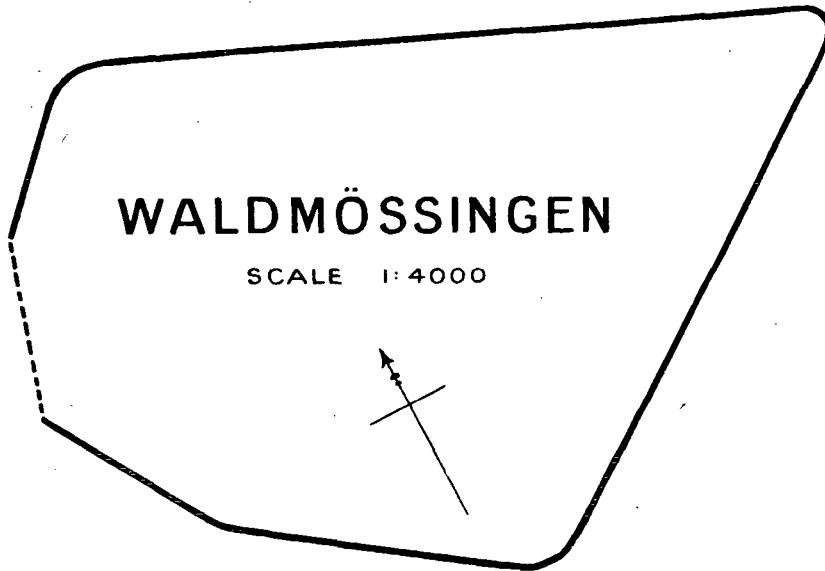


Fig. 9.

particular feature is admitted as evidence at all, it can only be on the side of Agricola, since every one of the four parallels that were cited from abroad belonged to the first century. There we must be content to let the problem rest. Some day, light from an unexpected quarter may show us where to find the key.

## II. GLENMAILEN.

The site of this camp, now divided between the farms of Bush and Logie Newton, lies on the fringe of the uplands of Strathbogie, about midway between Huntly on the west and Fyvie on the east. It is a broad, low elevation bounded along the whole of its northern aspect by a deep natural hollow, in the green bottom of which run the infant

<sup>1</sup> See p. 345 *supra*.

<sup>2</sup> Colonel Shand: see the passage quoted, p. 350 *infra*.



waters of the Ythan; the hamlet of Ythan Wells, named from the springs in which the river has its source, is only a mile and a half away. Its southern slopes command a wide sweep of open country. To the west, however, it is sheltered by a high ridge culminating in the flat rocky top of Tillymorgan, over the shoulder of which peeps the distant peak of Bennachie. The ground between the foot of this ridge and the camp, though now in tillage, is marked on eighteenth-century maps as a morass. From the highest point of the enclosure the descent towards the Ythan is fairly rapid, while beyond the stream, above the farmhouse of Glenmailen or Glenmellan, rise two formidable hills with an open glen between. The strategic significance of the fortified lines is unmistakable. They were constructed by an army which had advanced from the south, and which had still to reckon with a hostile force that might sweep down on it from north or east, and they are so laid out that on these two sides the river with its marshy banks gives effectual protection.

The camp was first observed and surveyed, during the years 1785 and 1786, by Colonel Alexander Shand of Templeland, then a captain in the artillery, who at a later date returned to settle in his native Aberdeenshire after a prolonged and strenuous spell of active service. Joining the ranks as a private, he went through the Seven Years' War, being severely wounded at Korbach. Subsequently he was in America, where he was again wounded at Brandywine River, and finally he distinguished himself highly during the great siege of Gibraltar between 1780 and 1782. A zealous antiquary as well as a practical soldier, he was keenly interested in Roman roads and camps, and devoted much time to their investigation. In 1788 he prepared an account of his researches, including a description of Glenmailen, for the Literary and Antiquarian Society of Perth, which had been founded four years earlier. Contrary to his expectations, his paper was never printed, the first and only volume of the Society's Transactions not being published till nearly forty years had elapsed (1827). In the interval the manuscript seems to have been lost. The last we hear of it is in May 1788, when General Melvill, to whom as a leading authority on the subject it had been sent for perusal, writes Shand a complimentary letter about it, and tells him that, as requested, he has forwarded it to "the Rev<sup>d</sup> M<sup>r</sup> Whitaker"—that is, no doubt, John Whitaker, the well-known historian of Manchester.<sup>1</sup> In the absence of this authentic record of his activities, we may fall back on a passage in Newte's *Tour* which Shand himself expressly authorises us to accept as accurate, stipulating only that two short phrases are to be omitted. It will be seen that these suggest some measure of indebtedness to Melvill,

<sup>1</sup> Melvill's letter to Shand is reprinted in *Proceedings*, vii. (1866-67), pp. 29 ff. It has a special interest as containing a brief account of Melvill's own discoveries.

which Shand obviously regarded as reflecting on his own originality. The repudiation, however, is made with every mark of old-world courtesy: "the editor having been misled in that assertion concerning an Officer, eminent for his critical knowledge of the Roman classics and Roman British topography."<sup>1</sup> In the following extract the words to which Shand took exception are placed in square brackets.

Referring to Strathmore, Newte says:<sup>2</sup>—

"The chain of Roman camps in this great Strath was first discovered, as already mentioned, by Lieutenant-General Melvill, in 1754, and afterwards very accurately delineated and described by Major-General Roy. Captain Shand, [from the example, and at the instigation of General Melvill], embraced the opportunity which a four years' residence at Perth, with the command of the Royal Artillery, in North Britain, afforded him, of exploring the Roman geography in Scotland, and comparing the Roman field-works and engineering with what he had seen practised in the German and American wars. By a narrow inspection of Strathallan, Stratherne, and Strathmore, he not only traced, [after General Melvill], the great consular road, with the numerous posts, *presidia* and *castella*, as well as great camps situated on or near it, from Camelton to Kerrymuir in Angus, where the VIA ceases to be discernible: but he, afterwards, discovered a very great number of vicinal or cross roads near the rivers Erne and Tay, and visited the other Roman posts as far as the end of the Grampian Hills near Stonehaven, which had been supposed to have been the remotest point of the country to which the Romans, by land, had penetrated. Conceiving this opinion to be inconsistent with the warlike character, and mighty exertions of the Romans, he likewise, in search of Roman antiquities, explored the Countries of the North-Grampians, and found the great camp at Glen-Mailen on Ythan, perhaps the *statio ad Ithunam*, the very remarkable presidium near Old Meldrum, with a number of smaller works all similar to those on the other side, and having the same kind of character; only some few of them not executed with such nice accuracy: a circumstance which may be owing, perhaps, to their being a century or two later than those of Agricola."

This is the earliest reference to Glenmailen which appeared in print. Apart from the explicit *imprimatur* already alluded to, there is abundant evidence of an internal kind to prove that the whole passage was inspired by Shand. We know, for instance, from other sources that he did not share the views of Melvill and Roy as to the certainty of the Strathmore camps being Agricolan. Again, the allusion to "the very remarkable presidium near Old Meldrum" agrees closely with Shand's own description of "the Castellum on Barra-hill, nigh to Old Meldrum, a station no way inferior in grandeur, or good preservation, to any work of the kind, that at Ardoch excepted."<sup>3</sup> Incidentally, it may be explained that the so-called

<sup>1</sup> See the 'Note' by Shand reprinted in *Proceedings*, vii. (1866-67), pp. 27 ff., from which most of the foregoing particulars have been drawn.

<sup>2</sup> Thomas Newte, *A Tour in England and Scotland* (1791), pp. 301 f.

<sup>3</sup> See *Proceedings*, vii. (1866-67), p. 28.

“præsidium” or “castellum” on the Barra Hill is a circular fort surrounded by several concentric ditches; Chalmers is doubtless right in regarding it as a native fort of the same class as the well-known Caterthuns.<sup>1</sup> Finally, the allusion to “the *statio ad Ithunam*” points clearly to the influence of one who was a student of ‘Richard of Cirencester.’

Precisely the same features can be detected in the “short account of the camp near Glen-mailen, in Sir John Sinclair’s Statistical History of Scotland, vol. 12, at pages 287, 288, & 313 to 316,” which Shand likewise commends to the attention of “the curious,” pending the publication of his own paper by the Perth Society.<sup>2</sup> The parish ministers of Forgue and Auchterless, the writers of the two notices which he cites, were neighbours of Shand’s, and what they have to say upon the subject obviously reflects his conversation. The latter (the Rev. Alexander Rose) gives it much the more generous allowance of space, and one gathers that his observations had been submitted to Shand for his criticism.<sup>3</sup> He describes the camp in some detail, and adds a long footnote, the following extract from which may be compared with the passage quoted from Newte:—

“Who were the authors of all the stupendous military works, whether roads or places of defence, scattered over the country, we are no longer at a loss to know. An ingenious and worthy gentleman, a native of the neighbouring parish of Forgue, and who has served as an officer in the Royal corps of Artillery, since the year 1758, was desirous to compare what he had seen during his own time, with what could be still traced in the country, of Roman field fortification, and other topographical marks of their wise military institutions. His situation at Perth, in the duties of his profession, from the year 1785 to the end of 1787, gave him opportunities of spending a great deal of his spare time, in these wished-for researches, which having pursued with unremitting assiduity, he was at last enabled, contrary to an opinion which then prevailed, to demonstrate that the Roman armies had passed the Grampians by land, as well as that they had surrounded the coast-land by their shipping; the character, style, and manner of field fortification, being as evident, and as well supported in the Castellum on Barra-hill, and in the *Castra æstiva* at Glenmailen, as any where between them, and the *prætentura* of Agricola extending from Forth to Clyde.”<sup>4</sup>

Another extract from the same footnote, with its reference to the *Military Antiquities*, will serve to introduce a new point of interest:—

“The ingenious author (Captain A. S.) of the investigations, just recited, was at first inclined to believe the *Statio ad Ithunam*, was the

<sup>1</sup> *Caledonia*, vol. i. p. 90, with a plan.

<sup>2</sup> *Proceedings*, l.c.

<sup>3</sup> The last paragraph of a long footnote begins: “The same ingenious gentleman, to whom the public is indebted for these observations, takes notice that something more should have been introduced about the Roman roads,” etc., etc.

<sup>4</sup> Sinclair’s *Statistical Account of Scotland*, xii. p. 314.

work of the Emperor Severus, yet some of the best informed, and learned antiquaries will have it, that all the posts N. of the Grampians were constructed by Lollius Urbicus, the brave and gallant Lieutenant of Antoninus; and the late ingenious Major-General Roy, as soon as he perused the plan of Glenmailen and environs, with its explanation and references, put it down immediately in his *Mappa Britanniae Septentrionalis, Castra Agricolaë*. Therefore, it is to be presumed, it will be published in the next edition of the General's map of Scotland,<sup>1</sup> and that some account of it will be given in the Appendix to his Posthumous Work, now probably printing off by the Society of London Antiquaries, to whom one of his manuscripts was bequeathed by latter will, the other remaining in the King's library."<sup>2</sup>

Vol. xii. of the *Statistical Account* was published in 1794. The footnote just quoted must, however, have been penned at least a year earlier, for Roy's posthumous work was issued by the Society of Antiquaries in 1793. The writer's expectation was only partially realised. On the "Mappa Britanniae Septentrionalis," which forms plate I. of the *Military Antiquities*, the position of Glenmailen is duly marked near the headwaters of the Ythan, while plate LI. contains a plan of the enclosure, as well as a section of the rampart and ditch.<sup>3</sup> On the other hand, not only is there no "account of it" given, but it is not alluded to in the most distant way either in the text or in the appendixes. The analogy with Raedykes is thus very close. And the parallel extends further. On both plates the Glenmailen camp is actually designated "Re-dykes." It would be interesting to know whether that name was ever really applied to it, or whether we are faced with the result of some confusion. It is true that Chalmers asserts that "the camp at Glenmailen, as well as the camp at Urie, is called the *Rae-dykes*, from the Gaelic *Ra'*, signifying a cleared spot, a fortress."<sup>4</sup> But this may be based on no better authority than the plates in the *Military Antiquities*. What is certain is that to those eighteenth-century writers who knew the district at first hand—Shand himself and the two parish ministers of the *Statistical Account*—the enclosure was simply "the camp at Glenmailen." Mr Rose, indeed, in his footnote speaks of "the appellations of ri-dikes, and grim-dikes" in a way that suggests that they were used by the country people in connection, not with the camp, but with other earthworks in the district.<sup>5</sup> Possibly the clue to the nomenclature adopted in the *Military Antiquities* lies in the proximity of the Ri-hill or Re-hill, for which see fig. 10. At all events, that some distrust of it is justifiable is clear from what Shand

<sup>1</sup> The "first edition" of Roy's map was engraved in 1774 (Gough's *British Topography* (1780), ii. 561 and 586). The only copy I know is in the British Museum.

<sup>2</sup> Sinclair's *Statistical Account*, p. 315.

<sup>3</sup> The relevant portion of the plate is here reproduced as fig. 10, on a scale somewhat smaller than the original.

<sup>4</sup> *Caledonia*, vol. i. p. 127, footnote (g).

<sup>5</sup> *Statistical Account*, xii. p. 313.





says in the 'Note' which has already been quoted more than once. He thus expresses himself regarding the reproduction of his plan in Roy's book:—

“Captain S. did not finish his plan of the ancient military vestiges, on the sources of the Ythan, till some time afterwards, and permitted a good many copies to be taken, and as some of these have been copied from other copies, a few errors have crept in, particularly in the orthography, several of the names of places, and grounds in plate 51, being spelled in such a manner as would make them unintelligible to the country inhabitants.”<sup>1</sup>

This extract is interesting from another point of view. The phrase “some time afterwards” refers back to “during the years 1785 and 1786,” the period when the original discovery and survey of Glenmailen were made. The complete plan was, therefore, probably prepared for the communication made to the Perth Society in 1788 and submitted to General Melvill in the spring of the same year.<sup>2</sup> Very possibly Melvill may have been the intermediary through whom the plan reached Roy.<sup>3</sup> In 1788 the latter was deeply absorbed in the preparation of his final report on the great trigonometrical survey which was to determine the relative positions of the observatory at Greenwich and of that at Paris. This occupied all the energy that ill-health allowed him till his sudden death in July 1790. The plan of Glenmailen was laid aside in anticipation of a time of leisure that was not destined to arrive. Apparently it was not even copied, as that of Raedykes had been; No. LI. is the only one of the plates for which there is no original extant, either in the MS. copy of the *Military Antiquities* preserved in the British Museum or in that belonging to the Society of Antiquaries. The owner of the drawing from which the engraver worked—whether Shand himself or another—must have reclaimed it after the book was published.

It will be remembered that, according to the Rev. Mr Rose, “the late ingenious Major-General Roy, as soon as he perused the plan of Glenmailen and environs, put it down immediately in his *Mappa Britanniae Septentrionalis, Castra Agricolaë*.” The statement is not literally true. Roy did not insert the camp in his map at all; that was done by his editors. Nor is there, as there was in the case of Raedykes, any direct evidence that he saw in it the hand of Agricola. At the same time there

<sup>1</sup> *Proceedings*, vii. (1866-67), p. 28. It may be added that recent inquiries in the locality have failed to bring to light any evidence that the camp is ever called Re-dykes by the people of the district.

<sup>2</sup> See p. 349 *supra*.

<sup>3</sup> This possibility is in no way inconsistent with the statement of Chalmers (*Caledonia*, vol. i. p. 127, footnote (g)) to the effect that Shand “communicated his discovery first to the antiquarian society at Perth in 1788, and afterwards his survey of it to General Roy.”

is no reasonable doubt as to what his view would have been, had he found occasion to express it in writing, for Glenmailen presents all the characteristic features which led him to assign other temporary camps to the Agricolan rather than to the Antonine epoch. On the other hand, his editors were more cautious. While they did not hesitate to describe Raedykes as "*Cast. Agricolaæ*," they were content to attach to Glenmailen—or Re-dykes, as they called it—the more general description of "*Cast. Rom.*" Either they felt it incumbent on them to be careful, in the absence of any definite authority from Roy, or they considered it impolitic to disregard the opinion of Shand, who was inclined (as we know from Mr Rose's footnote) to attribute Glenmailen to Severus. Thus much for Roy's map. The question of origin is handled even more circumspectly in the explanatory notes which occupy the margin of plate LI., and which doubtless derive ultimately from Shand himself. There the only allusion to the matter is in the description of the three surviving gates, which are said to be "covered with Traverses in the same manner as the Camps which are supposed Roman, on the South side of the Grampian Hills." It would not be easy to imagine anything more definitely non-committal.

Coming to the enclosure itself, we shall find, on reference to fig. 10, that in 1786 enough of the fortifications remained to give a clear idea of the original form of the whole. The camp had been lozenge-shaped in outline, and the motive for this departure from the ordinary rectangular design is self-evident. By planting the northern corner within a bend of the Ythan, and making the interior angle decidedly obtuse, it became possible to secure the river as a protection along the full extent of two sides. For the greater part of this distance—that is, along the north-western front—the defences ran close to the brow of the natural hollow which the stream has carved out as its bed. The distance from the edge of the escarpment is seldom more than 40 or 50 paces. As the water was from 50 to 80 feet below, the obstacle was most formidable. Of the gates, which were apparently six in number, we have already heard. Three of them were visible in Shand's day, together with the traverses that had stood before them. The dimensions of the sides cannot be estimated with any accuracy: the scale of the plan is too small. An explanatory note, however, states that "the periphery . . . is 3140 Yards, near 2 Statute Miles." As the proportion of length to breadth is about 3:2, we shall be fairly safe in assuming an area of 2820 feet × 1890 feet, or about 122 acres, which agrees reasonably well with the "something more than 90 Scotch acres" of the explanatory note.<sup>1</sup>

Later writers make but brief reference to Glenmailen, and from none

<sup>1</sup> The Scotch acre contained 6084 square yards.

of them do we get fresh information of any value. The one fact we do learn is that the process of destruction made rapid headway during the half century that succeeded the publication of the *Military Antiquities*. Thus in 1845 the parish minister reports that "the south and west dikes only are entire."<sup>1</sup> Interpreted by the light of fig. 10, this must mean that only on the south-east and south-west sides were remains of the rampart to be seen in anything like their original condition. It cannot mean that the south-east side was complete, for nearly three-fourths of it had disappeared before Shand's survey was carried out. It implies, however, that the whole of the north-west side, which was in relatively good preservation in 1786, had been ploughed down in the interval. In short, the state of matters in 1845 would seem to have been very much the same as that which prevails to-day, when (as indicated on the Ordnance Survey Map) the rampart is visible for a continuous stretch of about 860 feet at the eastern extremity of the south-east side, and again for a similar stretch of about 950 feet at the western extremity of the south-west side, the curve of the corner at the end being in each case clearly discernible. Further, along certain portions of the north-west and north-east sides it is still possible to recognise the line of the defences, if the condition of the crops be such as to admit of a thorough-going scrutiny.<sup>2</sup>

The present-day surface-appearances, then, are entirely consistent with the plan as laid down by Shand. At the same time these are admittedly fragmentary, and it therefore seemed desirable to probe the matter further, before accepting Roy's plate LI. as a definite basis for argument. This was the motive immediately underlying the little expedition organised by Professor Haverfield and myself in July 1913. Leave to excavate was readily granted by the proprietor, Mr Garden Duff of Hatton, while Mr Alexander Hay, tenant of the farm of Bush, extended a cordial welcome to the excavators, and saved them both time and trouble by recruiting a band of intelligent and unusually hard-working labourers. Even had the exigencies of the crops allowed, the brief week at our disposal was not long enough to justify any such attempt at a systematic exploration of the outline as was subsequently attempted at Raedykes. As it was, so many of the fields were for the

<sup>1</sup> *New Statistical Account*, vol. xii. (*Aberdeen*), p. 286.

<sup>2</sup> For the information as to the north-west and north-east sides I am indebted to Mr J. Graham Callander, Secretary of the Society. Mr Callander, whose experience in connection with the Ancient Monuments Commission lends great weight to his opinion, was good enough to examine the ground very carefully on my behalf in October 1916, after the crops had been cleared away. When Professor Haverfield and I visited the site, access to the fields concerned was unfortunately not practicable. Mr Callander tells me *inter alia* that the markings described as "Earthwork" in field No. 684 of the O.S. 25-in. map (1901), whatever they may represent, are not to be connected with the north-west side of the camp.

moment inaccessible that attention was perforce concentrated on the ground lying towards the western end of the enclosure.

Cuttings made at the northern extremity of the south-western face revealed the character of ditch and rampart. The former, which had had sloping sides, must have been at least 8 or 9 feet wide and at least 4 feet deep. The latter, which must originally have been about 20 feet thick, was constructed of loose earth and stones, laid (as it seemed) on a specially prepared bed of white or yellow clay, some 2 or 3 inches in thickness. Its outer face was practically continuous with the scarp or inner face of the ditch; that is, just as at Raedykes, there had been nothing in the nature of a 'berm.' The whole of these features, except of course the underlying bed of clay, are reflected with tolerable clearness in Shand's section, which is shown in the upper right-hand corner of fig. 10. This, it will be seen, was taken close to the most northerly point of the whole camp, presumably because in 1786 it was there that the conditions for obtaining a record were most favourable. To-day, as we know, that particular portion of the defences has been so thoroughly razed as to be barely discernible. Towards the eastern extremity of the south-eastern side, however, the rampart still stands some 5 to 5½ feet high on the inside and some 7 to 7½ feet high on the outside, while the greatest apparent breadth at the base is about 18 feet. Elsewhere its state of preservation is less satisfactory. Along the south-west face, for instance, the maximum height attained is 4½ to 5 feet on the outside and about a foot less on the inside, while 11 to 12 feet represents the maximum width at the base.<sup>1</sup>

The discovery that the rampart had rested on a bed of yellowish clay furnished a guide that was of material assistance in tracing the original line of the defences over ground where no outward mark of their former presence remained visible. This bed is near enough to the surface to be easily reached with the spade; and yet, having escaped serious disturbance when the superstructure was destroyed, it is sufficiently far down to be immune from the ravages of the plough. By its aid, coupled with an occasional clearing-out of the ditch in front, the southern corner and the now vanished rampart at F<sup>2</sup> were shown to have been correctly laid down on the plan in the *Military Antiquities*. The site of gate *A* with its traverse was unfortunately covered with growing corn; but, by working along the north-western face from the western corner, the position of gate *B* was determined and found to agree with that assigned to it by Shand. The gap by which it was located was 70 feet wide. At the normal distance before it, digging brought to light the ditch of the traverse, immediately in the rear of which was the

<sup>1</sup> I am indebted to Mr Callander for verifying these particulars.

<sup>2</sup> See fig. 10.

bed of yellow clay that had formed a foundation for the protecting mound. In a word, wherever its accuracy was tested, Roy's illustration stood the ordeal in a manner which justifies us in accepting it as a reliable representation of the camp as it appeared in 1786. This gives us three gates with traverses, and from these, as will be evident from a glance at the plan, a total of six may quite safely be inferred.

The clearing of the very first section of ditch and rampart left on the minds of the excavators a distinct impression that they were face to face with the work of Roman engineers, and as the work proceeded the impression rapidly became a certainty. The form and design of the whole, the arrangement of the gates, the slope of the ditch, the extensive use of clay, the presence of the traverses—all these are characteristic. The camp at Glenmailen may confidently be set down as a memorial of the largest Roman army that ever penetrated to the remoter portions of our island. It must, of course, have been a field force, and the period of its stay would necessarily be brief. Hence the absence of relics. The ditch was thoroughly examined at several points, notably near gate *B* and at the adjacent corner, and the black matter from the bottom carefully scanned; but no coin, no fragment of pottery, emerged to reward the diligence of the searchers by giving them a datable clue. The sum of the finds was made up of a single piece of iron, which was lying fairly high up, and which may or may not be Roman, a few broken twigs of ancient forest trees, and two or three masses of rust which possibly represented corroded spear-heads. Exploratory trenches cut as near the centre of the camp as was practicable proved equally unfruitful. That they did not reveal any trace of buildings is scarcely surprising. Officers and soldiers alike would be quartered in tents. We are thus left in doubt as to the precise epoch to which the entrenchment belongs. Here, as at Raedykes, we must wait for further light. The present position has been excellently stated by Professor Haverfield:—<sup>1</sup>

“The general result is a plan which is a Roman plan and which includes at least one gate in a style used only by the Romans. One may therefore welcome the encampment as Roman, and may further deduce, from the absence of small finds and from the exceedingly wide gates and the rather slender defences, that the occupation was very short; it was, in fact, the ‘marching camp’ of an army of 10,000 or 15,000 men, abiding for only a few nights. Some day, further digging may tell us the date of the work within the Roman period.

<sup>1</sup> “Roman Britain in 1913” (*British Academy Supplemental Papers*, ii.), pp. 8 f. In the foregoing I have drawn to some extent upon this report by Professor Haverfield, and, still more freely, upon an article of my own, published in the *Scotsman* of August 2, 1913.

The choice must lie between Agricola about A.D. 83 and Septimius Severus about A.D. 209. *A priori*, it may seem likely enough that Agricola got as far north as the Ythan and that Severus did not, but only actual finds can decide. I will, for the present, add one warning. The site of our camp agrees ill with the description of the battle of Mons Graupius in the 'Agricola' of Tacitus, except on the assumption that the Romans that day faced south, and that the Ythan guarded their rear. No battle in the least resembling that sketched by Tacitus could have been fought here with the Roman front resting on the river."

## POSTSCRIPT.

On p. 340 *supra* reference is made to the surprisingly accurate manner in which one of the most obscure sections of the outline of Raedykes has been reconstructed on the Ordnance Survey Map. Through the courtesy of the Director-General I have now been able to consult the 'Name-book' for the parish of Fetteresso. This shows that the survey was made in August 1864, and that its relative accuracy is entirely due to the great care and thoroughness with which the responsible officer (Corporal Render, R.E.) performed his task. He reports that "General Roy's plan is pretty good on the North, East, and West sides, but very much in error on the South side," and that, where both rampart and ditch had disappeared, his own conclusions were based on a close study of the undulations of the ground, fortified by "the assistance of the adjoining tenants who levelled those portions during the process of cultivation." In regard to the position of gate *E*, with its traverse, he simply follows Roy, or rather Brown.