## VIII.-THE DISTANCE-SLABS OF THE ANTONINE WALL aND THE ROMAN NAMES OF ITS FORTRESSES.

By Cadwallader J. Bates.

[Read on the 24th February, 1897.]
It is very generally supposed that the Roman turf-wall between the Clyde and the Forth presents no historical or geographical difficulties of importance. We, in Northumberland, are accustomed to envy the antiquaries of Scotland this serene certainty, while our poor brains are being racked by the giant puzzle of the great ditch and its double ramparts, commonly called the vallum, and by the hitherto unreconciled discrepancies between the evidence of manuscripts and the evidence of inscriptions on the sabject of the stone murus, to say nothing of the impudent intrusion of the turf-wall near Burdoswald.

We possess no real knowledge as to who it was who first laid the foundations of the fortresses embraced by our Northumbrian Wall, but it is a positive fact that a chain of forts was thrown across, the more northern isthmus by Gnaeus Julius Agricola in A.d. 81. Equally explicit is the account of the building of a turf-wall there by Quintus Lollius Urbicus about sixty years later, during the reign of Antoninus Pius. The elaborate excavations of the Glasgow Archaeological Society have proved the wall between the Clyde and the Forth to be indeed formed largely of turves, built-up brick-fashion, and the engineering skill shown in tracing its course is little open to criticism. One inscription found near it-' that most invaluable jewel of antiquity,' as Sandie Gordon called it-has preserved the name of Lollius Urbicus himself, and a great many others recall the style and title of Antoninus Pius, who is moreover the one emperor named on them. From the insignificant centurial stones of our Tyne-and-Solway Wall, the most patient study can extract but little information. In Scotland, on the contrary, large slabs, several of them of no mean artistic merit, record the names of the three legions who contributed to the fortification of the isthmus, with the exact lengths of the different sections of work that each undertook.

It is, however, precisely this exuberant wealth of mathematical detail that forces to the front many problems and perplexities, that, so far as I am aware, have received no satisfactory solution. ${ }^{1}$ The chief reason for this is, I believe, the fact that our epigraphists have failed to notice a great metrical distinction that divides these slabs into two groups ; the distances in one group being expressed in Roman paces, those in the other in Roman feet. A Roman pace, of course, is one of two steps and contains five Roman feet.

British antiquaries of the old school regarded all the numbers on these distance-slabs as so many Roman paces. Horsley, in his Britannia Romana, added together those given on the eleven inscriptions extant in his day, and made a grand total of 39,726 Roman paces. He then measured the Wall from Old Kilpatrick on the Clyde to Caerridden on the Forth, and found that it was 39,717 Roman paces in length. The agreement was so strikingly close that, without much heeding the fact that the most of these distance-slabs had been found in the westernmost quarter of the limes, he pronounced them to represent eleven consecutive sections composing the whole Antonine turf-wall. This had the beauty of simplicity, but like many other things, it was too good to be true. It was based on the assumption that the entire series of mensural tablets had been found, and in due time two or three more examples ill-naturedly turned up.

It was, it seems, principally with a view of getting over the difficulty of the exaggerated length given to the Wall by the addition of the numbers inscribed on these new tablets, coupled with the certainty that we do not yet possess anything like the whole series, that professor Hübner, in the Corpus Inscriptionum Latinarum, proposed in expanding these inscriptions to invariably read pedes instead of passus. This reduced the length of the sections, supposing them to be consecutive, to one-fifth. The substitution of millia pedum for millia passuum has, however, been rightly denounced by Mr. Long in his admirable edition of Caesar's Commentaries as 'contrary to the usage

[^0]of the Latin language.' ${ }^{2}$ When we meet with $\mathrm{M} \cdot \mathrm{P} \cdot$ on distance-slabs, we are bound to read the figures following as Roman miles and paces; it is only when there is $\mathrm{P} \cdot$ or $\mathrm{P} \cdot \mathrm{P} \cdot$ before the figures that we are entitled to treat these as feet. Happily, a distance-slab of the twentieth legion (C.I.L. 1122), 'found in 1789, three-quarter mile to the east of Kirkintilloch, in the hollow of the Roman ditch at the part of the line where it traverses the farm of Eastermains,' clearly shows this cardinal distinction. It is inscribed $\cdot \mathrm{m} \cdot \mathrm{P} \cdot \mathrm{iini} \mathrm{P} \cdot$ III CCCIV :' that is to say, miles 3 , feet 3304 . The epigraphy is faulty at the best : the change from a higher to a lower scale of mensuration is possibly unique in inscriptions (though sometimes met with in medieval account rolls); but there it is. ${ }^{3}$

When we ask between what several points these distances were measured--a very natural question that appears, however, to have suggested itself to few antiquaries-our difficulties begin in grim earnest. It cannot be that the second legion took the trouble to record its execution of $3,666 \frac{1}{2}$ paces of work or, a detachment of the twentieth legion 4,411 feet, unless these distances were predetermined by existing circumstances and punctiliously measured. Otherwise, the work would surely have been set out in round numbers of Roman miles, with, at most, one or two fractional exceptions. Instinctively, we expect the distances recorded to be either those between certain definite geographical features, like streams or hill-tops, or between the several forts, or the several angles in the line of demarcation.

On the numerous tablets from the western portion of the limes there is really only one distance expressed in Roman paces, though it is four times repeated. Two inscriptions of the second legion and one of a detachment of the sixth, each speak of $3666 \frac{1}{2}$ paces of work, while there is another, similar to this last, with 3665 paces. According to major-general Roy's computation of 1,610 yards to the Roman mile (more accurately 1,618 yards), $3,666 \frac{1}{2}$ Roman paces are equal to

[^1]5,902 yards, and he gives the distance between the forts of Duntocher and East Kilpatrick as 5,900 yards.

The duplicate character of some of these tablets has long been remarked. We may suppose that one of a pair was placed on the inside of the wall, and the other on the outside; or one on one side of a bridge or gateway, and the other opposite it. Indeed, there may have been two pairs at each end of the distance.

When, however, we find the soldiers of two different legions both claiming to have constructed $3,666 \frac{1}{2}$ paces, the question naturally arises, do these refer to the same piece of work ?

Now, I cannot bring myself to believe that the three legions mainly engaged in the construction of, the Cloto-Bodotrian limes worked, so to say, conglomerately. The esprit-de-corps that led each legion to set up its own distance-slabs seems clearly to show that they did not work indiscriminately together. Two stones, both commemorating the labours of the sixth legion, differ from all the rest in having inscribed on them the words ' opUS VALLI,' thus denoting specifically, in contradiction to some other something or some things else, that it was a vallum that had been the object of their toil. The limes, we now know, consisted of three perfectly distinct members-a great fosse, a turf-wall, and a well-formed military road. It seems possible, then, that the three legions were employed concomitantly in pushing on these three works. This hypothesis would account for a much greater number of distance-slabs being found in the same region than seems practicable, if they all related to the turf-wall only. It would also explain slight variations in measurements that apparently belong to the same sections.

The two 'opus valli' slabs of the sixth legion-one (C.I.L. 1140) first noticed at Erskine, on the south side of the Clyde, opposite West Kilpatrick, the other (C.I.L. 1135) found at Bradfield, near Duntocher, in 1812—evidently refer to a portion of the limes to the west of the stretch of $3,666 \frac{1}{2}$ paces, that we have every reason for locating between Duntocher and East Kilpatrick. One of these stones records 4,141 feet, the other 3,240 ; that is to say, 7,381 feet in all, much about the distance from the Sandyford burn, where traces of the Wall are first met with on the west, to Duntocher bridge. The triple series of slabs on this stretch seems to be made up by two erected by
the second legion and two by the twentieth. The number of feet on the single stones is different, but the sum of the pairs is the same :-


Second Legion.

| $\text { C.I. } L \text { vii. } 1138-4,140$ |  |
| :---: | :---: |
| " | 1136-3,271 |
|  | 7,411 |

Twentieth Legion.

|  |  |
| ---: | ---: |
| C.1.L. vii. $1141-4,411$ |  |
| ", | Feet. |
|  | $-3,000$ |
|  | $\overline{7,411}$ |

The murus caespiticius lying between these fortresses may well have been shorter than either the ditch or the road ; the ditch would be left out in crossing streams ; the road, again, may have been made longer where the gradients of the line exactly parallel to the Wall were too steep. All this depends on minute local data that I do not at present possess.

The suggestion is that the Wall was begun from the west-the direction from which we can gather that Agricola began his chain of forts. As they were accustomed to do in the construction of camps and forts, the legions recorded the work they accomplished in so many feet; by the time they got to Duntocher they saw that in a great work like the limes it was more practical to talk of so many paces.

Whether the turf-wall was continued farther west than Sandyford burn, and if so, how far, there seems nothing certain to show. A gloss in Nennius says that it extended to the mouth of the river Cluth and Cairpentaloch, whatever that may mean. ${ }^{3}$ The Venerable Bede, as is well known, makes it finish so far west as Dumbarton, ${ }^{4}$ an opinion that deserves more consideration if we rightly understand what Bede really meant as to its easternmost extremity. This he states to have been two miles to the west of the monastery of Abercorn. ${ }^{5}$ Now, we know very. well where the village of Abercorn is; but where was the monastery? Judging from the analogy of Whitby, Hartlepool, Tynemouth, Coldingham, and Tyningham, more especially Coldingham, the most

[^2]probable site for an early Northumbrian monastery near Abercorn was the promontory now occupied by the castle of Blackness. -Almost exactly two miles to the west of this sea-washed rock (Bede's miles were just a little longer than our statute miles; he calls the twenty-six miles from Canterbury to Rochester almost twenty-four) ${ }^{6}$ is Bridgeness, where, in 1868, a very fine distance-slab of the second legion (C.I.L. 1088) was found. ${ }^{7}$ The 4,652 paces inscribed on it lead us, more or less satisfactorily, to the banks of the Avon, where there may have been a Roman fortress, and where there must have been a Roman bridge.

The important distance-slab found at Eastermains (C.I.L. 1122), to which I have already alluded as having 3 Roman miles and 3,304 feet inscribed on it, may possibly have been placed at that distance west of the fortress of Bar hill, which commands views both of the Clyde and of the Forth, and which, from its central situation, seems to be Medium -the middle fortress of the eleven, the names of which are given in that delightfully mysterious compilation of the Ravenna cosmographer. This, I have endeavoured to show in treating of our Northumbrian Wall, was pre-Aelian in so far as relates to Britain, although it received its present guise so late as the seventh century. ${ }^{8}$ The names given-Velunia, Volitana, Pexa, Begesse, Colania, Medio, Nemeton, Subdobiadon, Litana, and Credigone-should then be regarded rather as those of the forts of Agricola than of the Antonine fortresses. The term una alteri connexae, that the Ravenna writer predicates of them, may merely mean that they formed a chain. It was, I am reminded, Horsley (Britannia Romana, p. 505) who was the first to notice that these names belonged to the Cloto-Bodotrian limes; that clever imposter, Bertram, in the skit he wrote under the name of Richard of Cirencester, evidently alludes to them as the 'eleven towers built by Aetius.' ${ }^{\prime 9}$ Major-general Roy, that melancholy instance of what a most capable military engineer can write on Roman antiquities for want of sufficient historical ballast, actually placed these eleven forts

[^3]
between the Tweed and the Clyde. ${ }^{10}$ Hodgson again assigned them their correct position. ${ }^{11}$ Professor Hübner is mistaken in claiming the original honour of this discovery, ${ }^{12}$ and also, I think, in supposing the fortresses to have been only ten in number. ${ }^{13}$ This hinges on whether Medio-Nemeton be one word or two words; there is authority for each reading. ${ }^{14}$ Medium, as the sixth of eleven, would be really the middle-fortress, and in the instances of Ne metacum ${ }^{15}$ (Arras) in Gaul, and Nemetotacium ${ }^{16}$ in Devonshire or Cornwall, 'Nemet' occurs at the beginning and not in the latter half of place-names. The identification of the middle-fortress is comparatively easy in the striking case of Bar hill; but this, unfortunately, leaves us as much in the dark as ever as to whether the eleven names are given in their order from west to east, or from east to west. I own to a feeling in favour of the former, and think it possible that a trace of Credigone may survive in Caerridden, near the Forth. Professor Hübner's opinion in favour of the' contrary direction seems to have rested, to some extent, on his confusion of Credigone with the Rerigonium of Ptolemy, which was clearly on Loch Ryan, miles and miles out of the way, down the west coast in Galloway. ${ }^{17}$

If the list of the Ravennas does really begin at the west end, and we take only those larger fortresses of whose existence we have positive evidence, except the two terminal ones, then

| Velunia may be | West Kilpatrick. | Medium may be Bar Hill. |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Volitana | Duntocher. | Nemeton " | Westerwood. |  |
| Pexa | " | East Kilpatrick. | Subdobiadon", | Castle Cary. |
| Begesse " | Bemulie. | Litana | Rough Castle. |  |
| Colania | " | Auchindavy. | Credigone ", | Caerridden. |

Castle Hill I have left out as being much smaller than the rest; it was passed by in the $3,366 \frac{1}{2}$ paces recorded between Duntocher and

[^4]East Kilpatrick, and the peel of Kirkintilloch is apparently medieval. The absence of any certain signs of fortresses in the long stretches between Bemulie and Auchindary and between Rough Castle and the Forth may be due to the extra protection afforded on the north by the rivers Kelwyn and Carron respectively. A similar gap occurs in the western half of the southern Wall between Castlesteads and Stanwix. There is in Nennius a wild tradition of the addition of seven fortresses to the wall by Carausius. ${ }^{18}$ It was, of course, at the best calculated to keep back bands of raiders and cattlelifters, and not to resist a regular army, even of Caledonians. ${ }^{19}$

What I have sketched is rather an outline of what we wish to know than of anything we do know. It is impossible to get at the truth without having the courage to hazard guesses at truth. It was by starting from Seghill and Appleby that we reached the true segedunum at Wallsend and the true aballaba at Papcastle. I believe most of the theories I have broached are novel, and I may well apply to them the warning 'hoste vicino,' at the end of that brilliant little essay, Per Lineam Valli, which through its main position proved ultimately untenable, had the great merit of setting us really a-thinking about the problems of our own Wall. ${ }^{20}$ I not only expect attacks, but I invite them. I may be accused of temerity in charging in among the caltraps of a Bannockburn ; every proposition I have advanced may be overthrown, yet I cannot help hoping that I may have done something to give a new impulse to the study of the Antonine Wall, with whose history that of the Wall of Hadrian is so closely interwoven.

[^5]

## LIST OF DISTANCE-SLABS FOUND ON THE ANTONINE WALL.

(The epigraphy has been kindly revised by Mr. F. Haverfield, who has collated most of the texts with the originals.)

| $\begin{aligned} & \text { No. in } \\ & \text { C.I.L. vii, } \end{aligned}$ | Distance recorded. Sixth Legion. | Place where first found. | Where preserved. | $\begin{aligned} & \text { No in } \\ & \text { C.I.L. vii. } \end{aligned}$ | Distance recorded. | Place where first found. | Where preserved. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1140 |  | Erskine |  | 1122 | $\mathrm{M} \cdot \mathrm{P} \cdot \mathrm{III} \mathrm{P}$ III CCCIV | Eastermains |  |
| 1135 | * $\infty$ ) $\infty^{\text {CCXL }}$ | Broadfield, 1812 |  |  | Vexill. of Twentieth Legion. |  | Hunterian |
| 1132 | PER M $\cdot \mathrm{P} \cdot$ III $\cdot$ DCLXVIS | Castle hill (?) |  | 1143 | PER MIL P III | Caddir | ¢ museum, |
| 1131 | PER M P P M III DCLXV | Low Millochan, 1803 | Hunterian | 1142 | * * * DXI | Erskine | Glasgow. |
|  | Second Legion. |  | museum, | 1141 | $\begin{aligned} & \mathrm{P} \cdot \mathrm{P} \cdot \text { III CDXI } \\ & \mathrm{P} * * * * * \end{aligned}$ | Chapel hill Duntocher |  |
| 1138 | P - IIII OXL | near Duntocher |  |  |  |  | (Burnt at |
| 1136 | P - III CClXXI | Duntocher |  | 1133 | P | Hutchinson | $\left\{\begin{array}{l}\text { Chicago. } \\ \text { Cast at }\end{array}\right.$ |
| 1130 | PEP $\cdot \mathrm{M} \cdot \mathrm{P} \cdot \mathrm{IIII}$ DCLXVI.S | Castle hill |  |  |  | hill, 1865 | Blackgate, |
| 1126 | PER $\cdot \mathrm{M} \cdot \mathrm{P} \cdot$ III DCLXVIS | Bemulie |  |  |  |  | Newcastle. |
| 1088. | PER • M • P • IIII DCL II <br> * Opus Valli. | Bridgeness | $\left\{\begin{array}{l}\text { Society of } \\ \text { Antiquaries, } \\ \text { Ediquargh }\end{array}\right.$ <br> ( Edinburgh. | 1133 | P P III | near Castle hill, 1847 | $\left\{\begin{array}{l} \text { Hunterian } \\ \text { museum, } \\ \text { Glasgow. } \end{array}\right.$ |


[^0]:    ' 'Itaque haec omnia, mensurae titulorum, spatia a singulis numeris confecta, operis progressus incerta manent.' Corpus Inscriptionum Latinarum, vii. p. 194. I desire to acknowledge the kind criticisms I have received from Mr. George Neilson and Dr. James Macdonald, which have proved indirectly of the greatest assistance. Dr. Macdonald contributed some interesting articles on The Roman Room of the Hunterian Museum to Scots Lore (pp.130, 211, 316), a Glasgow magazine, in 1895.

[^1]:    ${ }^{2}$ C. Julii Caesaris Commentarii de Bello Gallico, with notes by George Long, 1862, p. 136 n . Mr. Long's contention that the circumvallation of the stronghold of the Aduatuci was fifteen Roman miles in circuit is, if it needed it, supported by Caesar's unquestioned statement that that drawn by him round Alesia was fourteen Roman miles in circuit, lib. vii. §. 74.
    s As I was correcting the proof of this passage my adaition at a Paris restaurant was rendered verbally as un frane et vingt-six sous.

[^2]:    ${ }^{3}$ ' Ad ostium fluminis Clutha et Cairpentaloch, quo murus ille finitur rustico opere.' 'Cairpentaloch' can hardly be Kirkintilloch. Another gloss, 'a flumine Kaldra usque ad Rimindu,' is equally enigmatical. By the former the Kelwyn may be meant, and by the latter Caerridden or Cramond.
    ${ }^{4}$ 'Tendens ad occidentem terminatur iuxta urbem Alcluith.' Hist. Eccl. I. c. 12.
    ${ }^{5}$ ' Incipit autem duorum ferme millium spatio a monasterio Aebercurnig.' Ibid.

[^3]:    ${ }^{6}$ Hist. Eecl. II. c. 3.
    ${ }^{7}$ The block of this stone has been kindly lent by the Society of Antiquaries of Scotland. It appears in the Proceedings of that society, and also in the catalogue of the Antiquarian Museum at Edinburgh.
    ${ }^{8}$ History of Northumberland, Elliot Stock, 1895, p. 18.
    ${ }^{9}$ See Roy's Military Antiquities, p. 151.

[^4]:    ${ }^{10}$ See Roy's Military Antiquities, p. 151.
    ${ }^{11}$ History of Northumberland, II. iii. p. 258.
    12 ' Id quod ab antiquariis Britannis omnibus video neglectum esse.' C.I.L. p. 194. $\quad{ }^{13}$ Tbid. $\quad{ }^{14}$ Ibid. $\quad{ }^{15}$ Long's Caesar, pp. 110, 405.
    ${ }^{16}$ Ravennatis Cosmographia. On the other hand, there is Augustonemetum (Autun.) Ad $\cdot \mathrm{Mr}$. Haverfield tells me, it is more to the point to notice that 'nemet' occurs alone as meaning a grave or a sanctuary, in a charter of A.D. 1031 (referred to by Zeuss, Gramm. Celtica, p. 161) and elsewhere. Medium alone may be an odd name, but so is Magnae. ${ }^{17}$ C.I.L. vii. p. 194.

[^5]:    18 ، Carutius postea imperator reaedificavit et VII. castellis munivit inter utraque ostia: domumque rotundum politis lapidibus super ripam fuminis Carun, quod a suo nomine nomen accepit, fornicem triumphalem in victoriae memoriam. erigens, construxit.' Nennius, Hist. More probably, of course, the name of the river Carron suggested Carausius's connection with the Scottish Wall.
    ${ }^{19}$ In Western"Russia it is the custom to throw up a mound of earth round a forest, not.so much to prevent wood-stealers driving their waggons in as to show whether they have done so or not: if there are no tracks across the mound the forester can return home, if there are he can follow them up. Intercepting forays on their return formed a regular part of-Border warfare in the middle ages.
    ${ }^{20}$ Per Lineam Valli; by George Neilson, of Glasgow.

