ART. XXI.—Comparative View of the Dimensions of the Vallum in Northumberland. By Mrs. Hodgson, Newby Grange.

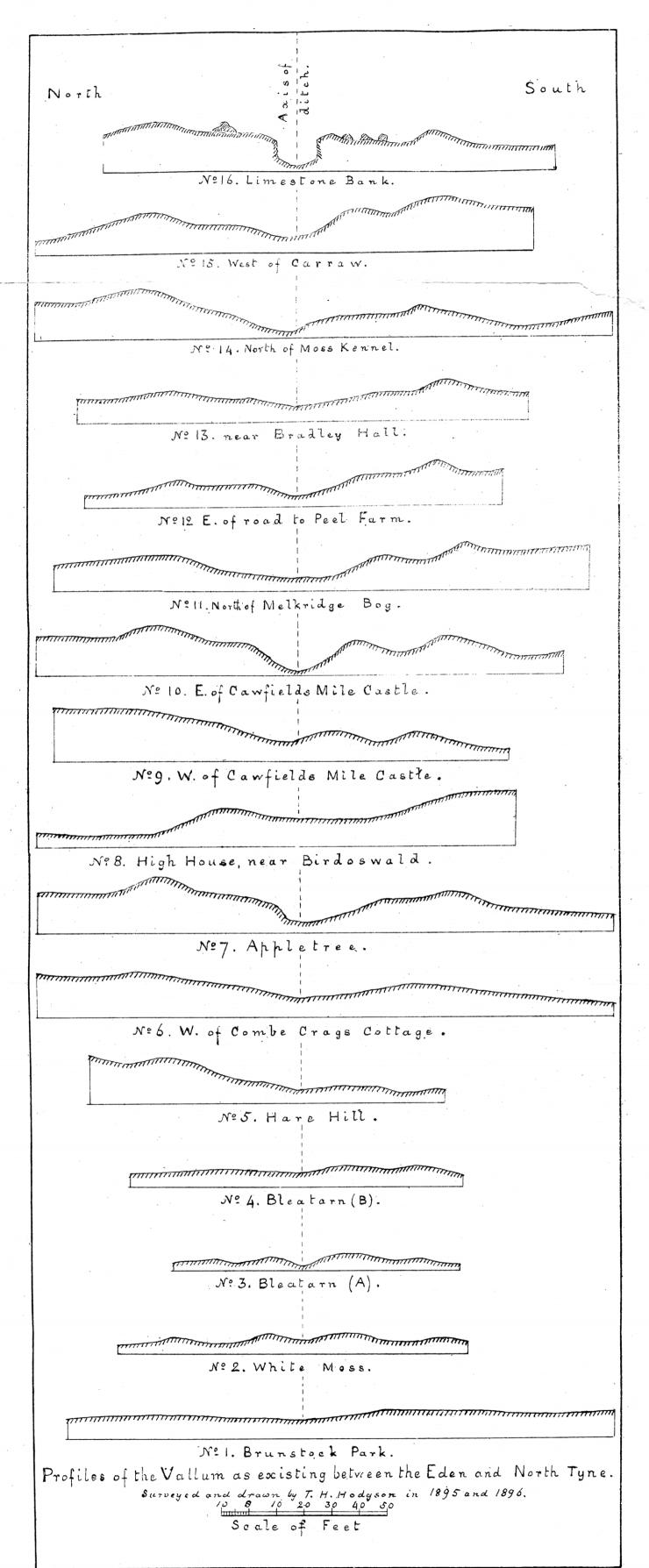
BETWEEN the Poltross Burn on the borders of Cumberland and Northumberland, and the North Tyne, the Vallum crosses a tract of country little susceptible of cultivation, and the earthwork has been disturbed in very few places by other than natural forces. At Limestone Bank, the most easterly point surveyed by my husband,\* even these have had little effect in altering the position of the large blocks that lie on the sides of the ditch, which, being cut through the rock, also retains its form. The sides are vertical, which is unusual, but is accounted for by the cleavage of the rock. The mounds all contain large blocks like those lying on the berms, but they are covered with soil and turf.

West of Carraw the earthwork is on a grand scale for some distance, but the inner mound varies considerably in width within even a few hundred yards, so that both Horsley, t who speaks of the inner mound as generally the larger, and Bruce,‡ who differs from him, may have been correct, only Bruce's drawing is too neat and diagrammatic to express the present state of the work and the consequent uncertainty of measurement.

In the next three sections there was no trace of the inner south mound, and I have included them under type B.\ Near Bradley Hall (on the eastern side of the curve there) we saw some large stones on both berms. measured roughly was 5ft. 3in. by 4ft. by 2ft 3in.

<sup>\* (</sup>See Plate I, opposite.)

<sup>†</sup> Britannia Romana, p. 146 and Plan. ‡ Roman Wall, p. 52, orig. ed. § These Transactions, Vol. xiv., Art. xv, p. 244.



Near Melkridge Bog the Vallum is overhung from both north and south. The inner south mound is not easily traced by the eye, but the level shows it well-marked. It has many large stones in it, showing through turf. They are also seen on the north berm and in the principal mounds. At the east end of the field the inner south mound looked the larger of the two, but a bull was master of the situation, and we took no measurements.

The eastern section near Cawfields is on a very large scale, the western is considerably smaller, as the ditch has been partly filled up by natural causes, and the north mound, on very sharply rising ground, has always been much narrower and lower than usual. I have been somewhat doubtful whether to include these under profile A. (with a small inner mound) or to compare them with profile C. of the Cumberland sections at Bleatarn and elsewhere, where there are two principal inner mounds and two subsidiary outer mounds. The various types really graduate into each other, as would be seen if we could take a still larger series of measurements. Sir W. Crossman takes the inner and outer mounds to represent the first and second "throw" of the earth from the ditch, which readily accounts for the differences.

To sum up the results up of the measurements: The ditch of the Vallum varies in width at the present surface from 4ft. or 5ft. at White Moss and Bleatarn to 4oft. and 43ft. near Bradley Hall, at Brunstock, and at Combe Crags. Its depth below the probable natural surface I have not estimated in Cumberland except at Appletree, where it is 9ft. In Northumberland it varies from  $3\frac{1}{2}$ ft. west of Cawfields to 9ft. at Limestone Bank.

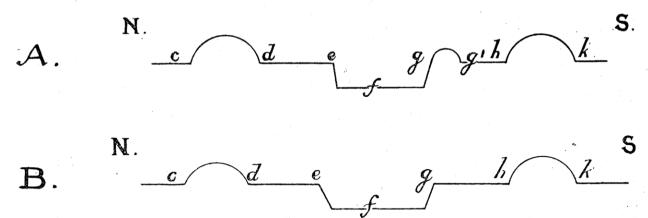
The north mound varies in width from 15ft. at Gilsland and 17ft. at White Moss to 43ft. at Appletree and 50ft. west of Carraw. The inner south mound, where it is smaller than the outer, varies from 8ft. and 9ft. at Appletree and Limestone Bank, to 19ft. and 20ft. west of

Types of Profile of Vallum. Diagrammatic only, not to any scale.

A is the profile given by Dr. Bruce (The Roman Wall, original edition, p. 52.)

The present surface is measured in feet, the distances along slopes being reduced to horizontal.

References in column of names are to illustrations by T. H. Hodgson. Plate I.



I.—Horizontal Measurements. (in feet.)										
	Type of Profile.	c to d.	d to e.	e to f.	allum Ditch.	f to g.	$g$ to $g^1$ .	$g \stackrel{\text{or } g^1}{\text{to } h}$ .	h to $k$ .	Total North to South
North of Moss Kennel  North of Bradley Hall  East of Road to Peel Farm  North of Melkridge Bog  Eact of Courfields Mile Coatle	A B B B A	25 50 35 35 25 37 36 20	30 17 20 15 23 17 14 28	7 15 15 18 13 13 18	Axis of the Vall	8 17 9 22 22 22 15 8	9 19   12 15 20	25 5 25 21 20 13 15	22 32 20 23 16 20 30 25	126 155 124 134 119 134 143
II.—Height of Mounds above, and depth of Ditch below, the probable natural surface.										
North of Bradley Hall East of Road to Peel Farm North of Melkridge Bog East of Cawfields Mile Castle West of Cawfields Mile Castle		3 5 5 2 3 4 <sup>1</sup> / <sub>2</sub> 5			9 5 6 4 5 <sup>1</sup> / <sub>2</sub> 4 8 3 <sup>1</sup> / <sub>2</sub>		1½ 3½ 3½ I 3 2		4½ 5 4 4½ 5 4 5 4	

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Carraw and west of Cawfields. Where it is the larger of the two, at Whitemoss and Bleatarn, it is 24ft. to 29ft. wide. The outer principal south mound varies from 16ft. near Peel Farm to 70ft. at Combe Crags and Brunstock. I have not calculated the heights of the mounds in Cumberland except at Appletree, but including this with the Northumberland sections, the height of the north mound varies from 1ft. west of Cawfields to 5ft. at Appletree and three other places. The inner south mound varies in height from 1ft. to  $3\frac{1}{2}$ ft.—this last at Carraw—and the outer south mound from 4ft. to 5ft.

The measures over the whole width of the works vary from 104ft. at Bleatarn to 155ft. at Carraw, 168ft. at Combe Crags, and 170ft. at Brunstock. This last must always have been on a large scale, but has been widened by ploughing.