

The various specimens have now found final resting-places in the British Museum, the Universities of Glasgow, Liverpool, and Reading, and Eastgate House Museum, Rochester.

Yours faithfully,
G. E. DIBLEY.

THE CARLISLE BASIN.

SIR,—The courteous criticism by Messrs. Dixon and Trotter of my review of the Carlisle Memoir (GEOLOGICAL MAGAZINE, Vol. LXIII, 1926, pp. 377–9) states the remaining issue clearly. I am glad that they reject the conclusion that the gypseous shales at Abbeytown are a series not elsewhere seen, which provoked my paper (GEOLOGICAL MAGAZINE, 1915, pp. 241–9), as it seemed to have a misleading influence on the interpretation of both the Solway Basin and the Isle of Man. Messrs. Dixon and Trotter avoid the correlation of the gypseous shales at Abbeytown with those south of Carlisle by explaining them as the thickened and changed extension of the Stanwix Marls. Certain resemblances of the sandstone at the bottom of the Abbeytown bore and the Kirklington Sandstone had forced consideration of that possibility on Holmes and myself. Holmes scouted that idea. The beds at Abbeytown are shales with many layers of gypsum, and one occurrence of salt, and no limestone, and are 746 feet thick. The Stanwix beds are marls with thin beds of limestone without either gypsum or salt, and according to Holmes are “extremely thin”. The Survey Carlisle Memoir (1926, pp. 23, 28) reminds us that in these beds colour is an unreliable guide, but it is not without value, though less important than chemical composition, in which the Abbeytown shales and Stanwix Marls are strikingly different. The evidence for Holmes’ Dalton Fault may be small, but that for the Cummersdale Fault appears even less convincing. I followed Holmes in his interpretation of the facts of the Orton bore, but its record of 1781 is too indefinite for much weight to be placed on it. The dismissal of Holmes’ Upper Gypseous Shale is an important advance; but the tradition left by Holmes’ view will probably delay settlement of the further issue until another bore reveals more evidence. Meanwhile I regard the general structure of the Solway Basin as fitting the correlation of the gypseous shales at Abbeytown and Carlisle in spite of the more varied colours found at Abbeytown.

J. W. GREGORY.

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