

Shap fell granite lies on the moors near Lastingham, and near Scarborough, and on the wolds near Flamborough, Middleton, &c.

The Penine chain ends abruptly on the north against Brampton, Hartley Burn, Hexham, &c.; and a great depression is formed on the line of the 90 fathom dyke and the vale of the Tyne. *Along this depression*, and far down to the mouth of the Tyne, the Cumbrian detritus is found, though no streams now flowing there have any connection with the mountains from which the materials came.

The large quantity of detritus from the Cumbrian mountains, which has been drifted to the south, on the western side of the high mountain border of Yorkshire and Derbyshire, has gone across the drainage of the Lune (Lancaster), Wyre, (Garstang), Ribble (Preston), Mersey (Manchester), Weaver (Northwich), into and beyond the drainage of the Trent, the Dee, and the Severn (Bridgnorth). Not in any instance have they overstepped to the east the mountain barrier previously noticed; but they lie up against it in enormous quantity, and in the most inextricable confusion, not to be explained by any thing like the action of the sea on its coasts, even during the most violent storms.

In and under Barr Beacon, is a mighty mass of drifted quartz gravel, and sand, with fragments of limestone, trap, and coal sandstone rocks from Dudley, Rowley, &c.; but I found no distinct proofs of Cumbrian rocks,—not a bit of granite, and no bones. This seems to be analogous to the great drifted mass of gravel, coal, and sand at Durham, which has followed the drainage of the Wear.

The distribution of pebbles of quartz rock from Bromsgrove Lickey to the north and east, even to the valley of the Thames, and along the hills which border it, is well known from Dr. Buckland's description, and certainly it is one of the most striking examples of the effect of ancient currents; but it appears totally independent of the "drift" from Cumberland.