

rock, which is partly a basalt-glass, forms a conspicuous crag crowning the hill of Wat Carrick. This dyke can be traced south-eastward into England and north-westward beyond the Leadhills, a total distance of 45 miles. More striking is the scenery of the Ewes Water [282, 309, 333]. The great escarpment of volcanic rocks at the base of the Carboniferous system runs from Annandale through Birrenswark [285, 309] to Langholm, whence it bends northward, and rising in altitude as it proceeds, attains in Pike Fell, Arkleton Hill, and the Pikes [309] heights of from 1600 to upwards of 1700 feet. There are few more interesting walks in the south of Scotland than from Langholm, along the range of this escarpment, to the head of the Hermitage Water, and thence back by the scattered 'necks' on the west side of Liddesdale, which mark the sites of volcanic vents of Lower Carboniferous age [309]. The old coach-road up Ewes Water crosses the watershed at a height of about 800 feet by the Moss-paul Pass which leads down into Teviotdale. The valley is much narrower and the hills are loftier than in Eskdale.

The river Liddell, a little above its junction with the Esk, has cut a picturesque ravine in the Carboniferous Limestone series at Penton Linns. The high grounds on the left, as the train moves up Liddesdale, are formed by the dip-slope of the lavas of the great volcanic escarpment. The small, green conical eminences on the lower slopes mark the positions of some of the volcanic vents above referred to, the most conspicuous being the Tinnis Hill, opposite Kershopefoot Station [309]. The long ridge to the right, forming the boundary of the valley on that side, is capped with a group of white and yellow sandstones, the escarpments of which form a marked feature far over into the English border. At Riccarton Junction, where the railway from the North Tyne joins the main line, a section is laid open of the long Upper Silurian ridge, which here separates the valleys of the Liddell and Hermitage Water. But Carboniferous rocks appear again immediately on the north side and are seen in the cuttings before the train enters the tunnel, which here pierces the ridge that forms the watershed of the country. The high detached conical eminences to the left (Maiden Paps, 1677 feet; Great Moor, 1964 feet) are volcanic vents and bosses connected with the great escarpment [309]. The high hill to the right, before