

the river.¹ There are no fractures there of any importance. The true explanation is as follows:

At an old period of the physical history of the country, the valley north and west of Buxton had no existence, and the land there actually stood higher than the tops of the limestone hills to the east. An inclined '*plain of marine denudation*,' stretched eastwards, and gave an initial direction to the drainage of the country. The river began to cut a channel through the limestone rocks; and as it deepened and formed a gorge, the soft Carboniferous shales in which the river rose, were also worn away by atmospheric action, and streams from the north and west began to run into the Wye. By the power of running water, those valleys were deepened simultaneously and proportionately to their distance from the sources of the river; and the farther the Wye flowed, the more was its volume increased by the aid of tributary streams and springs. Thus it happens that the Wye seems to the uninitiated unnaturally to break across a boss of hills, which, however, were once a mere slightly undulating unbroken plain of limestone. There is no breakage of the rocks, and nothing violent in the matter. It was and is, a simple case of the wearing action of running water cutting a channel for itself from higher to lower levels, till, where Rowsley now stands, it joined the Derwent, which flows in a long north and south valley scooped

¹ 'On the Stratification of the Limestone District of Derbyshire,' by W. Hopkins, M.A., &c. For private circulation. 1834. In p. 7 he says, 'When two longitudinal faults, ranging parallel, are not very distant from each other, they sometimes form a *longitudinal valley*, of which the valley of the Wye is a splendid instance. In such cases, however, it is curious that the faults do not generally coincide with the steep sides of the valley, but are distant from them by perhaps from 50 to 200 or 300 yards.'