

soft shale or clay we find represented by a hollow trough ; the surf has worn it down till it can no longer be seen, and a strip of smooth gravel rests over it ; a stratum of sandstone, of the average solidity, rises above the hollow like a mole, for the waves have failed to wear the sandstone down ; while a band of limestone or chert we find rising still higher, because still better suited, from its great tenacity, to resist the attrition of the denuding agents. And such, on a great scale, is the principle of what one may term the geologic framework of English landscape. The softer formations of the country we find represented, like the shale-beds on the shore, by wide flat valleys or extensive plains ; the harder, by chains of hills of greater or lesser altitude, according to the degree of solidity possessed by the composing material. A few insulated districts of country, such as part of North Wales, Westmoreland, and Cornwall, where the Plutonic agencies have been active, we find coming under the more complex law of Scottish landscape ; but in all the rest, — save where here and there a minute trappean patch imparts its inequalities to the surface, as in the Dudley coal-field, — soft or hard, solid or incoherent, determines the question of high or low, bold or tame. Here, for instance, is a common map of England, on which the eminences are marked, but not the geologic formations. These, however, we may almost trace by the chains of hills, or from the want of them. This hilly region, for instance, which extends from the northern borders of Northumberland to Derby, represents the Millstone Grit and Mountain Limestone, — solid deposits of indurated sandstone and crystalline lime, that stand up amid the landscape like the harder strata on the wave-worn sea-coast. On both sides of this mountainous tract there are level plains of vast extent, that begin to form on the one side near Newcastle, and at Lancaster on the other, and which, uniting at Wirks-