

cannot altogether avoid using the technical terms,) of the small grains of sand, the pebbles, the bowlders, and the masses of all sizes, which compose the so-called diluvium, was scrutinized, and compared with the character of rocks at every point on the lines of distance, till the parent rocks were demonstrated from which the fragments had been broken or rubbed off. The mineralogical constitution thus traced up to a commencing point, gave a sure indication of the extent of each kind of drift ; and a measure of the varying water-power, by which the detached bodies of stony matter had been moved onwards. Hence were perceived the different degrees of force and velocity which characterized the streams as they flowed ; the earlier or later dropping of the mud, sand, pebbles, and larger pieces, on their course ; the greater or less rolling at the bottom before a resting-place was obtained ; the extent of the deposit in breadth, and where it terminated by the moving power being exhausted, or being checked by some obstacle ; and the deductions which could be drawn, as to the time requisite, under different degrees of water-power, for wearing the rough and sharp fragments of rocks of various hardness and tenacity, till they could be brought into rounded forms with smooth surfaces.

To any mind not practised in such inquiries, it is not easy to conceive what a wide field this was for investigation : and it could not be occupied by studies only in the closet : it required painful and patient toil in flood and field, over wide plains, in river-beds, on the sea-coasts, in the windings of large and small valleys, and up the mountain-sides ; and all this to be effected over many miles of surface, and in different and distant regions of the earth. No one person could be competent to more than a limited share in this field ; though we cannot but be astonished at the extensive portions of it which have been individually explored by distinguished geologists : but they are