

not only as regards meteorological conditions, but in respect to the geological structure of the ground, merit the careful attention of the geological student. He may occasionally observe that, other things being equal, the volume of a flood is less in proportion to the permeability of a hydrographic basin, and the consequent ease with which rain can sink beneath the surface.

Were rivers entirely dependent upon direct supplies of rain, they would only flow in rainy seasons and disappear in drought. This does not happen, however, because they derive much of their water not directly from rain, but indirectly through the intermediate agency of springs. Hence they continue to flow even in very dry weather, because, though the superficial supplies have been exhausted, the underground sources still continue available. In a long drought, the latter begin at length to fail, the surface springs ceasing first, and gradually drying up in their order of depth, until at last only deep-seated springs furnish a perhaps daily diminishing quantity of water. Though it is a matter of great economic as well as scientific interest to know how long any river would continue to yield a certain amount of water during a prolonged drought, no rule seems possible for a generally applicable calculation, every area having its own peculiarities of underground drainage, and varying greatly from year to year in the amount of rain which is absorbed. The river Wandle, for instance, drains an area of 51 square miles of the chalk downs in the southeast of England. For eighteen months, from May, 1858, to October, 1859, as tested by gauging, there was very little absorption of rainfall over the drainage basin, and yet the minimum recorded flow of the Wandle was 10,000,000 gallons a day, which represents