nature that work within the earth, with those which are seen and felt upon its surface. Hutton first caught the meaning of that constant circulation of water which, by means of evaporation, winds, clouds, rain, snow, brooks, and rivers, is kept up between land and sea. He saw that the surface of the dry land is everywhere being wasted and worn away. The scarped cliff, the rugged glen, the lowland valley, are each undergoing this process of destruction; wherever land rises above ocean, there, from mountain-top to sea-shore, degradation is continually going on. Here and there, indeed, the débris of the hills may be spread out upon the plains; here and there, too, dark angular peaks and crags rise as they rose centuries ago, and seem to defy the elements. But these are only apparent and not real exceptions to the universal law, that so long as a surface of land is exposed to the atmosphere it must suffer disintegration and removal.

But Hutton saw, further, that this waste is not equally distributed over the whole face of the dry land. He perceived that while, owing to the greater or less resistance offered by different kinds of rocks, the decay must vary indefinitely in rate, its amount must necessarily be greatest where the surplus water flows off towards the sea-that is, along the channels of the streams. Watercourses, he argued, are precisely in the lines which water would naturally follow in running down the slope of the land from its water-shed to the sea, and which, when once selected by the surplus drainage, would necessarily be continually widened and deepened by the excavating power of the rivers. He regarded the streams and rivers of a country as following the lines which they had chiselled for themselves out of the solid land, and thus he arrived at the deduction that valleys have been, inch by inch and foot