any hollow or flatter part of the beach. Thus, before the tide rises again to efface the whole, a complete drainage-system may be carved out of the sand, which may serve as a kind of model of the drainage-system of a country or a continent.

When, from these general considerations, we proceed to the examination of the actual surface of the land, one of the first and most striking features to present itself to notice is the evidence of universal loss of material. Not only from the valleys, where running water is visibly engaged in loosening and transporting debris derived from solid rocks, but everywhere from the general surface of the land, a vast amount of rock can be demonstrated to have been removed. Abundant evidence of the truth of this statement will be furnished from the surface of Scotland in the following chapters. The abstraction of material cannot be accounted for by underground disturbance. It is, in fact, most strikingly displayed where the rocks retain their original horizontality; where, consequently, though they have been uplifted, they have not been crumpled or disarranged, and where, therefore, the idea of subterranean convulsion is completely excluded from consideration as a factor in the production of the present irregularities of contour. The formation of the valleys has proceeded concomitantly with a general degradation of the surface of the land. The causes of this degradation are not obscure. We see them in full working order at the present time all over the globe, wherever land rises above the surface of the sea. They are to be recognised in the action of the air, rain, frost, springs, rivers, glaciers, and the sea. Hence the erosion of valleys would appear to be only a part of a vast and complex process of waste from which the surface of the land is continually suffering. We do not need to appeal, therefore, to unknown or recondite causes to account for such topographical features as those that diversify