

as memorials of what has been removed. Where, on the other hand, they have been thrown into inclined positions, the truncation of their strata at the surface points to the same universal degradation. Here, again, the lines of stratification may be used as datum-lines to measure approximately the amount of rock which has been worn away.

While, therefore, it is true that, taken as a whole, the dry land of the globe owes its existence to upheaval, it is not less true that its present contours are due largely to erosion. These two antagonistic forms of geological energy have been at work from the earliest times, and the existing land with all its varied scenery is the result of their combined operation. Each has had its own characteristic task. Upheaval has, as it were, raised the rough block of marble, but erosion has carved that block into the graceful statue.

The very rocks of which the land is built up bear witness to this intimate co-operation of hypogene and epigene agency. The younger stratified formations have been to a large extent derived from the waste of the older, the same mineral ingredients being used over and over again. This could not have happened but for repeated uplifts, whereby the sedimentary accumulations of the sea-floor were brought within reach of the denuding agents. Moreover, the internal characters of these formations point unmistakably to deposition in comparatively shallow water. Their abundant intercalations of fine and coarse materials, their constant variety of mineral composition, their sun-cracks, ripple-marks, rain-pittings, and worm-tracks, their numerous unconformabilities and traces of terrestrial surfaces, together with the prevalent facies of their organic contents, combine to demonstrate that the main mass of