

relation the present topography bears to that which was left at the close of the great uplift. This is a question which ought not to be merely guessed at. To assume, for instance, that the existing contours of a range of mountains are essentially those which it received at the time of its upheaval is wholly inadmissible. We may be ultimately brought to that conclusion, indeed, but it ought to be reached by a careful examination of the actual structure and forms of the mountains.

Now, one of the most striking facts which every mountain chain, even the youngest, thrusts prominently into notice is the proof that great as have been the subterranean movements to which the chain owed its birth, they are hardly more remarkable than the extent to which the uplifted ground has subsequently been denuded. From summit to base, on crag, crest, and ravine, the story of universal denudation is written in signs that cannot be misread. The minimum amount which has been removed from some parts can be measured, and is found to be so great, that if it could all be put back again where it once lay, it would entirely fill up deep and wide valleys and completely alter the form of the mountains. From this evidence, it is demonstrable that the present topography must be widely different from that which the mountain-chain originally wore. If we only reflect upon the work that is now being done before our eyes by running water everywhere, upon the amount of sediment which can be shown to be carried every year from the land into the sea, and upon the rate of waste of the general surface of the land which the removal of this material proves, we are compelled to admit that no terrestrial forms of surface can possibly escape transformation by superficial agencies, and that the older a land-surface is the more unlike must it be to its first aspect. So