

any estimate of this kind can be based upon accurate and reliable data. But it illustrates a method of vividly bringing before the mind the reality and extent of the denudation now in progress.

2. *Subaerial Denudation—the unequal erosion of land*

It is obvious that the earthy matter annually removed from the surface of the land does not come equally from the whole surface. The determination of its total quantity furnishes no aid in apportioning the loss, or in ascertaining how much each part of the surface has contributed to the total amount of sediment. On plains, watersheds, and more or less level ground, the proportion of loss may be small, while on slopes and in valleys it may be great, and it may not be easy to fix the true ratios in these cases. But it must be borne in mind that estimates and measurements of the sum-total of denudation are not thereby affected. If we allow too little for the loss from the surface of the table-lands, we increase the proportion of the loss sustained by the sides and bottoms of the valleys, and *vice versa*.

While these proportions vary indefinitely with the form of the surface, rainfall, etc., the balance of loss must always be, on the whole, on the side of the sloping surfaces. In order to show the full import of this part of the subject, certain ratios may here be assumed which are probably understatements rather than exaggerations. Let us take the proportion between the extent of the plains and table-lands of a country, and the area of its valleys, to be as nine to one; in other words, that, of the whole surface of the country, nine-tenths consists of broad undulating plains, or other comparatively level ground, and one-tenth of