

soils.* But even though these counteracting forces had been somewhat differently balanced ; though

* "It is highly interesting to trace up, in this manner, the action of causes with which we are familiar, to the production of effects, which at first seem to require the introduction of unknown and extraordinary powers ; and it is no less interesting to observe, how skilfully nature has balanced the action of all the minute causes of waste, and rendered them conducive to the general good. Of this we have a most remarkable instance, in the provision made for preserving the soil, or the coat of vegetable mould, spread out over the surface of the earth. This coat, as it consists of loose materials, is easily washed away by the rains, and is continually carried down by the rivers into the sea. This effect is visible to every one ; the earth is removed not only in the form of sand and gravel, but its finer particles suspended in the waters, tinge those of some rivers continually, and those of all occasionally, that is, when they are flooded or swollen with rains. The quantity of earth thus carried down varies according to circumstances : it has been computed in some instances, that the water of a river in a flood, contains earthy matter suspended in it, amounting to more than the two hundred and fiftieth part of its own bulk. The soil therefore is continually diminished, its parts being delivered from higher to lower levels, and finally delivered into the sea. But it is a fact, that the soil, notwithstanding, remains the same in quantity, or at least nearly the same, and must have done so, ever since the earth was the receptacle of animal or vegetable life. The soil therefore is augmented from other causes, just as much, at an average, as it is diminished by that now mentioned ; and this augmentation evidently can proceed from nothing but the constant and slow disintegration of the rocks. In the permanence, therefore, of a coat of vegetable mould on the surface of the earth, we have a demonstrative proof of the continual destruction of the rocks ; and cannot but admire the skill with