

by some of the expounders of geological science, that, while the vegetable mould on the earth's surface is subject to perpetual waste, from the action both of the winds and of the waters, either blowing it away in dust, or washing it down in rivers to the ocean—the loss thus sustained, is nevertheless perpetually repaired by the operation of the same material agents on the uplands of the territory—whence the dust and the debris, produced by a disintegration that is constantly going on even in the hardest rocks, is either strewed by the atmosphere, or carried down in an enriching sediment by mountain streams to the lands which are beneath them. It has been rightly argued, as the evidence and example of a benevolent design, that the opposite causes of consumption and of supply are so adjusted to each other, as to have ensured the perpetuity of our soils.* But even though these counteracting

* “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