

“diluvian” origin, especially by those who seek physical information where it was never intended, and is assuredly not to be found. This is to be ignorant of the action of a river, in which the two distinct processes of laying down and of removing materials are always going on; while the two effects, which appear to be coexistent in one place, occur, at one point of time, in two places, and are in a state of perpetual transference. The torrent, gradually deepening its rocky bed, carries forward its materials to a lower point, thus diminishing the rapidity of the slope on which it flowed: while, continuing to act on these, it labours to restore the declivity which it had reduced, thus deepening its channel and transferring them to a lower point. Hence the raising of the bed by the protrusion of materials, and the lowering of it by vertical wear, proceed at the same time: the former, however, preceding the latter, or the work of elevation going on at a point nearer the source, at any instant, than that of deepening. Though the final result would be to equalize the mountain and the sea, the powers gradually diminish, or the time encreases, with the diminution of the declivity, and is thus always most feeble in the plains. But here also it lays down what it will remove, and removes what it has laid down: while the results are modified by lateral deviations arising from the evanescence of the declivity and from obstructions of its own creating; through the fall of its banks or other causes. Hence arises the depth of deserted alluvia in the wider valleys and the plains, with their permanent elevations above the actual course of the river which created them. And these are the alluvia which some have viewed as “diluvian,” as others have supposed them to belong to deserted lakes; unaware of the nature of what I have thus, if too briefly, analysed. The very valley, thus giving an allu-