

to one of the sources of the so long mysterious fresh water deposits.

But the great visible effect of rivers consists in the excavation of valleys; correlatively also modifying the original forms of the mountains. The ravine continues to enlarge by the further destruction of its sides; at length becoming a narrow valley, and successively a wider one, finally uniting at times to a plain or the sea, in an almost imperceptible manner; and thus a system of successive valleys becomes shaped, if not formed, in the course of a river and its tributary streams; replacing what was originally a system of rocky ravines, or of valleys not always materially differing, often also containing lakes. Yet in this progress, other causes aid the mere action of the stream; the decreasing declivities of the hills being corroded by the rains or other causes of disintegration, while gravity aids the descent of alluvia, to be carried off by the water, with all the rest, and to produce other work for the still flowing river to perform. If "diluvian" or general currents have been supposed to aid in these excavations, I cannot perceive that any proof of this has yet been produced, except in the single and rare case of the bursting out of a lake; a source of destruction which I must hereafter notice, while some instances were quoted in an early chapter.

If it remains to trace the further process of destruction by a river, I must now consider it as having ceased to act on the solid rock, since, henceforward, it flows through the alluvia which it has transported from the higher grounds. There is, thus, a process of production, anticipating that of destruction: but these two branches of the subject become here inseparable.

The destructive operation in this case being that of removing alluvia, these have been often supposed of