again. All these changes and vicissitudes are the inevitable outcome of the circumstances; they cannot well be otherwise, and nobody need be astonished at the extreme instability which governs the hydrographical relations of the country of Lop. Matter is everywhere subject to revolution and recurrence, but it is seldom that its translations and metamorphoses take place so swiftly and in such reliable forms as here. The river preys upon the dunes that lie on the extreme edge of the sandy desert, and the sand it brings down fills its bed and raises it, at the same time that the descending dust raises the height of its containing banks. Both dust and sand travel eastwards with the water after having previously travelled westwards on the wings of the wind. Here a basin is filled with these two materials; its water is poured into some other basin elsewhere. Here a river-bed is obliterated, owing to the waters which have hitherto made their way through it seeking a path in another direction. Everything is in a condition of unceasing movement. The processes of the deposition and augmentation of the masses of sand and dust proceed slowly; but the changes in the direction of the waters take place every year, and by sudden caprices, under our very eyes.

Taking the mean length of the six lakes whose dimensions I ascertained, the strip of country in which all these changes take place measures 180 km. in length and 10 km. in breadth. It has therefore an area of 1,800 million square meters. If now the total area of the lakes equals 564 million square meters, it results that one-third of the entire region is under water. As I have already indicated, there is the still further possibility, that the dunes rest upon subterranean lakes or subterranean parts of the lakes which are actually visible. The remaining two-thirds of the surface consist of dunes of drift-sand, and to some extent of bajirs. And we may probably with confidence apply the same proportions to the adjacent parts of the desert, and say that one-third of it consists of bajirs, the remainder being covered with sand. The two circumstances which essentially render possible the origination of lakes are the pre-existence of the depressions and the river's tendency to provide itself with ramparts and to raise the level of its bed, the consequence of which is that the level of the river at full flood tends to rise higher than the level of the adjacent country (fig. 253).

Fig. 253.

To this it might be replied, »why do not the same conditions prevail on the left bank?» The reason they are not discernible there is, that in its present position the river forms the dividing-line between the steppe and forest country on the one hand and the desert on the other. The entire Mesopotamian tract which extends from this part of the Tarim and the Kontsche-darja produces vegetation, the dunes being both rudimentary and sporadic in their appearance. While the sand-free parts of the desert are entirely exposed to the erosive force of the wind, this natural agent produces no effect upon the region of vegetation. On the contrary the forest arrests its progress; the dust it brings with it is much more likely to be let drop on the leeward side of the forest, and there become quiescent. The kamisch steppe and