

Thus, in one word, the cause of the migration of the Lop-nor is the filling up of the lake with solid material and the excavation of the desert by wind erosion. The process is depicted in the accompanying illustration (fig. 174). The heavy line in the upper sketch represents a vertical section of the surface drawn from north to south at the time the Lop-nor was full of water. The prolonged line I shows the extent to which the lake was filled after the lapse of a certain time;

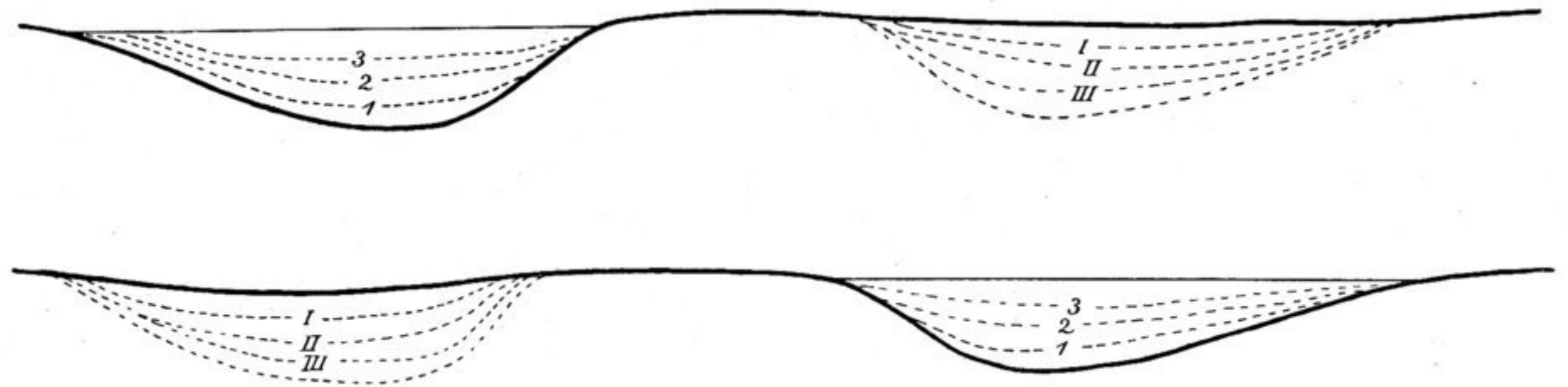


Fig. 174.

while I in the lower sketch shows the amount of material which during the same period was eroded by the wind and removed off the face of the desert in the region to the south. When the stage is reached that is exhibited by the sectional lines 3—III, the Lop-nor would be for the most part filled and the Kara-koschun in relation to it would be a depression. After that the combined processes would require to be carried but very little farther before the lake would run over and flow out of the northern depression into the southern depression. The lower sketch shows in section the further continuation of the process, which repeats itself exactly, except that the respective movements take place in the reversed order; that is to say the depression of the Kara-koschun fills, while the Lop-nor depression becomes hollowed out. The sedimentary deposits of clay and sand which have in the meantime been laid down in the latter are again carried away by the wind, and this explains how the *Limnaea* shells, which for centuries, or it may be for one to two thousand years, have lain

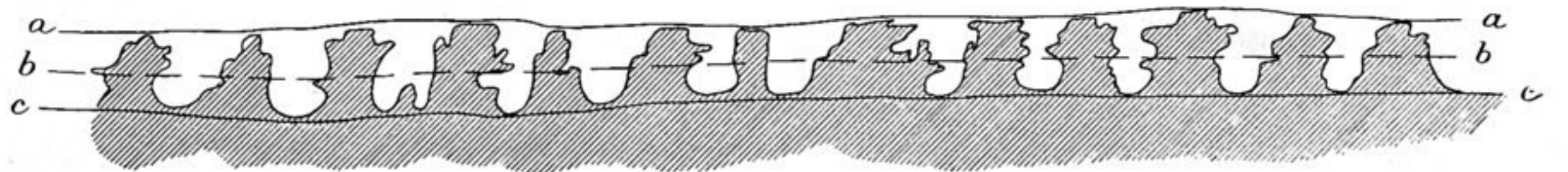


Fig. 175.

embedded in the sedimentary layers, are again brought to light by the corrasive action of the wind. In reality the process is more complicated than our illustration shows, for in it I have disregarded the possible intermediate stages that occur in the middle portions of the desert. From the description I have already given of the Desert of Lop it is plain that the lines I, II, and III will not describe perfectly regular and continuous curves; on the contrary they are exceedingly irregular. Even the line of our survey (see Pl. 36) is, as I have demonstrated, much levellier than it is in reality, because it fails to show the wind-eroded gullies. The relation which