

amounts of fluvial increment as they do now, they will never become so salt as, let us say, the self-contained Tibetan lakes, which in proportion to their volume are the recipients of quite insignificant quantities of fresh water. The lakes which lie in the clay and sandy deserts of Central Asia may in fact be regarded as the final expansions of the river which forms them, such as the Kara-koschun, and, in part, as marginal lakes which are intimately connected with the river, like those we are discussing. In both cases the lakes form so intimate and so integral a part of the river-system, that its properties must to a very great extent be further propagated in them.

From the map of this desert lacustrine region it is evident that the intervals between the lakes, bajirs, and daschis are filled by immense dune-accumulations, likewise arranged in long parallel lines that run north-north-east and south-south-west. These dune-accumulations, like the lakes, vary in breadth; and as the lakes differ in point of depth so also do the dune-accumulations differ in altitude in different localities. Pl. 43 shows in section the outline of the chain of dunes between the Karunalik-köl and the inner depressions of Toghraklik-köl. I traversed them from east to west with a levelling-instrument. The reflecting level was 1.47 m. above the ground; every point therefore along the sectional line indicates an observation taken at that level. The distances between the points of observation were measured with the tape. The support of the reflecting level was prevented from sinking into the sand by a metal disk placed under its lower end. The line of traverse started from the Muptu Achune-modschughu, and on the whole proceeded westwards, although once or twice I was compelled by the conformation of the dunes to deviate to the south. But these deviations I disregarded in drawing the sectional line; it is to be regarded as virtually a straight line. And there is also one other respect in which the section is not quite accurate, in that it indicates only the step-like ascent of the normal 1.47 m. from point to point, and ignores the irregularities of the sandy surface, its convexities and concavities, between point and point. The features of the contour are however indicated to some extent in the little topographical sketch on Pl. 44, which shows plainly the deviations from the straight line of traverse. To begin with, at 42.9 m. from the shore we have an elevation of 1.47 m. above the lake-level. This stretch, covering the strip of shore, is almost entirely free from drift-sand. But to reach the beginning of the next step, or the foot of the second level of 1.47 m., we only advanced 6.05 m. After that the steepness of the dunes varied, and consequently also the distance between our points of observation. The shortest distance between any two such points was 4.10 m., indicating a pretty abrupt rise of contour. The intervals lay for the most part between 5 and 8 meters, and as this very appreciable steepness was on the windward side of the dune, it suggests that the wind must also blow there from other directions than the prevailing east-north-east quarter. Although the shape and other properties of a dune-accumulation such as this must to a great extent be dependent upon the shape of the individual dunes which compose it, in that they partly melt together, and so lose their characteristic peculiarities, and partly are distorted by sudden gusts and deviations of the wind from its prevailing direction, nevertheless it is easy to see that there are two different kinds of dunes or two different types, which recur time after time with more or less distinctness.