movement still persists, and does so for some time even after the wind has changed its direction. The topmost summit is indeed capped with smaller waves, precisely as the dunes are. If the waves of the sea are sufficiently large and sufficiently powerful, they are but little affected by a feebler wind setting in from another quarter. In the same way the sand-accumulations of the Desert of Tschertschen are never affected by the winds which blow from any direction except from the predominant quarter. It is in both cases merely the surface that is affected by the change of wind: that becomes rippled, and the ripples augment and grow into waves or small individual dunes.

If now the entire mass of sand were to be evenly distributed over the surface of the whole of the desert, and *its* surface were to be perfectly horizontal, sandy ridges that would be then formed would be disposed at right angles to the direction of the prevailing wind, and would assume the position *b* indicated on the accompanying sketch-map (see Pl. 52). But as a matter of fact, they actually assume, as we found, whilst crossing the desert, the position *a*, for the chain of bajirs which we followed ran between two parallel accumulations of sand. Special circumstances must conspire together to produce this apparent anomaly. How far the pressure of the wind is the same throughout the entire region, that it is from Jangi-köl to Keng-lajka, cannot be determined; but it is possible that its force is to some extent modified in the northern part by the Kuruk-tagh and the forest-tracts beside the Kontsche-darja, and as a consequence of this that the extremities of the dune-ranges which project so far north are in some degree retarded, and unable to advance with the same speed as those parts which lie directly exposed to the wind.

Moreover, we know that Keng-lajka lies 300 m. higher than Jangi-köl, and we may assume that the rise to the first-named is everywhere equal and uniform throughout the area in question. And perhaps this circumstance is not without its effect, however small that may be. Certainly it is not admissible to say, that as the pressure of the wind is four times greater on the summit of the Eiffel tower than at the surface of the earth, in like manner it must be greater at Keng-lajka, because that place lies 300 m. higher than Jangi-köl, for, as I have supposed, the inclination is about the same in all parts of the desert, and the wind sweeps unchecked over every portion of its area alike. The 300 m. difference of elevation is distributed over such an enormous stretch of country, 1 in 930, that really it scarcely comes into account; at any rate, its effect is quite insignificant. If however we were to assume that this difference of elevation, or of relief, did possess any importance, it would contribute to deflect the sandy ridge in the direction indicated by *a* in the illustration, and also in the way there shown. In that case those parts of the accumulation or concatenation which are situated on higher ground would be more exposed to the wind than its lower-lying parts; and the southern portion of the dune-accumulation would advance faster than the northern portion.

However there is another factor which appears to me to exercise a definite and determinative influence, and, quite independently of the causes cited above, to be sufficient to explain the phenomenon. That is the greater abundance of sand there is in the north of the desert as compared with the south, or in other words, the sand decreases in quantity as one travels from north to south. If now the velocity