

mountains afford a lee side sufficient for the small dunes to remain at their place. It may be that the height and shape of the dunes are changed during other seasons when the winds are less strong or coming from other directions. But in the winter the surplus of sand will again be carried away and the dunes return to their normal size. In the latitudinal valley I travelled through in 1896 and in the one of 1906, no dunes had been formed because all conditions were not existent, and the existence of sand and wind alone, is not sufficient for the formation of dunes. In how far and why the absolute altitude plays a part, I cannot tell, but, as I have mentioned above, it is noteworthy that the sand belts are only to be found at a comparatively moderate height, and that there are no dunes at all on the highest regions of the Tibetan plateau-land.

There is another interesting problem to be considered in connection with this question. The destruction of the mountains goes on irresistibly. The peaks, ridges and ranges, therefore, become lower and lower, a fact that is by no means influenced by the slowness of the procedure. The hills west of the *Nagrong* dunes will, one day, become so low that there is not lee side enough for the dunes, and the particles of drift sand will no more find a station along the base of the eastern hills. It is probable that this state of things has already entered in several Tibetan valleys where, at an earlier period, dunes have existed. But, on the other hand, it is not likely that there have been extensive sand deserts in the great latitudinal valleys in post-glacial time. The greater precipitation, which now is going towards desiccation, would not have allowed the formation of dunes. The dryness of the air is an important factor in all sand deserts. As now, during the present epoch, the air is becoming more and more dry, is it then likely that the Tibetan highlands are at the beginning of a period more adapted to the formation of sand deserts? This is not probable as long as the winter storms sweep across the country with their enormous force. In those parts of the *Lop* Desert and the desert of *Seistan* in *Persia* where the regular wind is at its strongest, there are no sand dunes. But in other parts in the neighbourhood, where the wind is more moderate, dunes of enormous height are formed, as to the west of the lower *Tarim* River. Here, therefore, it is obvious that if the wind surpasses a certain degree of velocity, no dunes may be formed, even if all other conditions are satisfied. This is the case in Tibet: the wind is too strong. Dunes that are formed at seasons are again swept away by the storms.

On *March 11th*, our route is 8.6 km. south, a little to the east. The ground falls 97 m. or at a rate of 1:88. The minimum temperature was at  $-16.6^{\circ}$ . In the morning the wind was moderate, but at 10.40 o'clock a. m., the usual storm began with full strength and continued the whole day. In the evening, again, the wind was not strong. Before the storm began, the landscape became visible and its principal features could be inserted on the map.