

finally reaches the foot of the hills at the left side of the valley and finds nothing except sand. After a while we found some snow buried under drift sand.

In the valley of *Nagrong*, we had thus witnessed a phenomenon that is very rare in Tibet, *viz.* the formation of sand dunes. The highest of them, only two or three feet, were situated near the base of the eastern mountains. I have already pointed out the surprising fact that sand dunes are extremely rare on the Tibetan plateau-land, though the conditions for their formation nearly everywhere seem to be existing, first of all the sand which continually is formed by destruction of the mountains, and then the regular wind with which I, during two winters, had become so intimately acquainted. To this comes the dryness of the climate and the want of vegetation, the whole country being not far from a perfect desert. And still one may wander for months through the *Chang-tang* plains and broad open valleys without seeing a single dune. This means, of course, that one or several conditions for the formation of dunes are not fulfilled. But on the eastern side of the lower part of the valley of *Nagrong*, there are none of the conditions missing, and the result is the belt of dunes we have crossed. There must, therefore, exist some important difference between the *Nagrong* valley and other valleys in Tibet. One great difference is that this valley runs N. N. E.—S. S. W. whilst most of the others run N. W.—S. E., W. N. W.—E. S. E. or W.—E. But this is not sufficient for explaining the existence of dunes as I have seen other meridional valleys, for instance between *Targo-gangri* and *Shuru-tso*, where no dunes have accumulated. Perhaps the relative height of the hills and ridges on both sides of the *Nagrong* valley plays an important part. Perhaps also the absolute altitude and the rarefaction of the air have something to do with the problem. Thus, for instance, there is to the east and S. E. of *Kum-köl*, south of the *Kalta-alaghan* Mountains in northern Tibet a sand desert with considerable dunes, along which I travelled in 1900, but there the absolute altitude is only 3,900 m. In the *Tsangpo* valley in 1907 I also passed through regions of sand dunes, *viz.* east of *Karu* at a height of about 4,000 m. and at *Dongbo*, *Camp CLXXXIX*, at a height of not quite 4,600 m. as described in Vol. II, p. 294 and 323. In both these instances the valleys containing the sand dunes are running from west to east and are large latitudinal valleys. As we have seen many latitudinal valleys in Northern and Central Tibet which have no dunes at all, and as the *Nagrong* valley, which is rather meridional has dunes whilst other meridional valleys have none, the direction of the valleys seems to play a subordinate part. The valley of the *Tsangpo* should, perhaps, not be directly compared with the valleys of the *Chang-tang*, as its sands are brought down by the river and not by the wind. But in the other valleys mentioned, the same conditions are prevailing. Now as regards the *Nagrong* valley, we have found that its absolute altitude was lower than the whole country we had travelled through ever since December 17th,