

CHAPTER VI.

THE ULUTÖR, HUNSERAB AND UPRANG PASSES.

August 3rd was devoted to a short visit to the snouts of the glaciers in the upper part of the *Ulutör* valley. The distance to the highest point reached was 4.5 km. and the rise to it 260 m. As its own height was 4,849 m.; the rate of the ascent was thus as 1:17.3.

The ground is, as hitherto, extremely soft; covered with grass, moss and the same flowers and plants as those described on *Mus-tagh-ata*.¹ The rills and brooks from melting snow which disappear in the gravel of the screes at the base of the mountains, reappear in the central part of the valley and make everything wet. Sometimes there are, amongst the grass, small pools containing algæ. From the easternmost of the three principal glaciers in front of us descends a brook, the ice-sheets of which have been accumulated one upon another to a thickness of 2 m., forming comfortable bridges for crossing the brook, the bed of which is filled with gravel and blocks of granite. Great erratic blocks are strewn about, not always easy to distinguish from those which have fallen down directly from the neighbouring rocks. Old moraines are not visible, the ground is soft and grass-grown, only here and there belts of gravel occur.

We direct our course to the middle glacier, which seems to be the largest. In its lowest part it seems to be 30 or 40 m. thick. Its whole right or eastern side is nearly vertical and covered with a thin light grey layer of fine material, in which also a horizontal structure is clearly visible. The right lateral moraine on the top of the glacier is very insignificant, and the strand moraine of the same side is only rudimentary, 1 or 1.5 m. high nearest the glacier. It is partly swept away by the right glacier brook. The ice-wall at the right side is carved out to a height and depth of 2 or 3 m.; therefore an over-hanging vault of ice is formed. The ice below the vault is quite black and contains solid material, obviously from the ground moraine. From the surface of the glacier small brooks and rills flow in cascades with a temperature of 0.5° at a distance of 3 m. from the glacier.

¹ Cf. Professor OSTENFELD and Professor WILLE in Vol. VI.