

the green snow-water soon disappears. After the junction, the Kubi by no means remains one single string of water; the river again divides in several meandering branches covering the broad almost horizontal bottom of the valley. At the right or southern side of the valley there is also an uninterrupted wall of old lateral moraines pierced by ravines and partly covered with snow.

At the snout where the Kubi gushes out from under the ice the absolute height is 4,864 m. (15,954 feet), only 23 m. higher than Camp 201, and showing how extremely level the valley is from the source to Camp 200, a distance of 24.6 km. A very slow fall is characteristic for the valley of the whole Tsangpo down to Shigatse.

I climbed 150 m. up the moraines north of the snout to get a good view of the place. The slope is steep amongst blocks, gravel, snow, brooks, small pools, moss without any kind of order. There is no living rock; the moraine material consists of grey gneiss, mica-quartzite, gneiss-granite, quartzite and limestone.

From this standpoint, at 5,015 m. (16,450 feet) I drew the panorama which has been published before.¹ From the S. 55° W. the principal glacier, Langta-chen, comes down in a beautiful curve, gathering its ice from at least three different *nevées*, and with three moraines on its white surface. The moraine on the right side is well developed. The moraine on the left side is, by and by, eroded by the above mentioned green water brook, and is smaller. Only higher up, where it is not touched by the brook, it is accumulated to a considerable extent. Here it is combined with the gigantic terminal moraine of another glacier, coming down from the west. The river in this direction is, however, much hidden by ramifications and moraines.

Langta-chen is a summit between the two glaciers, and the same name may be given to the glacier at its eastern foot; the western glacier could perhaps be called the Brahmaputra-glacier. The topography of this glacial region could of course not be made out in detail from a distance, and my map is only preliminary. Future exploration will certainly show that the topography is much more complicated than on my map, which is compiled only from panoramas, photographs and bearings.

The whole snout of the joint glacier is dirty from gravel and small blocks brought down on the ice-stream. Only here and there in crevasses is the blue-green ice visible. Some small glacier-lakes stand on the ice, with turquoise-blue water; some other pools are dirty from moraine material. The moraine which is formed just in front of the snout, and where also some pools are to be seen, has no time to grow to any considerable extent, for the river, which is born here, sweeps the material away. The middle branch of the Kubi, which seems to be the strongest, comes out as through a gate between the hills of the terminal moraine.

To the south is the black rocky ridge called Mukchung-simo, which looked like two peaks when seen from Tso-niti-kargang. I wished to cross the uppermost course of the Kubi to measure its volume, but soon found that the river was absolutely

¹ Trans-Himalaya II, p. 102. Compare also the Atlas of Panoramic views.