

through the *Transhimalaya*, and beyond it the monastery *Tashi-gang* rises on its little cliff.

The brook from the *Tigul* valley is divided into three branches, now frozen. Here four *manis* are erected. The principal valley becomes broader, and is more like a plain in front of us. We stopped at the little village of *Langmar*, consisting of half a dozen black tents, most of them surrounded by fences of twigs and brushwood, and all having streamers on poles. A short panorama, 358, Tab. 64, showing the mountains to the north, was sketched from this camp, No. *CCLVI*.

On *November 11th*, we travelled 9.5 km. N. W. to the junction of the *Gartang-chu* with the *Singi-kamba* or *Indus*. The fall of the ground is nearly as slow as the day before, or from 4,258 m. to 4,254 m., only 4 m., or as 1:2375.

The minimum temperature was -24.8° and the next day was very fine and without wind. We approached the base of the mountains to the left by a roundabout way, thus avoiding a labyrinth of terraces, ravines, tussock-grass, bushes and ice-sheets. Near the hills was a tent surrounded by a wall, inside of which barley was usually cultivated. The irrigation water comes from a transverse valley. The gravel of the screes and fans here consists of grey granite-porphry. The side valley was called *Gapu-rapdun*. It has no road. A little farther on, we are again close to the left bank of the river, at the sides of which there are several springs and swamps, everything now being covered with ice. At its right side is an extensive open plain stretching all the way to the base of the *Transhimalaya*.

At *Camp CCLVII*, the *Indus* joins the *Gartang* or *Gar-chu*, in two branches. Though the latter, as we have seen, hitherto had flowed nearer the right than the left side of the valley, it is now forced and pressed by the *Indus* to the very base of the *Ladak Range*. To look at them was quite sufficient to see which of the two rivers was the bigger. Still I made a measurement to solve definitely the question of which of the two main branches of the *Indus* was to be regarded as the real source. From the mouth of its transverse valley through the *Transhimalaya*, the *Singi-kamba* crosses the large valley diagonally, and here seems to flow in several branches in the rainy season. Even now the river was divided into two branches, not quite 800 m. from each other. At the junction the *Gartang*, on the other hand, is pressed together by the material brought down by the *Singi-kamba*, and therefore sticks to one single narrow bed. The velocity of the *Singi-kamba* is nearly twice as great as that of the *Gartang*, which also explains the leading part played at the junction by the real *Indus* branch.

In the afternoon the ice covering the three different branches, began to move and I got a very good opportunity to make the observations. Just above the junction, the *Gartang* or *Gar-chu* had a breadth of 58 m., a mean depth of 0.405 m., a mean velocity of 0.279 m., and a volume of 6.55 cub. m. per second. A little detached