

just in June, when the river rises energetically, the first fresh inundations of the plain to a great extent get absorbed and lost in the sand-dunes.

It is more difficult to understand why the 103cub.m. at Dongbo, on June 28th, could be the result of the 93cub.m. of the Tsangpo, July 3rd, between Camps 191 and 192. The Gyang-chu with its 3 or 4cub.m. does not much change the problem, The strong decrease must partly depend on the weather, perhaps clouds without precipitation in the source regions, and partly on the hour of the day, for the nearer one approaches the sources, the more the pulsations between day and night must become noticeable. And finally south and S.W. of Tuksum the Tsangpo receives two great tributaries from the Himalaya, as shown on Ryder's map; they probably bring down a considerable addition to the volume at Dongbo.

From the same causes, weather, hour of the measurement, and tributaries, of which one or two from the north may be considerable, and one from the south, Sabsang-chu, carried 3.5cub.m., depends the fact, that the joint Tsangpo at Chärok carried only 44cub.m. a second. Perhaps another factor enters at this advanced season, namely a diminution in the volume caused by the melting of the snow; for in the beginning of July a great amount of the winter-snow filling the valleys and slopes has already disappeared, and if no fresh precipitation falls, the river therefore sinks. When the great masses of fresh snow have melted away in early summer the river will probably, if no new precipitation falls, remain fairly stationary during the rest of the summer. But it may be regarded as pretty certain that a good deal of rain and snow falls in the high regions, specially on the Himalaya, even if the weather remains clear in the Tsangpo valley and in the Chang-tang, and that the river therefore, even during such a dry summer as 1907, increases slowly till August, when it reaches a maximum, which may be nearly constant perhaps for weeks. Later on the river falls, slowly at first and then quicker.

Finally we found, on July 8th, that the Tsangpo alone, now called Kubi-tsangpo, carried 34cub.m. or a little more than the Dok-chu on April 6th, which then had 30cub.m. At the point where the Kubi joins the Absi and Ngoma-dingding brooks I estimated the volume at some 25cub.m., of which only 15 remain for the principal glacier source of the Brahmaputra.

In 1907 the Tsangpo was exceptionally low. From descriptions I got from the natives it is obvious that the river must ordinarily be much larger. If 1907 had been a rainy year I should probably not have been able to make any measurements at all with the means I had at my disposal.

I heard the following names for the river: Yere- or Yaru-tsangpo, Tsangpo-chimbo, Sangchen, Damchok-tsangpo, Damchok-kamba, Damchu-kamba, Martsang-tsangpo, and Kubi-tsangpo, which is used for the section from Shamsang to the very source. But very often the Tibetans call the river simply Tsangpo, or *The River par préférence*, and indeed the Tsangpo is the great artery in the country of the Lamas.

