

plateau-land would only be a question of time. A bed of deposits in the region of Ye being some 500 m. in thickness would reach even as high as La-rok, and a rather broad plain would expand here between the Transhimalaya and Himalaya.

It is an interesting fact that along the uppermost courses of all the three great rivers, Indus, Satlej and Tsangpo-Brahmaputra, there is a very evident tendency to plateau-formation. From Shamsang and down to Tradum there is a series of flat plains in the Tsangpo valley, and such is also the case along the left Indus branch below Gartok and a long way down the joined Indus. This formation of plains between the parallel ranges has only been possible during an arid period. During the same arid period the enormous deposits in the originally narrow valley of the upper Satlej were also formed. Below these plateau-shaped regions all three rivers cut their beds deeply down into wild narrow valleys. This took place as soon as the volume of water grew to a great quantity and the slope became steep. The uppermost Satlej, however, shows in the plateau-shaped portion of its valley a character quite different from either the uppermost Indus or the uppermost Tsangpo. For it has cut down its bed through the enormous deposits of the arid time, and the tributaries have had to follow at the same speed of mighty erosion. The upper Indus and Tsangpo, on the other hand, have not been able to cut down their beds through the deposits in their valleys. Both these rivers flow in very shallow beds. The cause seems to be twofold. The region where the Satlej cuts through the old deposits is much more exposed to the monsoon rains than the similar region of the two other rivers, and the Satlej therefore here is several times mightier than the uppermost Indus and Tsangpo. In the case of the Satlej the slope is also much steeper, which immensely increases the erosive power. From the confluence of the Singi-kamba and Gartang (4254 m.) and down to Dungkang (4186 m.), the Indus valley has a fall of only 68 m. in 92 km., or as 1:1353. From Shamsang (4697 m.) to Camp CLXXXVIII (4583 m.) the Tsangpo falls 114 m. in 96 km., or as 1:842. But the Satlej from Chunglung-gompa (4239 m.) to Totling (3700 m.) falls no less than 539 m. in 90 km., or as 1:167. Its slope is therefore eight times as steep as that of the uppermost Indus, and five times as steep as that of the uppermost Tsangpo. The erosive power of the Satlej is therefore enormous, if compared with that of the two other rivers.

Comparing finally the valleys falling to the north from the great water-parting of the Transhimalaya, with those falling to the south, we find a striking difference in their morphology, to which I have already directed the reader's attention in the latter half of Vol. III when describing my eight crossings of the Transhimalaya. Here it will be sufficient to state the fact that the valleys going to the lake basins in the great latitudinal depression have a much slower fall than the southern ones, and that the steepness of the latter increases from west to east, which is quite natural on account of the gradual fall of the Tsangpo. The following table shows