

no doubt exhibit greater variations in this respect. If, as a consequence of chance irregularities in the monsoons, the rainy season brings a smaller downfall than usual, the result must of necessity be expressed with great distinctness in the volume of the Indo-Chinese rivers, and it is in the highest degree unlikely that the thaw-water from the snowy mountains within their source-area is sufficient to compensate for the deficiency; whereas the Tarim on the other hand, in whose border-ranges a definite rainy season can hardly be said to exist, is maintained in years of scanty rainfall by the masses of snow stored up during preceding winters.

Further, it may quite safely be taken for certain, that the same annual fluctuations which I have pointed out in the case of the Satschu-tsangpo must also take place in the great peripheral rivers. But these fluctuations must of course be very much more sharply accentuated in the first-named river because of its relatively short course than in the big rivers where the changes are modified by the existence of numerous springs and tributaries. Anyway a short ride such as mine during the rainy season through the basin of the Satschu-tsangpo is sufficient to convince me that the big rivers, which have their sources in the same part of Tibet, must during that period gather up enormous quantities of water. When the rainy season is over, and winter has come with its intense cold, the upper parts of those rivers must shrink to the smallest possible dimensions, while all the spring-fed streams and tributaries which have helped to augment their volumes freeze to the bottom, and in fact cease to flow almost entirely, indeed the rivers themselves become ice-bound — and the effects of all these circumstances must of course be propagated to the lower parts of the rivers, and that to a far higher degree than is the case with the Tarim.

Even in the course of a hurried journey on horseback one cannot help observing the important part which the mountain-ranges play with regard to the precipitation. The range which we crossed over by the pass 5462 m. high, and which on both sides of the pass rises considerably above the snow-line, undoubtedly forms the westward continuation of the Tang-la range, which has been long known; on the north of it the precipitation was far less than in the country to the south of it. The most extensive lacustrine region of Tibet is also situated to the south of this range; though it is also true that on the north of it, on the high plateaus, there are a number of lakes, but not only are they more scattered, they are also smaller in area. This immense range consequently forms a climatic dividing-line, which, if not indeed sharply defined, is nevertheless distinguishable. As we have already seen, the grazing-grounds that the nomads resort to are to be found solely and alone on the southern side of the range in question, so that in addition to being a climatic dividing-line, it serves also as an ethnological boundary, for the region to the north of it is uninhabited.

I may also call attention to another very interesting boundary which strikes the Tang-la at right angles. It is not indeed very distinct on the map, in fact it is not distinguishable at all; at any rate there is nothing else to show it except the hydrographical arrangement. If on the map of East Tibet we draw a line joining the ultimate sources of all the rivers which issue into the ocean, we have in that line the boundary to which I allude. When we come, in the fourth volume, to dis-