

the bed of the channel; in 1908 it must have been something like what it was in December 1904, or say 2 feet below the same point; in 1909, when the rains were heavy, the level of the lake rose to and above the channel threshold, and water began to flow out of the Manasarovar; finally, in 1910, the rains were very abundant, and the channel bed was filled by a stream.

These dates show a very regular periodicity within a few years.

The next, higher, degree of periodicity is the one we may call the Rakas-tal period. It is seen in the second column of the above list, where + prevails during some 200 years, and is succeeded by — during some 115 years. This period can, of course, also be recognised in the Manasarovar, where there is only + until 1804, and during the next 100 years more — than +. Even when this period is at its maximum, so that there are only + for a long time in the Manasarovar, this lake is affected; but as its level remains nearly constant, one should then be able to take readings only from the volume of water flowing out from the lake.

Such dates as the two + for the Rakas-tal, 1817—1819, may be regarded as very unreliable and unlikely. It is probable that a long series of years must have brought outflow from the Manasarovar, and that great masses of snow must have fallen in the mountains south and S.E. of the lake and north of it, before the Rakas-tal begins to send water down to the Satlej. And from the records we have from the end of the 18th and beginning of the 19th centuries it appears evident that the Manasarovar continues to overflow several years after the Rakas-tal has been cut off. If the rise of 1909 to 1911 grows and continues for many years, it may lead to an overflow of the Rakas-tal, though this is hardly likely, as the rise of 1846 and 1848 did not influence the Rakas-tal in any noticeable degree.

The material I have brought together and examined above, though it does not pretend to be complete, is in any case sufficient to prove that the two lakes belong to the catchment area of the Satlej. My own observations at the place, which, from certain points of view may have been more complete than those of my predecessors, also led me to this conclusion, long before I had had an opportunity to examine the material existing. Col. BURRARD who could only rely upon observations made by others, came to the same result.¹ And still he only uses the observations of Henry and Richard Strachey, and Ryder and Rawling. »The connection between the two lakes was discovered by Henry and Richard Strachey in 1846, and has been confirmed by other reliable observers.» This connection he takes »as established, but that between the western lake and the Satlej basin is still open to question». This is the cause why Burrard and Hayden in drawing the map of the catchment area of the Satlej »were in doubt whether to include the lake basin of Manasarovar», though they eventually, and quite correctly, decided to do so. The list given above shows that Burrard is right in saying that even if the water of the Rakas-tal flows into

¹ A Sketch of the Geography and Geology of the Himalaya Mountains and Tibet, Calcutta 1907, p. 162 et seq.