

water springs at a lower level than the surface of the lake and probably fed by its water. Ryder, however, regards the lakes as entirely cut off from the Satlej, the sources of which must be sought for north or south of the dry Satlej bed west of the lake region; or else the Manasarovar and Rakas-tal no longer belong to the Satlej system, a view that is, superficially, correct, but genetically and scientifically wrong.

Ryder gives a good photograph of the entrance to the channel from the Manasarovar side.¹ Having fixed the Kailas at 21,800 feet and the Gurla-mandata or Mémo at over 25,000, he went on to Menzé or Misar, which was reached on December 5th. This speed, necessitated by the advanced season and so as not to be shut up in Tibet by snow on the Himalayan passes, was too quick to allow the travellers to make any detailed investigations beyond the survey work. Jerko-la was found to be 16,200 feet high, Gartok 15,100, Ayi-la 18,700 and Totling 12,200. He calls this part the most cut-up country he had ever seen. At Shipki, 9,300 feet, they were able to cross the Satlej on the ice. Shipki-la was 15,400 feet. They reached Simla on January 11th 1905.

Ryder sums up the results of his expedition in the following words:²

»The area we surveyed with the plane-table comes to about 40,000 square miles. We surveyed the Tsangpo from Shigatse to its source, surveyed the Mansarowar lake region, and settled the doubtful points connected with it, which have been the subject of much discussion; we completed the survey of the Sutlej river from its source to where it enters British territory, and surveyed the source of the Gartok branch of the Indus. The triangulation was invaluable for correcting the plane-table work and fixing many heights.»

As will be shown later on, the expedition cannot be said to have surveyed the Tsangpo to its very source, as it went north of the source region and surveyed to the source of the Maryum-chu, which is a tributary. Neither was the hydrographical problem of the lakes definitely solved, which could be done only by wandering round the lakes and measuring all their affluents as well as the depth of the lakes themselves. Only by help of all historical data and detailed exact measurements on physico-geographical objects can a problem of this character be solved. And only in connection with all these data can the question of the situation of the genetic, real source and of the actual, temporary source of the Satlej be answered. For such observations Ryder's and Rawling's expedition had no time and no opportunity. And still their programme was fulfilled in the most brilliant way and from a mathematical point of view their expedition was the most important ever undertaken in Tibet. Ryder's map is classic, and all cartographical work hereafter carried out in southern Tibet will have to refer to it, start from it, and be built up on the strong and solid basis given by Ryder and his comrades.

To Ryder's narrative Captain C. G. RAWLING adds some interesting information, although he only saw the lakes from some distance, but visited the Satlej bed west

¹ Loc. cit. p. 388.

² Loc. cit. p. 390.