

steps all the way across, although it was now covered with a sheet of water  $43\frac{1}{2}$  cm. deep; so that in this we have a key to the height of the water's rise, equivalent to an average of 6 cm. a day. If the rise was thus considerable at that date, it must of course be very much greater when the ice-water from the Tarim begins to pour into the marsh; then when the summer came, there would be a subsidence, and finally with the autumn high-flood a fresh rise. The circumstances connected with the larger pool suggest certain interesting conclusions. The unceasing bubbling up of the water in the decimeter high miniature geysirs proves that the level of the pool was not yet equal to that of the Kara-koschun. Although the height to which these »geysirs» rose affords no exact indication of the difference of level, they do suggest that it was not at any rate small, seeing that even after the water had overcome the friction of the soil it made its way through, it still possessed so much force as this. When the time comes that the water ceases to boil up in this way, and the level of the pool is equal to that of the southern lakes, then, unless the flow be in the meantime arrested, a considerable part of the desert to the north and north-east will certainly likewise be under water. As for the pool in question, we only know that its bottom lay 2.22 m. below the level of the Kara-koschun plus what was still required to fill it completely. If we assume that it would rise about 0.8 m. higher after the inflow of the ice-water had time to make its presence felt, we should have a total depth of 3 m., a depth to which Prschevalskij's Kara-koschun rarely attains even after the spring-flood, and which is never encountered in its southern part at any season, for the maximum depth I obtained there was only 1.90 m. But we shall not be in a position to appreciate the real significance of these great hydrographical changes until we have analysed the levels of the Lop Desert as a whole. I will however mention *en passant*, that everything goes to prove, that the Kara-koschun is just now in movement again, and there is every probability that still greater changes are in prospect. The recently discovered lake-basin had already covered very nearly half the distance between the Kara-koschun and the northern shore of the old Lop-nor, and there can be no doubt that, provided the supply of water is not in the meantime cut off, it will continue its journey until it reaches the depression in the northern part of the desert. There is nothing in the relative levels to prevent it from doing this; for the bottom of that depression lies lower than the present surface of the Kara-koschun; and the very fact of the water flowing north and north-east is a proof that there is here no threshold such we found along the line of our survey across the desert.

There is however one other factor which undoubtedly had no slight effect upon the changes that were taking place in the spring of 1901, though unfortunately the physico-geographical conditions connected with it cannot be set forth. I mean the precipitation and other meteorological conditions in the border mountain-ranges in the period immediately preceding. I was indeed told that during the summer of 1900 the Chotan-darja, the Jarkent-darja, and the Ak-su-darja had all carried large volumes of water, and that even the Kontsche-darja had risen, though owing to its flowing through the Baghrasch-köl its volume is generally constant. All this was clearly the result of the exceptional quantity of snow that fell in 1899—1900. The winter of 1900—1901 was very cold, and there was an unusual quantity of ice formed through-