

while the existence of an exit would depend on the rapidity of the movement, the supply of water, and the nature of the climate.» He feels persuaded that there have been irregular movements of the beds of the streams and rivers within a very recent period, and in the existence of these movements he finds an evidence that the disturbance which caused the elevation of the Himalayas is still in progress. However, he does not deny that lakes under certain circumstances may be directly formed by talus dams. If a portion of a river valley were elevated more rapidly than the rate of erosion of the river, »the barrier so raised would react up stream and cause the formation of a sloping surface of river gravels. If then for some distance the configuration of the river valley was such that but little débris was shed into it, and below this region the amount of débris suddenly increased, it is quite conceivable that the rock barrier lower down might prevent this being carried away as fast as it was shed, and so a talus dam formed across the valley.» Only the various degrees of desiccation of the different lakes is difficult to reconcile with the talus theory. Some lakes have entirely disappeared while others, as the Ling-shi-tang Lake, have dwindled to one-tenth of their original size. Again, others, as the Panggong-tso, have half of their original area, and Tso Morari has contracted only to four-fifths of its former extent. Oldham therefore concludes that these great variations in the degree of desiccation would hardly be possible if the lakes had been formed at one period. If we, on the other hand, accept his theory of the differential earth movements, the varying degrees of desiccation in different lakes would be quite natural.

Returning now to the great well-defined valley occupied by the chain of lakes to which the Selling-tso in the east and the Panggong-tso in the west belong, we will, in a few words, consider the different opinions regarding the formation of the last mentioned lake.

According to Drew the Panggong-tso was formed by the damming up of the main valley by the talus-fan of a southern tributary at the place where the low threshold is situated between the lake and the Shayok drainage area.

Oldham, on the other hand, says that the formation of the lake is entirely due to differential movements of the surface, »which raised a portion of the original river bed at a more rapid rate than the stream was able to erode, and dammed back the drainage to produce the present lake», in the same way as he imagines the formation of Tso-moriri in Rupshu.

ELLSWORTH HUNTINGTON who visited the Panggong-tso, May 1 to 6, 1905, as a member of the Barrett Expedition to Central Asia, expresses the opinion that the lake basin, with a length of 105 miles and an average width of only 1.8 miles where covered with water, is due to glacial erosion.<sup>1</sup>

<sup>1</sup> Panggong: A Glacial Lake in the Tibetan Plateau. *Journal of Geology*, Vol. XIV, Chicago 1906, p. 599 *et seq.*