

Further Oswald observes that the Transhimalayan arcs exhibit a sharper curvature than the arc of the Himalaya taken as a whole. »It will also be noticed that the orientation of the Transhimalaya arcs has more in common with that of the Great Himalaya on the south side of the Brahmaputran trough than with the latitudinal alignment of the ranges of Tibet; that the convexity of the arcs decreases from north to south, and that structurally Transhimalaya must be regarded as part of the Himalayan system.<sup>1</sup> Its mountain-folds must also have been formed at a date anterior to those of the Tibetan-plateau.» As quoted above, Hennig has proved that the formation must have been simultaneous.

Some 25 years before Prof. Hennig had adopted the view of the erosive formation of the great latitudinal valley separating the Transhimalaya from the Himalaya, the same opinion was clearly set forth in the *Manual of the Geology of India* by H. B. MEDLICOTT and W. T. BLANFORD, which in 1893 was again published by R. D. OLDHAM.<sup>2</sup> According to them the forms of the hills and their intervening valleys are due to the action of rain and rivers and to frost. The sources of the Himalayan rivers are situated north of the line of highest peaks, and this zone of special upheaval is crossed by the deep valleys of the river. »These valleys are due to subaerial erosion and are entirely produced by the action of rain and rivers.» In the very beginning of the upheaval of the Himalayas a pair of latitudinal valleys was established along the northern face of the system. The drainage from these valleys escaped round the extremities of the upheaval. All the water north of the present line of highest peaks escaped through this pair of latitudinal valleys. »As the mountains were upheaved the gradients of the rivers flowing directly to their southern margin became steeper than those of the longitudinal valleys north of the main range, the erosive power of the streams increased, and they were able to cut back through the line of maximum upheaval and rob part of the drainage which originally flowed east and west to the gorges of the Indus, Sutlej, and Sanpo.» The slopes of the valleys to the south of the passes thus became much steeper than those of the northern. The erosion of the southern valleys therefore became more rapid, and in course of time the water-parting gradually progressed northwards.

According to Oldham, differential earth movements show that the Himalayan system is still in a state of strain, and he naturally concludes that this strain is due to the compression which originally caused the elevation of the Himalayan folds. If it be true that this compression and upheaval is still going on, the gradual desiccation of the Tibetan lakes also becomes quite natural. »There are no data available regarding the rate at which this is taking place, but the fact that some have dried completely

<sup>1</sup> Hennig and Oswald agree that the geological structure of the system is a support to the name I have given it, Transhimalaya, which emphasises its intimate connection with the Great Himalaya.

<sup>2</sup> Cf. p. 463 *et seq.*