up, while others show but little reduction in their original size, indicates that the process is still in progress and that the climate of Tibet was once moister than it now is. There appears to be but one explanation possible of this increased dryness of climate, and that is a rise of the mountains to the south, which has resulted in a more complete cutting off of the moisture from the monsoon winds.» Oldham also regards the drying up of Ladak as a direct result of the elevation of the Himalayas which gradually cut off a larger and larger proportion of the moisture coming with the southern winds.

This theory no doubt is correct, but the question is whether it may be regarded as sufficient to explain all the phenomena of desiccation in the interior of Asia. It seems to me that the rise of the southern mountains must be much slower than the desiccation of the lakes. The denudation is constantly in action to destroy the mountains, and PENCK is no doubt right in speaking of an upper limit of denudation above which no peak could ever rise. However, the desiccation of the Caspian Sea, and the growth of the desert of the Tarim Basin cannot be due to the rise of the Himalayas. The problem seems to be more complicated. There may be a climatic period of very high order and considerable length which may be due to cosmic causes, and a shorter, terrestrial, period to which the desiccation of the Tibetan plateau-lakes is due. On the other hand Oldham is no doubt right in saying that the strain is still going on in the Himalayas, and that the Tibetan lakes have been formed by earth movements in connection with this strain. On the shores both of the Caspian Sea and of Issik-kul there are excellent proofs that such earth movements have been active even during historical time.

In 1893 the authors of *A Manual of the Geology of India* did not regard the origin of the Tibetan lakes as thoroughly established. DREW ascribed their origin to the damming up of the main valleys by the fans of their tributaries. During the glacial period these tributaries were larger and the disintegration of the rocks more rapid than now.[1] Oldham could not accept the theory of Drew regarding the formation of the lakes. He found it more natural to suppose that the main stream would be able to keep its channel open. He believes that the lakes have been formed by differential movements of the surface. »Whatever may be the cause of origin of these lakes, there seems no reason to doubt that the broad shingle plains, which so frequently occur just above where the rivers enter a gorge, are produced by a check in the gradient consequent to a recent elevation of the river bed in the gorge, and consequent checking of the gradient immediately above it. A similar action might well, under favourable circumstances, give rise to the formation of an actual lake,

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[1] R. D. OLDHAM, Some Notes on the Geology of the North-West Himalaya. Records of the Geological Survey of India, Vol. XXI, Calcutta 1888, p. 149 *et seq.* — and A Manual of the Geology of India 1893.