

## CHAPTER XXIV.

### FACTORS TENDING TO DECREASE THE VOLUME OF THE TARIM — MIGRATIONS OF THE LOP-NOR.

It is not however upon these climatic oscillations that I wish to dwell, but rather upon the oscillations which actually came under my own observation; their causes are not only more patent, but more intimately associated with the desert that the river actually flows through than with the source regions which encircle it. I now proceed to consider three factors which in a greater or less degree act as a drain upon the volume: they are (1) artificial irrigation; (2) the splitting of the Tarim into several deltaic arms; and (3) the creation of marginal lakes.

The shrinking of the Kara-koschun did not escape the observation of Prince Henri d'Orléans, when he visited the lake in 1889, a circumstance which he attributed to the drain of irrigation works. He says: »Depuis une dizaine d'années, le Turkestan chinois, qui était auparavant le théâtre de guerres civiles continuelles, semble pacifié, du moins pour un temps; les habitants profitent de cette trêve pour se livrer à des cultures auxquelles ils avaient dû renoncer pendant longtemps. Pour arroser leurs champs, ils détournent une partie des eaux du Tarim, qui se perdent ainsi en irrigations, ou en inondations artificielles; les cultures qui, comme celle du riz, demandent beaucoup d'humidité, tendent à prendre chaque jour une plus grande extension, et, par là, à diminuer de beaucoup l'apport du Tarim au Lob Nor.»\*

My former visit in East Turkestan led me to doubt very much whether irrigation did exercise such a great influence as to make its effects distinguishable in the volume of the Kara-koschun. For, even though almost the entire flood which descends the Jarkent-darja in spring were to be forced by dams to flow to the cultivated fields of Maral-baschi, the loss is relatively insignificant when compared with the immense volumes of water that, during the early summer and the height of that same season, flow unchecked down the Tarim to its terminal lake. And the amount which the Ak-su-darja loses through a similar cause is still smaller. Nevertheless it cannot be denied, that all the water which is used for irrigation purposes at Tscher-tschen, Chotan, Jarkent, Kaschgar, Utsch-turfan, Ak-su, Baj, Korla, and even in the

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\* G. Bonvalet, *De Paris au Tonkin à travers le Tibet Inconnu*, p. 101.