

Lop country does swell up to a very appreciable amount, and that this does to a certain extent represent a drain upon the Kara-koschun. The Kaschgar-darja is distinctly an insignificant stream, and is barely able to get all the way down to the Jarkent-darja, but its feeble flood is still further weakened by the tribute it yields to the irrigation canals. The Kontsche-darja is not only drained for irrigation purposes below Korla, but also suffers loss through evaporation, through marginal lakes, and through absorption into the ground, so that less than fifty per cent of its volume succeeds in reaching the Tarim. Tschertschen is so thinly inhabited that the amount of water which is there appropriated for economic purposes is relatively small.

On the other hand I do not believe that the shrinkage which has taken place in the Kara-koschun during the last 30 years is to be attributed to any spread of agriculture, for even though there has been an expansion under the conditions of peace which now prevail, any effects that expansion would produce upon the volume of the Tarim would disappear in the fluctuations of the spring floods. Nor may we assume it as certain, that the shrinkage of the terminal lake has been going on for 2000 years, the cause being the gradual increase of the population during that period. On the contrary it seems more likely that at an earlier date the population was more numerous than it is now; and as evidence of this I may point to the ruins of the numerous towns and villages which have been abandoned because they were threatened by the continuous encroachments of the sandy desert, and eventually were overwhelmed by it. If irrigation really has exercised any effect upon the dimensions of the terminal lake, the inference is suggested, that the consequence of the more extensive irrigation of the oases in former times must have been to reduce the terminal lake to an even smaller area than that it possesses now. And it is possible that such really was the case, if we may build upon the unexpectedly small dimensions which the Chinese geographers assign to the Lop-nor. For there cannot exist a doubt, that the expansion of the sandy desert, the creation of marginal lakes, and the division of the lower part of the river system into several arms have, within historic times, been the worst enemies of the terminal lake, forcibly reducing it in area; but the combined result of these effects has been entirely neutralised by the inverse enlargement of desert area which has ensued in consequence of the decrease in population. The general result has however undoubtedly been this, that the terminal lake has retained approximately the same dimensions from the time of the earliest Chinese maps right down to the present moment, allowance being of course made for the climatic oscillations, for which that lake, in virtue of the excessive shallowness of its basin, must in an especial manner have been sensitive.

Let us turn now to the second factor which exercises a detrimental effect upon the volume of the lowermost Tarim. To judge from the historical as well as from the geographical *facta* (e. g. the Kuruk-darja), the Tarim during some past epoch flowed into the Lop-nor through one single bed. At the present time however it splits up, not far below Jangi-köl, into a number of different arms, first one and then the other serving as the main channel. In the latitude of Kara-köl these various arms form a complicated network of anastomosing branches, and it is not until we get down to Schirge-tschapghan that they are all gathered again into a single channel; but even at this last-named point a final bifurcation takes place, in