

lakes together an area 464 million square meters, or, including the six already considered, a grand total of 564 million square meters; from which we obtain 2,667,000,000 cub. m. as the cubical capacity of all the thirty-five lakes together, a figure which is too small rather than too large. For, setting aside any lakes that may have escaped my observation, there is this fact to be reckoned with, that one of these at the time of our visit was actually ascertained to have dropped 1.345 m. since the last preceding high-water season. If we imagine all the lakes to be empty, then the river, even when it carried, as it did at Schirge-tschapghan on 19th April, a volume of 101 cub. m. in the second, would require a space of 306 days of 24 hours each to supply them with this 2.6 milliard cub. m. of water; and if it carried, as it did at Jangi-köl on 16th May, a volume of 66 cub. m. in the second, it would require no less than 468 days of 24 hours each to fill all these parasitical basins. These figures furnish some idea of the immense tax which these lakes levy upon the river. In point of fact however they are all more or less constantly filled, and the only losses they sustain are through evaporation and absorption. If we assume, and the assumption is rather under than over the mark, that the quantity which is annually lost in this way amounts to a layer one meter deep over their conjoint area, the total loss from this cause would amount to no less than 564 million cubic meters. And in order to make good the loss thus occasioned, the river would require, assuming its volume to be 66 cub. m. in the second, a space of 99 days in which to empty itself, without deduction, into these depressions. In other words, the Tarim is compelled to yield up one-fourth of the whole of its annual discharge in order to supply these marginal lakes. This is tantamount to saying, that the Kara-koschun is deprived of one-fourth of its volume simply to feed these lakes alone, regardless of the innumerable lakes and lagoons which hang upon the river all along the other parts of its course. The greater the increase in the volume of these desert lakes the greater the loss of the Kara-koschun. At any rate this has unquestionably been the case in the latest stadium of the river's history. The Tarim raises the height of its inclosing ramparts by arresting the dust and binding it together by means of the retentive power of the belts of vegetation which accompany it. The higher these ramparts grow the greater becomes the liability of the river to overflow and inundate the country on both sides, and the greater consequently its tendency to fill all the depressions there situated. For this reason I found that the Kara-koschun is far smaller in size than Prschevalskij states, although only twenty years elapsed between our respective visits. The diminution is also attributable possibly to other factors as well, for instance, a more extensive use of irrigation in East Turkestan. But the river cannot obviously go on for ever building up these containing ramparts, and raising its own bed by laying down sedimentary deposits; on the contrary, it is very quick to respond to alterations of level, and frequently changes its bed. For instance, along the stretch where the Begelik-köl and its sister lakes lie, we have found that the river has shifted to the left, and that the desert lakes beside the old channel are destined gradually to dry up. If, as is not at all unlikely, the river should ever return to the regions on the east through which it formerly flowed, all these lakes that we have been studying would disappear *in toto*. A natural consequence of this would be, that the terminal reservoir of the river-system would begin to expand