

the question of the desiccation of the basin, he proceeds to deal with the Lop-nor problem. With regard to the desiccation he says *inter alia*: »Je ne pense point qu'en quinze cents ou en deux mille ans l'eau ait diminué d'une manière très sensible dans les rivières. A l'époque des Han, les rivières de Khotan et de Yarkend contribuaient seules à former le Tarim et le Kéria darja se perdait dans les sables alors comme aujourd'hui.»

In another place in this work I have proved, that in respect of this matter I am of precisely the same opinion as Grenard; the climatic changes which take place in the heart of the great continent would require enormous periods before they could effect any material variation in the volumes of the rivers and lakes of East Turkestan. That a process of desiccation is indeed going on admits of no doubt whatever; in fact, it has been sufficiently proved, especially by von Richthofen. But the historical period is, as already mentioned, all too short, even when we appeal to the oldest extant documents, to allow of our pointing, on the strength of their authority, to any appreciable diminution of volume. Stein has, I know, suggested the possibility, that as late as the 16th century the Kerija-darja still flowed all the way to the Tarim, his opinion resting upon information furnished by Mirza Hajdar. And the strips of toghraks and tamarisks that lie to the north of the Kerija-darja seem to render this supposition possible; but I am disposed to think that Grenard is more likely to be right, when he suggests that this river was cut off from connection with the main artery of the system as early as the Han period. His statement, that the Chotan-darja and the Jarkent-darja alone formed the Tarim must however be due to an oversight, for at that period it was the Ak-su-darja which contributed the largest volume to the Tarim, just as it does at the present day.

Grenard's observations, that the Chotan-darja, Kerija-darja and Tschertschen-darja have all eroded their left, i. e. their west, bank to a greater extent than they have eroded the opposite bank, and that the Jurun-kasch has during the last ten or twelve centuries shifted its bed some hundreds of meters towards the west, are both of the greatest interest. Nevertheless he does not consider, and rightly, that this fact is sufficient to warrant the postulation of a general law, and he holds it to be an exception, that since the 6th cent. A. D. the Tschertschen-darja has shifted its channel a good deal to the east, namely from At-lasch. And with this Roborovskij agrees, in that he looks upon the depression, in which the Ketme-kuduk is situated, as being a former bed of the Tschertschen-darja. But, as I have myself crossed over this channel, and ascertained that it is formed by streams which come down from Atschan, Isengän, and Kontsche-bulak, and as I moreover, whilst travelling westwards from Tschertschen, failed to discover any other ancient river-course that might erroneously be taken to have formerly belonged to the Tschertschen-darja, I ventured to express (vol. I p. 371) the opinion that this river, at all events in the vicinity of the town of Tschertschen, has not changed its bed. Nevertheless Grenard's observation is noteworthy, namely that it is precisely in the zone where these rivers give life to the oases that they migrate to the west, whereas no sooner do they enter the desert than they distinctly tend to the east, that is erode their right bank the more — a fact which I myself had several opportunities of observing.