

the rivers flowing from south to north and belonging to the Tarim system we find that they decrease in volume from west to east. Yarkand-darya is incomparably the greatest. The joined waters of the Kara-kash and Jurun-kash are not sufficient to permit the Khotan-darya to reach the Tarim the whole year round, though it has enough volume to overcome the desert. The next river to the east, the Keriya-darya, is overwhelmed by the sands in the middle of the desert, and the still farther east-flowing rivers, the Tolan-khoja and its neighbours, disappear amongst the dunes not very far from the northern foot of the mountains. The Cherchen-darya, on account of its extended drainage area, is an exception to the rule.

During the moist period all these rivers were much larger than now. The Khotan-darya flowed the whole year round to the Tarim, as also did the Keriya-darya. The small rivers east of the latter joined into one or two main rivers which probably, at least in June and July, reached the Tarim. This abundance of water formed a lake many times larger than the present Lop-nor. Heaps of sand and dust were carried down into the depression, which therefore became as level as I found it in 1901. When the desiccation began the rivers gradually decreased in volume, the sand dunes inundated the basin, the old Buddhist civilisation, the traces of which we have found at several places in Eastern Turkestan, disappeared; the large lake dwindled, and later on only a comparatively small lake remained in the northern part of the Lop Desert with the Chinese colony Lou-lan at its northern shore. Finally this lake dried up and another was formed in the southern part of the desert. If the desiccation continues in the future the Lop-nor will disappear completely and the sand dunes will bury the lower course of the Khotan-darya as they have done long ago with the lower courses of the Kara-muran, Bostan-toghrak, Tolan-khoja and Keriya-darya.

We have (p. 20) found the mean altitude of 6 lakes belonging to the folding trough of Wellby between the Koko-shili and Dungebure systems, to be 4956 m. Taking now all the altitudes entered on Colonel Byström's map in 1:1000,000 (*vide* Atlas) of the same trough, we get for the central part, from the region just west of Lake Markham to the region south of Lac de l'Antilope 4885 m.¹ The mean altitude of the next section which goes to the fresh-water lake of the Chumar river, is 4898 m. Here the number of altitudes is 17, of which three were taken by me at points where I crossed Wellby's route in 1900 and 1901.² Only in the easternmost part of this valley is the fall towards China clear and marked by the Chumar River. It is surprising that the last lake of Wellby, the one through which the

¹ The altitudes are: 5100, 5211, 4714, 4572, and 4730, the last from de Rhins. They are taken both from lakes and other parts of the trough, which is also the case with the next section of Wellby's route.

² The altitudes are from west to east: 4928, 4920, 4804, 4917 (Hedin), 4891 (Hedin), 4962, 4982, 4829, 4766 (Hedin), 4870, 4969, 5090, 4942, 4890, 4860, 4850, 4800 m. Taking the average of all these altitudes we get a mean of 4895 m.