

loop, round which the abandoned channel circled, was occupied as usual by a large reed-grown island, with a steep face on the west and a backing of naked alluvium on the east. At Kujluschning-baschi there was another similar abandoned loop on the left bank; it too still retained water in it. Here we found a flock of 800 sheep belonging to a baj of Ak-su. The river was 48.0 m. broad, and had a mean depth of 0.620 m., a mean velocity of 0.6611 m., and a volume of 19.68 cub. m., in the second.

Here I may perhaps suitably point out a circumstance which was told me by the shepherds of the vicinity, and which, though I had no opportunity to observe it myself, seems to be sufficiently reasonable. Although, as we have seen, the level was steadily falling at the rate of 1½ cm. every night, the natives declared that, when the ice began to form, in about seven weeks' time, the river would be no lower than it was then in the middle of October. The explanation of this is, that during the latter part of the autumn the Jarkent-darja is continually fed, chiefly by means of invisible underground springs, from the superfluous overflow of the irrigation canals after the fields have been sufficiently supplied in the spring and summer. Besides this, at the same season the little streams which drive the mills, and water the patches of cultivated ground in the immediate vicinity of the river, all begin to return to the mother stream. And it is not until late in the autumn that these subterranean supplies manage to reach their original source; thus it is their steady reflux which maintains the great river pretty constant in the season immediately preceding the formation of the ice, or at all events which retard the fall so effectually that it is scarce perceptible. Theoretically this explanation is very plausible; indeed, the river is even said to rise slowly sometimes in the middle of November. During the summer the Jarkent-darja swells out in this part of its course to an enormous width, so that it is quite spring before it admits of being forded.* Here also we noticed occasionally the tracks of tigers. These animals frequent more especially the desolate districts on the right bank, and shun as much as possible the propinquity of man. As for the wild camel, our shepherd informants had only heard speak of him; they had never seen one.

October 17th. During the night the river rose 0.51 cm. The transparency was 34.5 cm. Immediately below our camp the Jarkent-darja was joined from the left by the arm of the Kodaj-darja called the Kara-jilgha-darja, or the »Black Valley River»; the confluence being named Kalughutsch or Kujluschning, i. e. »the Confluence». This is the same arm which we have seen starting off at Kuruk-asti, two weeks before, though its channel was then dry. But at Kalughutsch it carried a volume equal to five *tägirmän-taschlik-su*, or as much water as would turn five millstones; that is

* Some conception of its dimensions may be obtained from Pjevtsoff's description of it in the region just below Aksak-maral. In the latter half of June he observed that the river increased in volume every day, and at a noticeable rate. »Every moment huge masses of earth kept toppling down its steep banks as they became undermined by the rapid current, their fall violently agitating the water, and branches, even entire trees, went spinning along on the current, which was moving at the rate of 4 or 5 feet in the second.» Yet he was told by the natives, that the river would not attain its maximum flood before the beginning of July (O. S.). Immediately above Lajlik he found that the river had a breadth of 2 versts (2132 m.), as compared with a breadth of 134 m. at the time I measured it at the same place. In other words, the Jarkent-darja at the season of full flood must present a totally different appearance from what it does in the autumn.