

built, eleven years ago, a *togh*, or »dam», with the view of forcing the water to go to Dural; in which project they were successful, and in this way the Kumdarja was originated. But in the autumn of 1896 the high flood burst the dam, and then the water proceeded without diminution into the Laschin-darja.

The district in which we were then is said to be called Lopu-nur by the Mongol pilgrims who go to Lassa.

On the 4th May we measured the volume in the Kuntschekisch-tarim, or, as it is also called in this district, the Ara-tarim. This was at Camp No. XLII, where the erosion terraces were 3.05 m. in height: the breadth was 43 m.; the mean depth, 1.426 m.; the mean velocity, 0.6314 m.; and the volume, 38.71 cub.m. in the second, or 2.4 cub. m. more than the volume at Säkitma on 2nd May. It is to be noted that the river, setting aside influx and efflux, increases in volume as one proceeds up it, or in other words diminishes in volume as it travels downwards, in consequence of evaporation, absorption into the ground, the drain of canals and marginal lakes, and other factors of that kind. But it likewise decreases upwards, because we were travelling *against* a stream which was at that season subsiding. As a consequence of this, peculiar fluctuations and oscillations are set up, and at a point a long way

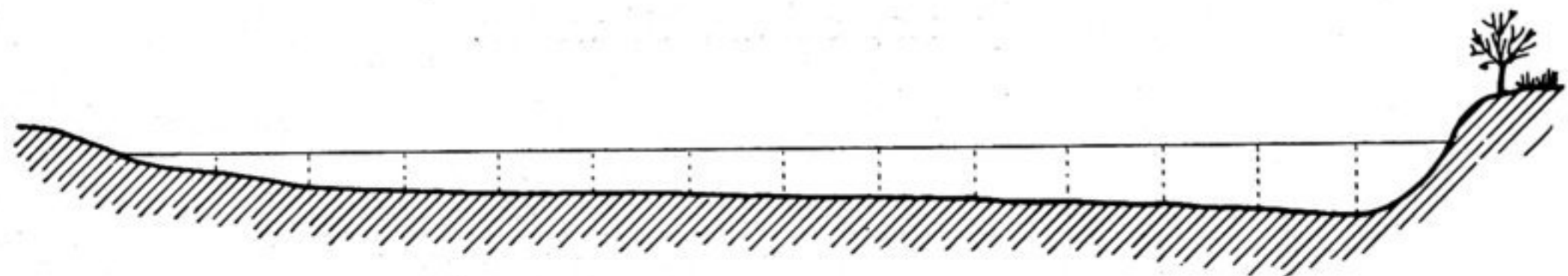


Fig. 439. Right. 0.42 1.06 1.22 1.30 1.35 1.41 1.62 1.78 1.72 1.81 1.90 2.02 2.35 = depth. Left.
 23 50 67 70 72 78 79 78 81 81 85 79 58 } velocity.
 40 50 61 71 72 66 78 80 78 83 72 68 }
 49 61 61 62 72 68 69 71 67 57 }

Breadth = 43.0 m. Kuntschekisch- or Ara-tarim at Camp No. XLII; May 4th. Scale = 1 : 400.

down its course the river may thus have a bigger volume than it has higher up, whilst at the same time the effects of the fall and diminution are not yet propagated downwards to the points beyond which the high water has already passed. If one were to travel with the river day and night, one would find that the volume decreases pretty uniformly and regularly in consequence of evaporation and the other factors I have first mentioned. Also if at this season one were to investigate the volume at one and the same place during a given period of time, one would find that it decreases regularly, but then as a consequence of the setting in of the low-water season. If however one proceeds up-stream against the current, as we did, both these component factors come into play: the volume increases because we gradually approach localities in which the loss by evaporation is less, and the volume likewise diminishes because the stream naturally flows away downwards and because it is no longer fed by the same influx from above. The resultant of these operations would at this particular season be equivalent to ± 0 , or at all events, as in the last instance, we have an extremely slight difference.

During the day's journey toghraks were rare, and those we did see were young and ill-thriven. At Kargha-asti we have the beginning of the big and curiously formed loop of Dural; in two or three places it has cut its way through sand-bound soil.