

on the edge of a little round bay that cut into the left bank of the Tarim, and made an excellent harbour, was also called by the natives Tura-salghan-uj, or the House built by the Great Man, also Tura-ottogho (= otak), that is to say the Great Man's House. This I merely mention *en passant* for the sake of illustrating how easily fresh geographical names spring up in those regions. At the head of our little bay stood a solitary poplar, these trees being here very sparse and sporadic, and all of them young; in this quarter there are no old and luxuriant woods. Steppe predominates; and there are strips of kamisch along the right bank at the spots where the river and sand do not actually come into contact.

Our reasons for choosing this precise locality for our winter-quarters were three. First, it was here I met my caravan, which had travelled *viâ* Ak-su and Korla. Secondly, I had resolved to make this the starting-point of a journey across the Tschertschen Desert, as described in a separate section of this work. The third reason, the most cogent, the river had now become completely frozen over, and prevented us from proceeding. The stream, now choked with drift-ice, which was more closely packed and more rugged than heretofore, did indeed continue somewhat farther, but in an expansion of its bed a very short distance lower down it was frozen fast from bank to bank. This first ice broke up again on the 11th December under the effects of a violent gale; but the frost soon recovered the upper hand and the river became permanently bound in its glacial fetters.

On the day just named I attempted to measure the volume at Jangi-köl, but found it impossible to accomplish it. A pole 8.61 m. long failed to reach the bottom; and the swiftness of the current and the pressure of the drift-ice both proved serious hindrances. The breadth, however, was 31.14 m. There were indeed some broad places close by in which the depth did not exceed two or three meters; but, with the exception of a narrow strip of water in the middle of the river, both banks were lined with thick, broad edgings of ice. At the spot where I obtained the measurement of 31.14 m. for the breadth, the velocity at 4 m. from the bank and at depths of 1, 2, and 3 meter, was 0.77, 0.88, and 0.90 m. in the second respectively. In other words, the velocity increased with the depth, a result attributable to the eddying movements of the water in the loop. Here in the eddy we were able to observe how actively erosion was at work, and in the spring of 1901 the strip of bank on which our camp stood was swept entirely away.

On the 15th December at the narrow passage I have just mentioned one-half of the river-bed was still open, that is to say on the side next the left bank where the current ran strongest; and even on the 20th Dec., the day I left Jangi-köl, there was a strip 4 m. wide still remaining open. Notwithstanding this, the river immediately above and immediately below our camp was on the 18th frozen so hard that the ice bore the weight of our camels.

On the 8th December the transparency of the water was 8.9 cm., but on the 15th no less than 19 cm., while the temperature at noon stood at $+0^{\circ}.1$ C. On the 18th the transparency gauge registered $29\frac{1}{2}$ cm., and on the 19th 21 cm. This was connected with another circumstance which I will briefly touch upon. Between the 8th and the 15th Dec. the level dropped 24 cm., so that the sheet of solid ice which filled our little bay subsided in the middle, forming a saucer-like