

a locality called Kara-buka, half-way between Toghri-kum and Ghascha. At the latter place, which is on the right bank, there are magnificent old poplar woods. At Kurdscheklik, on the left bank, the river is touched by a shepherds' track which leads to Avat. On the same side of the river, at a place called Kislär-sarati, or the »Maidens' Burial-place«, there stands an unimportant masar amongst some poplars. Thence a small artificial canal carries water to a spot where the shepherds of the neighbourhood grow wheat. Close by, the river describes a rectangle in the forest known as Sanijä-satmasi.

During the course of the day the appearance of the river altered very materially. It was straighter than it had been anywhere since we left Kötäklik; it was broad and shallow; and the long windings, with their counter-currents, eddies, and »dead« water, were here entirely absent. At the same time there was a great accumulation of alluvial deposits; in fact, they occupied one-half of the river-bed. The banks were still sharply cut, though not more than 1½ m. in vertical elevation. Along the banks steppe predominated, alternately with bushes and clumps of poplars. At Jigdelik there were again sand-dunes, overgrown with vegetation. One of the dunes, Kade-dung, or the »Pole-Hill«, bore a pole by way of *nischän* or »landmark«, to indicate, that there was a masar in the vicinity. Thence we perceived, at a distance of about 10 km., in S.15°E., a very lofty double dune, and on the nearer side of it ran, according to the information supplied by my guide, the Kara-saj, which I have already mentioned more than once before. This mysterious watercourse would consequently appear to traverse a very considerable extent of country, for we had been hearing of it all the way from Sorun. So far as we were able to make out from the top of Kade-dung, the space between the river and the big dune appeared to be occupied successively by living forest, barren steppe, dead or dying forest, and the naked earth, swept clear of sand, but with fragments of flint scattered thinly over it. There is barren sand again in the south-south-west, although it is not so high, with the hard exposed earth, which the natives call *saj*, stretching from it towards us. At Kara-saj there is a gumbes of the same type as the one at Saj-tagh; that is to say, it is built of clay and stone, and is surrounded by a smaller *guristan* and two or three artificially dug earth-caves, which appeared to have been once inhabited, though it must have been a long time ago. The neighbourhood was scoured in vain for other indications of human beings, or other traces of human dwellings.

October 15th. In the course of 17 hours the river rose 0.65 cm. The transparency measured 34 cm. at 7 a. m., and 38 cm. at 1 p. m. At first the course of the stream was very winding, but during the latter part of the day we only encountered one big loop going towards the north. Sometimes for a short stretch the river would turn through every point of the compass. The current was as a rule swift. It may be laid down as a general rule, that where the river is sinuous it is at the same time narrow and deep, with a sluggish current; but where it is straight, it is also broad, shallow, and rapid. In the former case there is no alluvial formation worth speaking about, and the banks are higher; in the latter case there are extensive accumulations of alluvium, and the banks are lower, while at the same time the sedimentary deposits cause the current to split into two, or