

the excessive flatness of the shore, I should say that in all the part of the lake which lies east of the line we sounded the depth is no greater. The bottom of the lake is carpeted with Algæ, which impart to the water a dark green shade, though in places there are strips of bare ground, where the sand tinges the water a light yellow when seen from the distance. The gravelly scree of the Kalta-alaghan comes right down to the northern shore, and even covers two small islands, which lie off it; the smaller of these measured only 30 m. in diameter.

With the wind blowing hard we continued towards the south-west to about the middle of the lake, where the depth was 3.40 m.; but from that point we had to drift with the wind and the waves, and along the stretch we then covered the depth continued steadily to decrease, the soundings being 1.46, 0.85, 0.84, 0.82, 0.78, 0.62, 1.00, 1.05, 1.20, 1.20, 1.10, and 0.70 m. Consequently this lake is little better than a thin sheet of water spread out over an almost horizontal surface. At the point where the gale compelled us to turn the lake contracted until it was like a bay or river estuary, though to the north-west it appeared to extend as far as the blinding rain would let us see, and indeed it is said to stretch a very considerable distance in that direction. In the western half too it is said to be very narrow in some places. The southern shore, by which we returned, consists of black mud or ooze, and that too is the constitution of the lake-bottom, for when we poked it up with our paddles, it came floating up to the surface like a dark flocculent cloud. Gradually the mud was succeeded by the grassy steppe that borders the lake on the east. The mud is no doubt derived from some of the southern rivers, for in summer they carry pretty large volumes of turbid water, and probably in time they will fill up the lake. To what extent that really is so I do not know, for when I left Camp No XVI. I struck south, and have never visited the western half of the lake. According to Roborovskij's map the stream which connects the Upper with the Lower Kum-köl is joined from the south-east by a triple tributary called Tumenlik-su, which issues from the Tumenlik-tagh, the Ischak-kashti, and the Chal-saj, offshoots of a mountain-range likewise known as the Tumenlik-tagh. Carey and Dalgleish, who, unlike Roborovskij, have travelled beside the stream in question, give on their map a very different picture of that region. According to them the stream which empties into the western part of the Kum-köl originates, like the Tschulak-akkan, in the spur called Schapka Monomacha. According to Roborovskij the united stream is called Bulak-baschi. The name Tumenlik-tagh ought no doubt to be Tömürlik-tagh, for that is the form in which I heard it.*

As I only visited the eastern part of the Upper Kum-köl and the whole of the Lower Kum-köl, but not the country lying between, I am unable to give any absolutely certain idea of the hydrographical connection between these two lakes. Yet by combining the results of the maps by Carey, Bonvalot, and Roborovskij with my own experience I believe I can make a pretty near approximation to the truth. On Bonvalot's map, which is in general rather meagre in point of detail, one can distinctly trace his itinerary from Usun-schor by way of Bagh-tokaj and Amban-aschkan-davan. He gives this last an altitude of 5550 m., which is at least 1000

* On the map appended to vol. I of the Tibetan Expedition the stream which issues from the lake is also called Tumurlik-su.