over the lowest transverse ridge in the bottom of the canal of the Ullugh-köl is nearly twice as great as that over the shallowest transverse ridge in the canal of the Karaunelik-köl. If to this we add, that at both places the river-bed is precisely similar and the difference cannot in any case be great, then we find that, reckoning from the 20th May, the inflow into the Karaunelik-köl ceased when the river had dropped 0.77 m., whereas it had to drop yet 0.63 m. further before it ceased to enter the Ullugh-köl, and this lake consequently became cut off from it. Nor need this difference occasion any surprise, it is only what might be expected. The larger the lake-basin the greater the quantity of water required to fill it, and the greater the quantity of water which flows through the canal, and the longer the period of its flow, the more active and the more effectual is the erosion. We may therefore, with a fair degree of confidence, lay down the following law, that the greater the lake the more deeply trenched is its canal. And in the case of the small lakes, we have also found that the feeding-canals are very unimportant and soon dry up.

The Ullugh-köl has the following dimensions: — the maximum length runs to 7.35 km.; the maximum breadth to 3.2 km.; the eastern sound is 500 m. across; the western 900 m., the island is barely one kilometer in diameter. The eastern bay at the southern end is 2 km. long, the western 800 m. The area of the lake is 14,860,000 square m., or close upon 15 square kilometers; deducting from this the area of the island, 730,000 square meters, there remains for the lake surface 14,130,000 square m. The mean depth, calculated from 46 soundings, is 4.92 m., giving for this lake a mean 0.69 m. shallower than the Karaunelik-köl; but the maximum depth of Ullugh-köl is 0.60 m. greater. Thus the volume of the Ullugh-köl amounts to 69,519,000 cub. m., that is on the 21st May. At the period of high flood the lake level had been 1.345 m. higher than at the date of our visit; this gives an additional capacity of 19,000,000 cub. m. At the date quoted the canal carried a volume of 6.665 cub. m. in the second, or 575,856 cubic m. in the 24 hours, a flood which, assuming there were no evaporation and no absorption into the ground, would fill the lake in the space of four months or 121 days. But under the existing conditions of equilibrium it is precisely these two factors which do levy heavy contributions upon the inflow through the canal. Taking the mean depth of the canal as 2.125 m., that is after adding the high-water level, which was distinctly marked as having been 1.345 m. above the then existing surface, then the breadth is also the same or a trifle greater, the velocity one meter in the second, and the volume about 35 cub. m. in the second. If, then, the lake-basin were empty, it would, on the basis of these data, be filled in 23 days; and if we allow 6.665 cub. m. for the evaporation and absorption, the time required would be 29 days. In point of fact, a large body of water does of course remain in the lake; at the moment when it is cut off from the river, it still contains 49,700,000 cub. m. If now the evaporation and absorption were to go on uninterruptedly at the rate of 6.665 cub. m. in the second, the lake would dry up in 86 days. But here again, as in the case of the Karaunelik-köl, the rate decreases in consequence of the diminishing area and the increasing thickness of the impermeable sedimentary layer which is deposited on the lake-bottom, and also in consequence of the growing, though imperceptible, salinity of the water.