

The table is thus very patchy, the cause being practically the fact that the observations were all taken at places selected at random. As for the transparency, the observations seem to point to the presence of a daily period, the simple and natural explanation of which is to be found in the position of the sun: the bright disk I used was more distinctly visible in proportion as the sun's rays struck the surface of the water at right angles; but when they struck it obliquely, the disk was less intensively illuminated. In rivers like the Mus-art-darja and the Ugen-darja, which in the late autumn are almost stationary, the transparency increases to a high degree, reaching as much as 0.78 m. In the lower Jarkent-darja too, where the velocity is but slight, the transparency increased to 0.39 m. Generally speaking this property is determined by three factors — the velocity, the character of the bottom, and the shape of the river-bed. The water is of course clearest where the bed is deep and narrow, and has a sluggish stream, and is very muddy where it is broad and flows with great velocity. Again, where there is an abundance of vegetation on the eroded banks, and these are permeated in all directions by the roots of plants, the water is naturally clearer; but where vegetation is absent, as it is in most of the »jangi-darjas», the water is always exceedingly muddy.

During the close of September and throughout almost the whole of October the river subsided slowly; but from the end of October a very slight rise could be detected, this the natives attributed to the return of the irrigation water into the main stream.

The height of the terraced banks was of course always taken on the inner side of the convex bends, and thus expresses the maximum value in every case. This datum varies however with the shape of the river-bed, and is approximately proportional to the breadth and depth of the river. The highest eroded bank I measured was 5.12 m. high, and the greatest difference I observed between the high-water level and the existing level amounted to 3.21 m., a value which is of course entirely dependent upon the shape of the river-bed and the velocity of the current. The two classes of value which I have last mentioned run therefore to some extent parallel. For instance, if the terraced bank is only 1.38 m. high, then the highwater level will be only 0.98 m. above the existing level. Still this cannot be laid down as a rule; for we had instances in which the terraced bank, although 2<sup>1</sup>/<sub>2</sub> m. high, could be overflowed by the high-water, which then gave rise to temporary marshes.

Finally, I may observe that the subjoined table contains an exhaustive list of all the measurements I made of the river.