

those of India," flowed to the Caspian, and the trade between the Euxine and India followed this river, continuing the valley of the Kur eastwards of the Hyrcanian Sea. But in the time of the first Arab and Turkish writers, the Oxus, described by Edrisi as "superior in volume, depth, and breadth to all the rivers of the world," had been diverted northwards to the Aral. In the fourteenth century it had again resumed its course to the Caspian, towards which there is a relatively steep incline, for the bifurcation of the present and the old bed below Kunya-Urgentch is 140 feet above the level of the Aral, and 380 feet above that of the Caspian. The new channel was blocked for about 200 years; but towards the middle of the sixteenth century the Amu, for the second time during the historic epoch, shifted its course from the Caspian to the Aral.

If so, it has followed the present course for only about 350 years.

These facts, based on the writings of classical and medieval travelers, and ancient maps, make it appear as though the Oxus were normally an affluent of the Caspian. It was not until the last few decades that actual physiographic study of the region opened up another side to the question. Konshin, Mushketoff, Sievers, Hedroitz, Lessar, and Somkoff have made special study of the problem. The now dry Usboi channel, from just south of Krasnovodsk, skirting around southeast of the Ust-Urt northwards to the tarn of Sari Kamish, has thus been a great subject for controversy. Few geographical problems have become more familiar than the question as to its origin. At first it was naturally taken for the historic course of the Oxus. Élisée Reclus, in reviewing explorations up to the time of his great work, was sure that it was. Conshin, after exploring it for two years, decided that the Oxus had never flowed that way directly, but that it was an ancient channel through which the Aral overflowed to the Caspian.

The data now at hand are as follows: The Usboi is a channel in the unconsolidated sediments of the steppe, starting southwestward from the Sari Kamish basin and thence skirting around the Ust-Urt escarpments down into the Balkhan Gulf of the Caspian, a distance of over 200 miles, with a total fall of about 234 feet; it averages 60 to 70 feet in depth, about 3,000 feet in width, and resembles a river-bed with occasional islands and rapids, and in it still survives a series of brackish "shores" or pools. Three ancient distributaries of the Amu, channels now dry, run from the Amu's present delta into the Sari Kamish basin. Élisée Reclus states that during the inundations of 1878 the river discharged 31,500 cubic feet per second to the Sari Kamish. That it formerly flowed there regularly is evidenced by two epochs of ruined towns and cities along the abandoned courses. As there are no ruins along the Usboi, its water is supposed to have been brackish.

The Usboi is, therefore, supposed to have been an overflow channel from the Sari Kamish, into which both the Amu and Syr have emptied. As the divide between the Aral and Sari Kamish basins appears to be at least 60 feet above that between the Caspian and Sari Kamish, the Aral was doubtless dried up when both its rivers were thus diverted, and only a small lake at whatever time the Oxus alone flowed west. As a full Sari Kamish sea would be of much less surface area than the present Aral, or about 130 by 70 miles, the Usboi would still receive an overflow if both rivers were again diverted there. The Usboi, therefore, throws no light upon the climate of our basin. But the more ancient stage of a wider strait or continuity of level between the Aral and Caspian, that stage which