

north and south of the line of oases stretching westwards to Khotan.⁵⁸ After more archæological labours at sites in the desert fringing the Khotan oasis to the north and north-west,⁵⁹ we started early in April for Ak-su by the route which leads through the heart of the Taklamakān along the united bed of the Yurung-kāsh and Kara-kāsh rivers, then practically dry.

On this journey I was able to explore interesting ancient remains on the curious desert hill of Mazār-tāgh which juts out to the left bank of the Khotan river as the last offshoot of a low and now almost completely eroded range coming from the north-west. A reconnaissance made by the surveyor showed that this range is still traceable amidst high dunes for a distance of at least twenty miles.⁶⁰ Its exploration beyond was impossible at that season of increasing heat and sand-storms.

We descended the Khotan river bed to the neighbourhood of its junction with the Tārīm which we crossed.⁶¹ By the left bank of the Ak-su river we reached the town of that name, the present Chinese headquarters for the eastern portion of the Tārīm basin, early in May. There we separated for nearly three months. I myself travelled up the Uch-Turfān valley and crossed a barren and very rugged outer range of the T'ien-shan, previously unsurveyed, to the little-known oasis of Kelpin.⁶²

Moving southwards I traced remains of ancient settlements in the desert between the arid outer hills of Kelpin and the terminal course of the Kāshgar river, before reaching the Ak-su-Kāshgar highway near the ruined sites of Tumshuk.⁶³ A series of low parallel hill ranges in the unsurveyed desert belt to the north-east of Marāl-bāshi offered an opportunity for interesting topographical work. Then the increasing heat and the call of many heavy tasks obliged me to return to my base at Khotan. Proceeding by rapid marches along the left bank of the Yārkaṅd river I carried my plane-table traverse to Yārkaṅd,⁶⁴ whence the caravan route already followed in 1900 brought me back to Khotan by June 9th.

Here I was detained by exacting labours needed for the safe packing of my large collection of antiques and by the manifold preparations for the planned explorations in the high K'un-lun to the south. The halt fortunately allowed me to give Lāl Singh adequate time for independent survey work, and with his unfailing energy he used it to the best advantage. Injury to a level of the theodolite prevented, it is true, the triangulation I had wished him to carry from Ak-su to Khotan. Nevertheless he effected very useful plane-table surveys along the main T'ien-shan range from the valley below the Muz-art pass to the watershed north of Kāshgar.⁶⁵ Descending a second time to Kāshgar, he travelled to Gūma through the districts of Yārkaṅd and Karghalik by a route different from the high-roads already surveyed.⁶⁶ He then succeeded in mapping, as directed, the last portions of *terra incognita* on the northern slopes of the K'un-lun between the Kiliān valley and the middle Kara-kāsh river above Pujiya in the lower Khotan hills. In addition he connected his survey with Rām Singh's work in 1906 by crossing the Sanju-dawān and ascending the Kara-kāsh river as far as Kiliān-kurghān.⁶⁷

⁵⁸ See Sheet No. 14. A-B. 2, C. 3; *Desert Cathay*, ii. pp. 413 sqq.

⁵⁹ See Sheet No. 9. D. 2.

⁶⁰ See Sheet No. 13. A. 3, B. 4; *Desert Cathay*, ii. pp. 417 sqq.

⁶¹ See Sheets Nos. 13. A. 4, B. 1-4; 12. A. 3, 4, B. 4.

⁶² See Sheet No. 7. B. 2, 3, C. 2, D. 2; *Desert Cathay*, ii. 421 sqq.

⁶³ See Sheets Nos. 7. B. 4; 8. B. 1.

⁶⁴ See Sheets No. 8. A, B. 1; 5. C. 3, 4; D. 1, 2.

With regard to this plane-table work between Ak-su and Yārkaṅd I may briefly note that the route I had followed was crossed by that of Lāl Singh only at one point, the small oasis of Ābād, two marches

north of Yārkaṅd (Sheet No. 5. C. 2). The distance covered by me from our common starting point, Ak-su, amounted to over 350 miles, while that on the surveyor's route *via* Kāshgar was considerably greater. It was hence no small satisfaction to me to find that the position shown for Ābād by my own plane-table differed from that of Lāl Singh by only one mile in longitude and about two in latitude.

⁶⁵ See Sheets Nos. 12. A, B. 1; 7. A. 3, B. 2, 3, C. 2, D. 1, 2; 4. A-C. 4, D. 3, 4; 1. C, D. 4.

⁶⁶ For the route to and from Kāshgar, see Sheets Nos. 2. D. 1, 2; 5. A. 1. For the route from Kāshgar *via* Ābād-Merket-Karghalik to Gūma, see Sheets Nos. 5. A-C. 2, 4, D. 3; 6. C. 1, D. 1, 2; 9. A. 1, 2.

⁶⁷ See Sheets Nos. 6. D. 2; 9. A. 1-3, B. 2, 3, C. 3, D. 2.