

series of expeditions for the exploration of unknown or as yet inadequately surveyed portions of the Kuruk-tāgh and Lop deserts to the south.

At the same time it became possible also to utilize my prolonged stay for a detailed large-scale survey of the chief parts of the Turfān basin. Geographical and antiquarian interests united in calling for such a survey; for apart from containing in its terminal salt lake probably one of the deepest land depressions below sea-level of our globe, it exhibits, within close topographical limits and hence in a particularly characteristic form, all those physical features which make the Tārīm basin, its great neighbour and counterpart, so instructive both to the geographer and the historical student. For the latter a close survey of the territory must offer additional archaeological interest on account of the very numerous ancient remains which have survived within or near its oases, and which strikingly attest its importance and resources in the past when Turfān served as a chief link between Buddhist Central Asia and the Far East.

This work, on the one-inch scale and with clinometrically observed contours, was entrusted to Muhammad Yakūb and carried on by him under such control as his periodic visits to my archaeological camps permitted me to exercise. In the end his plane-table sheets, seven in number, covered the whole of the central part of the Turfān depression and comprised all its oases ancient or modern with the exception of Toksun in the extreme west of the basin.⁶⁰ With this and the other surveys of my two expeditions it is hoped to prepare a detailed map of the Turfān district, on the scale of 1:250,000, for publication in the Royal Geographical Society's *Journal*, together with a short monograph on the geography and historical topography of the territory. In addition, I may mention, both Afrāz-gul and Muhammad Yakūb were engaged during our work at Turfān in preparing large-scale plans of important ancient sites, such as the ruined towns of Kara-khōja and Yār-khoto, etc., to be published in my Detailed Report on the third expedition.

By November 12th I was able to let R. B. Lāl Singh start from Kara-khōja for fresh hard work in the Kuruk-tāgh to the south. His instructions were to reach Singer, the only small inhabited place in those truly 'Dry Mountains', by a new route from the south-east corner of the Turfān basin⁶¹ and thence to start triangulation towards Āltmish-bulak in the south-east with a view to securing, if possible, a connection across the Lop desert with the easternmost points on the K'un-lun range fixed during the preceding autumn. Owing to the incipient season of dust storms no chance for sighting those distant peaks had offered during our stay at Āltmish-bulak in February, 1914. But experience during my first explorations at the Lou-lan ruins in December, 1906, had shown the possibility of such rays being observed under particularly favourable conditions. At the same time the rapidly increasing cold gave hope that after Lāl Singh's arrival at Singer and the establishment of a triangulation base there, the season would be sufficiently advanced to permit of the difficulties arising from the want of drinkable water further east being overcome by the use of ice formed on salt springs.

Lāl Singh carried out this programme with his accustomed persevering energy in the face of great hardships and privations, helped once again by that experienced hunter Abdurrahīm and his hardy camels. By the middle of December he had carried a system of triangles from his measured base near Singer to Āltmish-bulak.⁶² There a fresh base was measured, but the chance of sighting the K'un-lun range south was vainly awaited for a week, the usual desert haze and the distance, over 130 miles, effectively preventing a view. Lāl Singh then moved one march further south to the salt spring of Āstin-bulak and after again waiting under still more trying conditions of extreme cold and exposure succeeded at last on December 23rd in sighting a portion of the distant range. Observations were made from both ends of a new base to a peak

⁶⁰ The one-inch scale survey extended from the Pichan oasis in the east (Sheet No. 31. A. 3) to the vicinity of Āltun-mazār in the west (No. 28. B. 3), and from about lat. 43° south to the terminal salt lake bed forming the deepest portion of the Turfān

basin.

⁶¹ For the route followed from Deghar to Ārpish-me-bulak, two marches N. of Singer, see Sheet No. 28. B. 4. C. 4. D. 3.

⁶² See Sheet No. 29. B. C. 2, D. 3.