

The passage of the much-decayed spurs, with their extensive glacis of gravel, which adjoin to the south-west is equally easy, and a long descent, not altogether without water, brings the traveller to the village of Kara-yulghun, the easternmost of the small oases belonging to the district of Ak-su.<sup>3</sup> Thence both the 'Old' and the 'New Town' of Ak-su can be reached by two easy marches (Map No. 12. A, B. 2). Cultivation of most of the ground traversed is rendered possible by an adequate supply of water from the branching beds of streams fed by the snows of the T'ien-shan, south of the Tengri-khān massif.

I have already discussed in *Serindia* the brief notices that Chinese historical records devote to the territory of the present Ak-su, mentioned in the Han Annals and the *Wei lio* under the name of *Ku-mo* 姑墨 and in the T'ang Annals and other later texts under diverse designations, as *Po-huan* 撥換, *Wei-jung* 威戎, &c.<sup>4</sup> I have noted in the same work the observations that I was able to make on the geographical factors determining the political and commercial importance of Ak-su, and as to the probable reasons for the inadequate use, in modern times, of the abundant resources for irrigation afforded by its rivers.

Chinese  
notices  
of *Ak-su*.

The stay which the very attentive reception accorded to me by Mr. Chu Jui-ch'ih 朱瑞墀, the Tao-t'ai of Ak-su and an old acquaintance, obliged me to make on May 18th-19th at the 'Old' and the 'New Town', respectively, gave me a fortunate opportunity of meeting Lāl Singh again, and arranging for further survey work by him. Since leaving Kuchā he had moved, over little-known ground, along the foot of the T'ien-shan to the point where the Muz-art-daryā debouches from the mountains.<sup>5</sup> From there, notwithstanding the early season, he had carried his plane-table survey up the still snow-covered head-waters of the river, and ascended the glacier over which the route towards Ili crosses the watershed east of the great massif crowned by the Tengri-khān peak, 23,600 feet above sea-level (Map No. 11. A. 4). The local help and guidance which the obliging Tao-t'ai readily promised now made it possible for me to let the Surveyor proceed to Kāshgar by a new route. It led him, for the most part, between and along those utterly barren hill ranges of the outermost T'ien-shan stretching to the north-east and south-west of the small oasis of Kelpin, which I reached in 1908 from the north.<sup>6</sup> Lāl Singh was thus able to extend our surveys over a considerable area which had previously remained wholly unexplored,<sup>7</sup> before he rejoined me at Kāshgar, in the first week of June, via Kalta-yailak.

Survey  
work by  
Lāl Singh.

The line followed by the direct route from Ak-su to Marāl-bāshi must at all times have been determined, as it now is, mainly by the places where travellers could secure water for themselves and their transport animals; for the route lies throughout in the flat alluvial plain between the Yārkan river to the south and the outermost chain of the T'ien-shan to the north. In ground of this description, changes within historical times in the volume or the direction of the surface drainage brought by rivers are bound to leave definite marks. Hence however imperfect the observations which my rapid journey allowed me to make, I will briefly record them here, if only for the interest of comparing them with corresponding observations in other parts of the Tārīm basin. Before mentioning the indications of such changes, I will give a succinct account of the present route, which we covered in six rapid marches, amounting to a total estimated distance of nearly 150 miles.

Route from  
Ak-su to  
Marāl-  
bāshi.

<sup>3</sup> Notwithstanding the facilities of this road, the route leading along the southern foot of the outer hill chain appears to have been preferred, down to T'ang times, for direct communication between Kuchā and Ak-su, as shown by the T'ang itinerary reproduced by M. Chavannes, *Turcs occid.*, p. 8, and discussed above, ii. pp. 817.

The erroneous location at Yaka-arik, a modest village

of about a hundred houses, of *Po-huan* (*recte* Ak-su), proposed by the *Hsi yü t'u chi*, was duly rectified by M. Chavannes, *T'oung-pao*, 1905, p. 553, note 1.

<sup>4</sup> See *Serindia*, iii. pp. 1297 sq.

<sup>5</sup> See Maps Nos. 17. A, B. 1; 12. B-D. 1.

<sup>6</sup> Cf. *Serindia*, iii. pp. 1304 sqq.

<sup>7</sup> See Map Nos. 7. A, B. 4; C. 3; 4. B-D. 4.