

He states that in commencing his reconnaissance from the Kuen Luen Mountains (which he carried on with the plane-table only), one of the three trigonometrically fixed points on which his work was based, turned out subsequently to have been incorrectly projected on his board. This, together with the doubt that must always exist when rapidly passing through an unknown country as to the identity of the different peaks visible from the line of march, is quite sufficient to account for the discrepancy. In my preliminary map I have assigned to Khotan a longitude of $79^{\circ} 59'$ instead of $79^{\circ} 26'$, the position it has recently occupied on our maps. About its latitude there can be no doubt. Mr. Johnson took several observations there with a 14-inch theodolite and obtained a mean result of $37^{\circ} 7' 35''$, whilst from Kishen Sing's observations with a sextant extending over nearly a month we have a mean result of $37^{\circ} 7' 36''$. The points east of Khotan, *i.e.*, Keria and the Sorghak gold fields, are derived from Kishen Sing's route survey, combined with his latitude observations. We also have from the same source a complete survey for the first time of the road *viâ* Polu to Noh, and thence to Leh. As a specimen of the accuracy of this Pundit's work I may mention that when the road from Karghalik to Pal, a distance of 630 miles, was plotted out on the scale of 2,000 paces to the mile, without any correction or adjustment whatever (although $4\frac{1}{2}^{\circ}$ were added to each magnetic bearing in order to allow for magnetic variation) starting from my own value of Karghalik, the plot closed at Pal (fixed by the Great Trigonometrical Survey) almost absolutely correct in latitude and only eight minutes out in longitude, and in no single portion of the whole route, which passes over elevations exceeding 17,000 feet in height, did the plotted value differ by as much as three miles from his own observed astronomical latitude (*vide* Appendix Section A.). Of this discrepancy of eight minutes in longitude it is possible that a portion may be due to error of position in the starting point (Karghalik), but it may be noted that the amount is no more than would be accounted for by an error of $1\frac{1}{2}^{\circ}$ in the assumed value of magnetic variation. It is not to be supposed that such accuracy is generally attainable, but in the present case, although the surveyor laboured under certain disadvantages from the absence of inhabitants, yet there were the compensating advantages that he was under no necessity for concealment; he was therefore able to take and record bearings when and where he pleased.

As regards the work executed to the north-east and east of Káshghar; the position of Maralbashi, on the road to Aksu, was fixed in latitude by Captain Biddulph (*vide* Appendix Section A.), and its position in longitude is roughly determined by a few bearings, and estimated distances taken by him on the road from Káshghar.

On the road to Ush Turfan I carried on a rough route survey wherever I went, and took observations for latitude and obtained chronometric determinations of longitude as far as Ui Bulák, in latitude $40^{\circ} 26'$ north and longitude $77^{\circ} 36'$ east. Thence by route survey I got a determination of the position of the Belowti Pass; calculating from this the probable position of Ush Turfan I place it about three-quarters of a degree to the east of the position given it in the last edition of Colonel Walker's Turkestan map. On examining the latest Russian map (1873) it appears that the position of Ush Turfan has been recently altered, and placed very near where I would myself locate it. I have therefore in my map adopted the last Russian values of Ush Turfan, Aksu, and all places to the east. It will be found that the cities of Aksu and Kuldja are more than twenty miles to the east of the places assigned them in all but the most recent maps.

The details inserted to the north of the map are taken almost exclusively from the Russian topographical map of Central Asia (corrected to 1873). The portion of ground to the south of Khokand, visited by Mr. Fedchenko, is derived from various maps purporting to be by that distinguished traveller, amongst others, one recently sent by Madame Fedchenko to Colonel Walker, differing materially from all others that I have seen. For the country between the Alai, visited by Mr. Fedchenko on the north, and the scene of our own explorations in the Pamírs on the south, the map is compiled from all the limited sources available* which have

* Including the route survey carried on by Abdul Subhan from Panjah to Kila Wamur, the chief town of Roshán, and also including a sketch map prepared by Colonel Gordon and Captain Biddulph representing their joint ideas of the geography of the Pamír.