

Magnetic Observations.

As has been mentioned in a previous portion of this report it was decided not to take from India a complete set of magnetic instruments. I took with me however a dip circle by Barrow with which observations for inclination were taken at Leh (in Ladakh), Chágra (in Ladakh), Yárkand, Káshghar, and Tashkurghán (in the Sarikol District). It has been laid down as an axiom by General Sabine, the great authority on matters of magnetism, that "the value of each new magnetic station is directly proportional to its distance from those where observations have already been made," and I may therefore hope that the record of results, *vide* Appendix, Section E., may prove of considerable value, as I am not aware that any magnetic observations have ever been taken within a very considerable distance of any of the three last named stations. The rules laid down by General Sabine were rigorously adhered to in taking the observations.

Observations for magnetic variation (declination) were taken at, and have been computed out for sixteen stations in, Ladakh, Turkestan, and Wakhan. The station furthest to the north-east was at Ui Bulák (latitude $40^{\circ} 26'$ and longitude $77^{\circ} 36'$) where the variation was $5^{\circ} 40'$ east; the extreme western station was at Kila Panjah (latitude 37° longitude $72^{\circ} 45'$) where the variation was $4^{\circ} 17'$ east. Details of the results, which are very consistent *inter se*, are given in the Appendix. The instrument employed in the determination of declination was the six-inch transit theodolite, which has been described in the Appendix, Section B. It was fitted with a first-rate magnetic needle. Comparisons taken at Leh and at Dehra both prior to the departure of the Mission, and subsequent to its return, prove that no alteration has taken place in the position of its magnetic pole. The object observed was generally Polaris. In many instances, however, the sun, either near sunrise or sunset, was made use of; at important stations, such as Leh and Kashghar, the mean of several different independent determinations has been taken.

I cannot conclude this report without alluding to the sad loss we have all sustained by the recent and sudden death of our much lamented comrade, Dr. F. Stoliczka. Having been in almost daily intercourse with him from the day of leaving the Punjáb on our outward journey (through the Changchenmo, Chakmák, Artysk, and Pámír trips) up to the day of his death, and being naturally especially attracted to him as working always cordially with him to add my mite to the field of science, I most bitterly regret his loss. It is hard to think that he should not have been spared to give to the world the results of his laborious investigation and scientific research, and although he has left valuable notes behind him, yet owing to his unequalled knowledge of Himalayan geology there is probably no man living as competent as he was to do full justice to them; and it is unlikely that any one will go through his valuable zoological and other collections with the same minute care and attention that he would himself have bestowed upon them. I have special reason to regret the absence of his experience and advice while preparing my own report, in writing which I had confidently looked forward to receiving the benefit of his assistance.

(Sd.) HENRY TROTTER, *Capt., R. E.*