

Clements R. Markham

REPORT

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THE TRANS-HIMALAYAN EXPLORATIONS

BY EMPLOYÉS OF

THE GREAT TRIGONOMETRICAL SURVEY OF INDIA,

DURING

1873-74-75.

DRAWN UP FROM THE ORIGINAL RECORDS

BY

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PREPARED TO ACCOMPANY THE ADMINISTRATION REPORT FOR 1874-75,
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REPORT
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I.—INTRODUCTORY.

THE years 1873 and 1874 will be memorable in the annals of geographers from the great strides that have been made in our knowledge of Káshgharia and the Upper Oxus regions. The reports by the Officers of the Mission, under Sir Douglas Forsyth, to Yárkand and Káshghar, have already been the means of communicating to the public a mass of statistical and geographical information concerning a country which, owing to the present state of Asiatic politics, is year by year becoming of increasing importance to us. On reference to the geographical section of those reports, it will be seen that I was enabled to avail myself of the opportunities afforded me, as a member of the Mission, to fix with considerable accuracy the positions of Káshghar, Yárkand, and the eastern limits of Badakhshán, as well as to connect the details of the Russian surveys to the north of Káshghar with my own route surveys in the Pámirs and in Eastern Turkistán, and these again with the British trigonometrical surveys on the south and Lieutenant Wood's route survey on the west.

On the completion of my report I was about to proceed to Europe on furlough, when I was requested by Colonel Walker, R.E., the Superintendent of the Great Trigonometrical Survey, to postpone my departure for awhile, and examine and prepare for publication the results of the explorations of various native employés of the Great Trigonometrical Survey, who happened to have returned simultaneously just at that time, though from very opposite quarters, to the head-quarters of the Survey, bringing with them the materials for new maps, and a considerable amount of interesting information regarding regions of which even less was known than of those that had been visited by members of the mission.

I gladly availed myself of Colonel Walker's proffer to allow me to work up these materials,—the more so that some of them had reference to the regions in the neighbourhood of the remarkable bend of the Oxus between its upper sources and the point where it enters the plains of Koláb, of only the upper portion of which had I been able to obtain any information from personal enquiries and the agency of the Munshi Abdul Subhán.¹ An opportunity was thus afforded me of completing the mapping of a new and most interesting line of country, and of correcting errors which had previously arisen from the absence of correct information regarding these regions.

¹ Munshi Abdul Subhán, a native surveyor, accompanied me to Eastern Turkistán and Wakhán. From Panjab, the chief town of Wakhán, he was despatched to visit the countries of Shighnán and Rohán, and succeeded in descending the Oxus as far as Kila Wámir, the chief town of Itshán.

There were three separate explorations to be described; these had been respectively carried out by the Havildár of Sappers, the account of whose adventurous journey to Swát, Dir, and Chitrál in 1870 was some years since given to the public by Major Montgomerie, R. E.;¹ by the Mullah, a recently entertained agent who had been working in connection with the Havildár; and by Pundit Nain Singh,² whose arduous and skilful survey in 1866 of the country between Lhásá, the capital of Thibet, and Lake Manasarowar, much of it along the previously unknown course of the Brahmapútra River, had earned for him the present of a gold watch from the Royal Geographical Society in acknowledgment of the important services he then rendered.

The Havildár on the present occasion went *viâ* Peshawur and Kábul to Badakhshán; but instead of travelling by the well-known Bamian route, he took a new and much more direct line, the greater portion of which had never been previously surveyed. Going north to Chárikár, he crossed the Hindú Kúsh range by the Sar-ulang (or Sarolang) Pass, and descending to Khinján passed along a very direct road *viâ* Narín and Ishkimiash to Faizabád in Badakhshán. Thence he started on a tour, the results of which, in conjunction with the exploration by Munshi Abdul Subhán down the Oxus to Kila Wámur, have entirely altered the map of that hitherto little known portion of Central Asia. Proceeding westwards to Rusták, he turned due north, crossed the Oxus River at Samti, where he found the river was called the Panjah, and visited in succession the towns of Koláb, Khawáling, Saghri Dasht, Kila Khumb (the capital of Darwáz), Kila Wanj, and Yaz Ghulám, places of which the names have long been known to geographers, but of which the absolute or even relative positions have been most doubtful. At Kila Khumb the Havildár again struck the Panjah, and his road continued for some forty miles along the right bank of the river, in the very centre portion of the great bend before alluded to, which has so long been unknown. At Yaz Ghulám, the frontier village of Darwáz, he was unfortunately turned back by orders from the ruler of Darwáz: the point he reached is most probably not more than one long day's journey from Pigish, the extreme point reached by the Munshi from the opposite direction. The Havildár, who was ignorant of what the Munshi had done, as it turned out, only a few weeks previously to his own arrival at Yaz Ghulám, was most anxious to complete his own work, and eventually went *viâ* Koláb and Faizabád to Ishkashim and endeavoured to make a survey down the river to Yaz Ghulám; but he was again stopped, this time at the southern frontier of Shighnán, and was prevented from carrying out his intentions. Thus there is a gap between the explorations of the Havildár and the Munshi, the existence of which is much to be regretted, but it was clearly unavoidable; happily the missing link is only a short one.

From Ishkashim the Havildár returned to Koláb and thence took the direct road to Khulm, which lies for the most part to the north of the Oxus; this has turned out to be a most important piece of exploration, as it has not only determined the positions of the towns of Kurghán-tapa and Kubáidian, but it has been the means, as will hereafter be shown, of proving that the Surkháb River, which in its lower course is better known as the *Wáksá*³ River, does not join the Oxus near Koláb, as has long been supposed, but more probably at a point about eighty miles lower down. From Khulm the Havildár proceeded to Rusták, and thence to India *viâ* Baghlán, Bamian, and Kábul.

The second journey to be noticed is that of the *Mullah*, an assistant of the Havildár, who was despatched by the latter from Jalálábád to endeavour to make his way up the Kunar

¹ Report on the Great Trigonometrical Survey Operations for 1870-71; also Journal of the Royal Geographical Society for 1872, Vol. XLII, pp. 180 to 202.

² This is the first time the Pundit's name has been communicated to the public; he is now about to retire from the service, and the necessity for concealing his identity is therefore no longer necessary.

³ The identification of the *Sarkháb* with the classical *Wáksá* will be a source of great rejoicing to all comparative geographers.

River (or River of Chitrál) to its head at the Baroghil Pass; thence he was to return to India *via* Yárkand and Ladákh. He ascended the river as far as Asmár, the Chief of which place he found engaged in hostilities with the fierce Káfir tribes who inhabit the banks of the river above Asmár. He had therefore to leave the river and go across country to Dír; thence he went to Chitrál by the same route that had been followed by the Havildár on a former occasion. From Chitrál he continued the ascent of the river, passing *via* Mastúj to the Baroghil Pass, after crossing which he went to Sarhadd-i-Wakhán, where he joined my own line of route survey between Yárkand and Wakhán.

Pundit Nain Singh's journey was over very different ground. The Pundit had accompanied Sir D. Forayth's mission to Yárkand, but for political reasons it was not found expedient to detach him on any independent exploration into regions inhabited by Mussulmans. On the return of the mission to Ladákh, being anxious to have an opportunity of gathering fresh laurels, he volunteered to proceed on a fresh exploration. Under instructions from the Superintendent of the Great Trigonometrical Survey, I started him off from Leh to Lhása by a much more northerly route than the one he had followed on his former visit to the same place. Leaving Leh in the disguise of a Láma or Buddhist priest, he was successfully smuggled across the frontier, and succeeded in making his way from Noh to Lhása by an entirely new route which emerges to the north of Lhása on the Tingri Nur or Námcho Lake, the successful exploration of which by another Pundit in 1872 has been recently described.¹ From Lhása the Pundit returned to India by a southerly route, following for a few miles the Brahmapútra, in a hitherto unsurveyed portion of its course, at a distance of about forty miles east of Lhása. By taking bearings to peaks, beyond which the great river was said to flow, he succeeded in fixing its course approximately for another hundred miles to the east. He traversed the Thibetan district of Tawang, and emerged in British territory at Odálguri in the Darrang District of Assam, having made a very careful route survey over almost entirely new ground for a distance of more than twelve hundred miles. Excellent astronomical observations were made at various points throughout his journey, and the quality of the work has proved itself first rate. The difference in longitude between Lhása and Odálguri (whose position has been fixed by the Indian survey) being little more than one degree, we are enabled to obtain a new value of the longitude of Lhása² which ought to supersede all former determinations, derived from routes all of which lie for considerable distances in nearly the same latitude. Hypsometrical observations for calculation of height above sea level were taken throughout his route, which materially increases the value of the newly-obtained geographical information.

The various journeys will now be described in detail.

¹ *vide* Great Trigonometrical Survey Report for 1873-74; also the Geographical Magazine for February 1875.

² *Vis.*, 91° 5' 30" east of Greenwich.

II.—THE HAVILDAR'S JOURNEY FROM BADAQSHĀN TO KOLĀB, DARWĀZ, AND KUBĀDLĀN.

THE explorer whose latest travels have now to be described is the Havildār of the Bengal Sappers and Miners who is already well known for his journey in 1870 from Peshawur through Chitral to Badakhshān. He was employed in 1872 in making a route survey from Kābul to Bokhāra.¹ On his last exploration he passed through countries of which it may be said that hardly anything is known except the names; and although the account he gives of the districts he passed through is somewhat meagre, it has, I believe, the merit of being trustworthy.

The Havildār left Peshawur on the 19th September 1873 with two companions—the first, a trusted comrade,² a Naique³ of Sappers, who had been with him on his two former journeys; and the other, his nephew, a young Pathān, who had also accompanied him on his expedition to Badakhshān. They had, in addition, two servants, one a native of Peshawur, and the other of Kunar. As far as Jalālābād they were accompanied by the Mullah whose exploration to Sarbadd-i-Wakhān forms the subject of a separate chapter.

The Havildār travelled as a merchant, and had with him about three thousand rupees⁴ worth of muslins and other cloths. In order that he might have the necessary leisure and opportunities for taking observations, the Naique was passed off as the headman of the party, and conducted the negotiations for the sale of goods and the payment of imposts, while the Havildār, in order to avoid suspicion, would affect to be a very illiterate, ill-educated man, and seldom placed himself in a prominent position.⁵

The party arrived at Jalālābād by the Ab-khāna⁶ route on the fifth day from Peshawur. They halted there on the 25th and 26th September, and then started for Kābul, which they reached in four days by the ordinary caravan road. The Havildār was detained in Kābul, in common with many other merchants, throughout the whole of October, pending the promulgation of some new fiscal arrangements by the Amīr. On the 3rd of November he started for Badakhshān, the party consisting of five men and four horses, two of the latter being loaded with merchandise. The road which he had selected, in compliance with orders previously given by Lieutenant-Colonel Montgomerie, R.E., was that *viâ* Chārikār and the Sar-ulang Pass.⁷

¹ No account of this journey has been published, as the greater portion of the route traversed has previously been described by others.

² A Pathān of the Esufrye country.

³ Corporal.

⁴ About three hundred pounds sterling.

⁵ This was the explanation given by the Havildār to account for the entire absence of notes about the journey. His compass bearings and distances were all recorded in English, of which language he has no knowledge beyond that of the written character. He states that he did not make any notes in the vernacular for fear of being compromised should they be found on his person.

⁶ There are three principal routes from Peshawur to Jalālābād, all meeting at Dakka Kādn. The one usually traversed by merchants is the easterly or Ab-khāna route *viâ* Fort Michul. On this line the Kābul River has to be crossed twice. The road passes through the Mohmand country, and in the time of Nazroo Khān, the Hākīm of Lālpurā (who has within the past few months been deposed by the Amīr of Kābul), admirable arrangements were made for the passage of merchants. Between Michul and Dakka are five *chaubis* or *guards* of from twelve to twenty men each. At each *chaiki* fees are taken (one rupee for each laden horse), on payment of which the guards guarantee the safe passage of the caravan. In summer months the Kābul River is much swollen from the melting snow, and passage is then so dangerous that travellers avoid crossing it, and take in preference a more southerly route, by Tatra, a longer and much more difficult road. The most southerly line is the well-known one of Khyber; it is much shorter and easier than either of the others, but merchants seldom or never dare to face the wild Afridi, who hold the country through which it passes.

⁷ Also called Sir-i-long, Sauleh-aulong, and Sal-aulong. It was by this pass that Wood tried to get to Kunduz in November 1837; and although he succeeded in reaching the foot of the pass, he was turned back by the snow, and had ultimately to retrace his steps to Kābul and try the easier route *viâ* Bamian. Colonel Yule notices no less than nineteen known passes over the Hindū Kūsh in the neighbourhood of Kābul. These may be divided into the groups of the *Pasjshir* passes, of which the best known is the Khawak; the *Parwan* passes, one of which has now to be described; the *Chahardad* passes, of which the best known is the Kasshan or *Hindū Kūsh*; (a) and the *Hajiyak* passes leading to Bamian. It is by the latter, about 12,000 feet in height, that in modern days nearly all travellers go to Balkh and Badakhshān.

(a) Here it was where a companion of Wood's perished in the same air-storm that drove the latter back to Kābul.

Kábul to Paizabád.

The country from Kábul to the south side of the Sar-ulang Pass has been partially surveyed by Wood,¹ but the road to the north of the pass is now described for the first time. The Havildár's itinerary will be found in an appendix to this chapter, so it is unnecessary to enter into much detail in this place. Traversing the district of Koh-i-Dáman,² a thickly-inhabited and well cultivated plain, the great fruit-producing district of Kábul, he arrived in three days at Chárikár, the chief market of the Kohistán.³ From this place a road diverges on the left by the Tutúm valley to the Kaoshán Pass, which is stated to be one of the easiest over the whole range of the Hindú Kúsh, although it is closed by snow for eight months in the year, and rendered dangerous by floods for two more. It has of late years been much frequented by robbers, so that the Sar-ulang Pass, although more difficult, is generally used by the few traders who cross this portion of the range.

At Chárikár the Havildár had some difficulty in getting leave to proceed, but he managed to slip away one night under cover of the darkness. At four miles from Chárikár he reached the Sar-ulang or Parwán stream, up which the road continues to the Sar-ulang Pass. The road is good, and passes through well-cultivated country till within three miles of Parwán, a large village twelve miles from Chárikár. It then becomes bad, and continues so right up to the pass. Above Parwán the valley narrows, and the road skirts several small scattered villages surrounded by scanty patches of cultivation. The characteristic feature of the valley is the enormous quantity of mulberry trees which it contains. The fruit is much sought after by the poverty-stricken inhabitants as a substitute for wheat and barley. The cold winds that are almost constantly blowing in this region prevent the fruit from ripening properly—a kind dispensation of Providence, as the dried-up fruit is easily ground and preserved, and the flour produced from it is the chief staple of food of the inhabitants of the valley. The leaves of the mulberry are not used in the production of silk; probably the climate is too severe for the breeding of the silkworm.

Between Parwán and the pass the road generally follows the stream, which has to be crossed several times, but in places the road is at some distance from it, and is carried over a succession of difficult ascents and descents, at one of which a pony belonging to the Havildár fell over a precipice and was killed—a great piece of good luck for the villagers, who at once proceeded to eat it.⁴ These people are very poor, and are said by the Havildár to be great thieves and only half-Mahometans; they wear black clothes, which are generally fabricated of bits of old blankets.

Eleven miles above Parwán is the village of Dowao, from which a road goes to Anderáb by the Báj-gah Pass,⁵ which is said to be easier than the Sar-ulang; but it is not often used by merchants, as the latter are always compelled by the customs authorities at Khush-darah, on the north of the pass, to proceed to Khinján, the chief town of the district, their journey being thus considerably lengthened without any compensating advantages. A few miles above Dowao is the village of Ahangarán,⁶ and beyond that is the village of Ulang, from

¹ Whose interesting description of this country will be found in Chapters XI and XII of the new edition of Wood's *Oxus*.

² Literally the "skirts of the mountains"; it is the name given to the district extending northwards from a ridge eight miles north of Kábul, to Parwán at the foot of the Hindú Kúsh mountains. It is watered by the Ghorbund, the Parwán, and the Panj-shir streams.

³ *Kohistán, i. e., mountainous district*, includes the valleys of Tugao and Nijro, in addition to the upper courses of the valleys mentioned in the last note.

⁴ While returning from Yárkand in 1874, I was more than once asked to give away the carcase of a pony for consumption by the camp-followers.

⁵ Called by Leech and others the Parwán Pass.

⁶ It was here that Wood emerged into the Sar-ulang valley on his road from Chárikár, his guides having apparently lost their way.

which the pass takes its name.¹ Above Ahangarân the hills are bare and treeless, but at Ulang the valley opens considerably, and the village is situated in the midst of a well-cultivated plain, where plenty of wheat is grown. The inhabitants are said to be more civilised and better off than those lower down the valley.

On the 12th November the Havildâr crossed the Sar-ulang Pass (about 12,000 feet in height); snow lay on the ground to the depth of a few inches for an extent of a few hundred yards only; the road was fairly good all the way from Ulang. He passed the night at Do-shâkh to the north of the range, at a point where the stream from the pass is met by another down which comes the road from the Kaoshân Pass to the west.

The passes from the Ghorbund valley (of which the Kaoshân is one) were closed on account of Hazâra robbers,² who inhabit the upper portion of the Ghorbund valley and its tributaries.

The Havildâr's road from Do-shâkh to Khinjân lay down a stony valley containing nothing but a few jungle trees. Khinjân, although the chief place in the district, is a village of not more than 100 houses. From it a road goes eastward to Anderâb, on which place most of the roads from the Panj-shir passes of the Hindû Kûsh converge. Another road goes westward from Khinjân to Ghorî, Heibak, and Tashkurghân. Khinjân is a Tâjik State³

¹ *Sar-ulang*, or head of the *Ulang*.

² This district is called Hazâra Ali Jam, inhabited by the *Shakhs Ali* division of the Hazâras. The Hazâras are a very large tribe of Tartar descent, inhabiting the mountainous country to the west of Kâbul, and to the west and north-west of the Ghorbund valley. They are Shiâ Muslims, and their language is akin to Persian. They are very poor, the whole of the country occupied by them being very elevated and unproductive; their principal wealth consists in flocks of the *dâmbar* or fat-tailed sheep. They are supposed to number altogether about 150,000 souls. When in want of food, they not unfrequently sell their own children for slaves. It is said by Masson that through them the revenue term *Sang ya bûs* (stone or goat) became known. "When a tribe is next to independent, it is said to pay a stone and goat revenue; that is, the collectors are met with an old lean goat in one hand and a stone in the other, as much as to say, 'If you do not put up with this shadow of tribute, you shall have this stone on your head!'"

³ As the terms Tâjik and Uz-beg frequently occur in this narrative, it may be as well to define them.

The Tâjiks may be looked upon as of Persian descent; they were the original inhabitants of Western Asia at the time of the invasion of the Turkish races in the fifteenth century, prior to which time it is probable that the whole country was covered with a people speaking the language of Irân—a race descended from the ancient Persians and the Arab tribes who conquered Persia and the country to the east of it in the first century after the Hegira.

The Uz-begs are said to derive their name from Uz-beg Khân, a descendant of the famous Chenghis Khân, and an inheritor of much of his power. They were probably a medley of Tûrki and Mongol tribes, and have been the dominant race in Bokhâra and other parts of Turkistân since the fifteenth century. In consequence of this supremacy, many other tribes have since assumed the appellation of Uz-beg without possessing any legitimate title to it.

In the plains of Turkistân the two races are now mixed up in varying proportions, the towns generally containing a preponderance of Tâjiks, while the country districts are occupied by Uz-begs.

The latter invariably speak the Tûrki language, while the vernaculars of the former have generally a large admixture of Persian. Indeed, according to Elphinstone, the names of Tâjik and Parsiân are used indiscriminately both in Afghânistân and Turkistân. The term "Sart" is also used, especially in Khiva and Khokand, as almost synonymous with Tâjik. I have heard the Kirghiz of the Thien Shân apply this latter term generally to the inhabitants of the towns as distinguishing them from those of the country. A modern writer notices that "in a recent Firman the Khâna of Khokand directs that neither nomads nor Sarts shall molest certain travellers (Fedchenko and his party), thus showing that he considered all his subjects to be comprised under one or other of those titles."

At the time that the Uz-beg race obtained the supremacy in the plains of Turkistân, certain of the Tâjik inhabitants either fled to or maintained their positions in the more hilly and inaccessible tracts. These now form what are termed the *Galcha* States, the most important of which are Darwâz, Karâtigin, Badakhshân, including Shighnân and Wakhân, Chitrâi, and Kanjûd. All of these countries have separate dialects, the principal foundation in all being Persian. In Darwâz and in the lower portions of Badakhshân, the vernacular is a pure Persian, and any one speaking that language can converse freely with the inhabitants. In these two countries, as well as amongst the Tâjik districts in the plains, people are of the orthodox Sûnni (a) religion, whereas in the more inaccessible districts of Shighnân, Wakhân,

(a) The Sûnnis are the orthodox Muslims, of whom the Sûlâts of Turkey is the head. They call themselves Bando-i-Khuda, or the slaves of God, while the Khâls call themselves Bando-i-Shah (Hazrat Ali), the slaves of Hazrat Ali, who was the son-in-law of Muhammad. The Khâls hold Ali Hazrat Ali's descendants in great reverence. There is bitter hostility between the two sects, and the Sûnnis in Central Asia frequently designate the latter as *râfidis* or heretics, and think it no crime to sell them into slavery.

I am indebted to Captain J. M. Trotter of the Quartermaster-General's Department for the following note, as well as for one or two others with the initials J. M. T.:

The professors of the Mahomedan religion are divided into two great sects, the Sûnni and the Shiâ. The former comprises the whole of the Afghân and Turkish races and most of the Arabs, including the tribes near Mecca. The Shiâ religion is the established faith of the Muslims of Persia, and, as will be seen from the notices of the Tâjik States in these reports, of most of the Iranian races throughout Central Asia, unless where these have been perverted by their more powerful neighbours.

under the direct orders of Muhammad Alum Khán, the governor of Turkistán. Tolls are levied here on all merchants from the south. The authorized demand is the usual Mahomedan rate of 1 in 40. Up to within two years of the Havildár's visit,¹ the exactions were said to have been so great that merchants avoided this route altogether, but a change for the better has now taken place, and the Havildár had only to pay the moderate amount of Rs. 12 per load.²

From Khinján the Havildár's route lay up the valley of the Inderáb River as far as Khush-darah, crossing a stream from the Báj-gah Pass. The country was inhabited by nomadic Hazára tribes possessing large flocks of sheep and cattle. Their encampments consist of huts of clay walls, roofed over with sticks and whatever old cloths can be collected. Inderáb is one day's march to the east of Khush-darah, where the Havildár's road turned off to the north and passed over an uninhabited plain, crossing (at twelve miles) a high flat ridge, a mile in width, and rising about 9,000 feet above sea level. Thence the road descends through the Buz valley into the Narín plain, over which it passes to the village of the same name. Numerous tents of nomads were scattered over the plain, and a few small villages were seen at some distance from the road.

Narín is a small village with a bazár, which is frequented by the surrounding nomadic inhabitants. Rs. 2 per load was here levied for the benefit of Súltán Múrád Khán, of Kunduz, into whose territories our travellers had now entered, and where they suddenly found themselves in the midst of an Uz-beg and Túrki-speaking population; up to this point the language spoken had been Pushtí.

From Narín, after crossing a low ridge along which passed the road from Kunduz to Inderáb, the route lay along the east edge of the Jabúl-dágh plain, and at a distance of twenty-six miles is the small town of Ishkimish, where the Havildár was detained three days on account of snow. On the next march he crossed the Bungi River and reached Khánakáh. The road from Narín to the Bungi River³ passes in a north-east direction over a gently undulating grassy plain which is bounded on both sides by mountains, those towards the east being the highest, but on neither side were the hills covered with snow other than what had freshly fallen.

Upper Chitrál, and Kanjúd, the inhabitants are all Shiás, *i. e.*, the same religion as the modern Persians. It has been assumed from this that the Tájiks were all originally of the Shiá persuasion.

The whole of the Galcha tribes claim for their sovereigns a lineal descent from Alexander the Great. Various writers have given the most conflicting descriptions of the peculiarities of the Tájik and Uz-beg races, but it may safely be asserted that the former are the more lively, sociable, and intelligent of the two. They almost invariably reside in fixed habitations, and devote themselves to trade, commerce, and agriculture. The Uz-begs, on the other hand, are chiefly pastoral and nomadic, and nothing delights them more than wandering about from place to place with their flocks and herds. They are renowned for their hospitality, their simplicity, and the comparative kindness with which they treat their slaves.

¹ *i. e.*, up to 1871.

² The merchant travelling through Afghanistán has to submit to numerous and severe impositions. The Havildár had only two animals laden with merchandise, but in addition to the fees paid to the Hákim of Lálpóra, for safe transit from Peshawur to Jaldárád, he had to pay Rs. 3½ per load at the latter place. In Kábul itself Rs. 181 was paid on the two loads, although the nominal tax is only $\frac{1}{32}$ th the value of the goods. Bokhára and Káshghar (Yárkand) are said to be the only countries where the tax levied is limited to 1 in 40, the utmost that by Musulman law can be demanded in the case of goods belonging to the Faithful; even there the officials are inclined to over-estimate considerably the value of the goods.

³ This river is said to come from the Khost district, a small Tájik State north of the Hindú Kúsh, and east of Inderáb.

The minor question upon which these sects differ are very numerous, but the fundamental point at issue is as follows: The Sunnis hold that the succession to the chief authority among the followers of Muhammad was rightly settled after the death of that prophet by the successive election of the three first Imáms, Abu Ue'r, Omar, and Othman; while the Shiás conceive that this dignity was hereditary and should have devolved upon Ali on the death of his father-in-law (Muhammad). The Sunnis believe accordingly that the office of Commander of the Faithful has descended from the Khalifas to the Sultáns of Constantinople, while the Shiás are of opinion that the twelfth hereditary Imám, Muhammad Mahdí, who disappeared from the earth when he was nine years old in A. D. 888, has in his possession the only complete copy of the Kurán, and will reappear eventually as the head of their religion. The enmity between these sects is extremely bitter, and among the Uz-begs it is considered no crime to capture and sell a Shiá as a slave. In India, where I believe the Sunnis predominate, the disturbances that occur from time to time during the Muharram show the intensity of the feeling even in a country by no means distinguished for the orthodoxy of its Musulmans.

The Muharram is the first month of the Mahomedan year, and the first ten days are held sacred in commemoration of the martyrdoms of Hasan and Hussein, the sons of Ali. The tenth day on which Hussein was slain at Karbela is more especially observed.

In summer the plain is covered with a rich long grass, and tents of Uz-beg nomads are scattered all about the country, in addition to numerous small villages containing from four to five houses each. Camels, horses, and sheep abound, and it is a rich pastoral country. No rivers are crossed *en route*, but numerous springs issue from the soil and give a plentiful supply of water, which is used for irrigation, and in places gives rise to extensive grassy marshes. Near the villages are fields of wheat and barley. Melons are grown in considerable quantities, but there is little fruit besides, the country being almost destitute of trees. Firewood is obtainable from the ravines up the mountains to the east, but *bála*¹ is dug in large quantities from the ground, and is almost universally used as fuel.

From Khánakáh into Kalaoghán, a distance of twenty-eight miles the country, is more hilly, and the road, which is very bad, crosses a number of steep ridges. A small saline stream (Namak-áb) is crossed *en route*, as well as the larger stream of Tulikhán, which was forded with considerable difficulty at a place where it was about eighty paces wide. Three miles short of Kalaoghán is Ak-bulák, a village at the foot of the Lattaband Pass, over which lies the main road from Kunduz to Badakhshán. Kalaoghán, or Kila Afghán, is the residence of the Mír of Kalaoghán, a tributary of the Mír of Kunduz.² The fort is surrounded by a village of about fifty houses. From Kalaoghán to Faizabád, the chief town of Badakhshán, is a distance of fifty miles, and the road passes through a well-known country, familiar to us from the writings of Wood and Colonel Yule. The road crosses in succession the rich fertile valleys of Mashad (or Kishm),³ of Tezgam,⁴ and of Daraim,⁵ after which a long stretch over the Argu plain brings the traveller to Faizabád.

It was on the 19th November that the Havildár reached Faizabád, the modern capital of Badakhshán, and the residence of Naib Salar Hafizúla Khán, commander of the Afghán forces of occupation.⁶ Here he settled down for the winter, and remained till the 21st April 1874, as he asserts that the road from Koláb to Darwáz is absolutely closed all through the winter.⁷

Faizabád is a town that has seen strange vicissitudes. Well known in ancient times as the capital of Badakhshán, it was destroyed by Mír Murád Beg of Kunduz during the early part of the present century and razed to the ground; its inhabitants were deported to the pestilent fens of Kunduz, where most of them died. When Wood passed its site in 1837, scarcely a vestige of the old city remained, and the seat of government had been removed to Jerm. A few years subsequently, about the time of the death of Sultán Murád, Mír Yar Beg, one of the exiled descendants of the hereditary rulers of the country, recovered possession of Faizabád, rebuilt the fort, and fixed his residence there. From that time until the present it has been fairly prosperous. In 1859 the then ruler Mír Sháh gave in his submission to the Afgháns (under Azim Khán). At Mír Sháh's death in 1862, he was succeeded by his eldest surviving son, Mír Jahándar

¹ Probably the same as the well-known *bártaí* of Ladákh, the only fuel found over very large areas. It is a plant consisting almost entirely of woody fibrous roots.

² In Wood's time Kalaoghán belonged to Badakhshán, which was separated from Kunduz by the range of the Lattaband Pass. This is not now the boundary, as I learn from more than one recent authority.

³ Kishm is a district of Badakhshán lying above Mashad and on the same stream.

⁴ The Tezgam or Tezgám valley is well wooded, and pistachio trees abound.

⁵ About one mile east of where the road crosses the valley is the village of Daraim, now occupied by a regiment of Afghán cavalry. The valley is somewhat narrow, and contains perhaps 1,000 houses in all.

⁶ The Afghán garrison of Badakhshán consisted of a battery of artillery, two regiments of cavalry, and three of infantry. Each cavalry regiment or (*ramáda*) consists of six troops, each troop containing seventy or eighty men. An infantry regiment contains eight companies of 100 men each. One cavalry regiment is quartered in the Daraim valley and the other at Jerm. The whole of the infantry and the artillery are quartered at Faizabád.

⁷ Between the 20th March and the 20th April a party of the Kásbghar embassy, under Colonel Gordon, of which I was a member, was toiling across the road from Kásbghar to Badakhshán *via* the Little Pámir,—doubtless a more difficult march than that from Faizabád to Darwáz. I must confess, however, that the cold was intense and the journey difficult and trying.

Sháh, who, after constant wars with members of his family and others, was finally driven from his kingdom in October 1869 by Sher Ali, the present Amír of Kábul. Mír Muhammad Sháh, a member of the same family as Jahándar Sháh, was installed as governor, but subsequently had to give place to Naib Muhammad Alum Khán, the present Afghán governor of Turkistán. The Turkistán government includes the whole of the countries between the Hindú Kúsh and the Oxus, *viz.*, Báلكh, Kunduz, and Badakhshán, with their dependent states. The seat of the government is Báلكh. The Naib Salár, the chief of the forces in Badakhshán, is the military governor of that province, but the taxes, &c., are collected by a civil deputy of the government of Turkistán. Faizabád now contains, besides the cantonment, about 200 houses, and being the residence of a large garrison, is a place of considerable importance. Although the Naib Salár was personally very popular in the country, the Havildár states that much oppression was committed by the officers and men of the army, who pay but little attention to the orders of the Naib, or in fact to any but those of Muhammad Alum Khán, who is detested throughout the whole of his government for his cruelty, oppression, and gross debaucheries.¹

Faizabád to Koláb.

The Havildár says he did not find Faizabád a very pleasant place to reside in, and was very glad to make a start for Koláb on the 19th April, taking with him for sale churru,² which he had purchased in Faizabád, and which appears to be an article much sought after in Koláb. His nephew and one servant remained behind in Faizabád to await his return. Recrossing the Argu plain, and then going westward, he crossed the Kokcha River at Altyn Jaláb by a wooden bridge, and on the second day reached Elkáshán, thirty-five miles from Faizabád. The greater part of the road was hilly and stony.

Turning northwards, on the third day he reached Rusták, a large town containing five or six hundred houses, and the chief place of the surrounding district. About 200 soldiers are quartered here, a detachment from the garrison at Faizabád. The country is an open plain with low mountains lying to the east of it; it is thickly inhabited and well cultivated. It was with considerable difficulty that the Havildár obtained his rah-dari, or passport, and he was detained six days in Rusták on this account. On the 28th April he marched to Chiáb, the road passing through an open plain, very fertile and richly cultivated, the district being famous for its melons. On the road he passed several springs, or rather natural fountains, spouting out water to a height of several feet above the ground. The water was cold, and those fountains are said only to be in action during the hot weather, when the level of the water in the Oxus River is unusually high.

Another day's march brought him to Samti, a considerable village on the left bank of the Oxus. As far as the village of Kuduk his way lay through a rich and fertile plain, after traversing which the road enters stony ground near a spot where several springs issue and form a stream which flows into the Oxus at Samti.

In this small stream are five or six *Kar-chár* or *Karchai*, local terms designating places where they wash for gold. Each *Kar-chár* is worked by some ten or twelve men, who are engaged all the year round, except during the *chilla* or period of forty days' cold. Every month the gold-seekers assemble together, and the gold is sold to merchants, who collect together for the purpose at the monthly sales. One-twentieth of the purchase-money at the public sales goes to the Governor of Rusták. The annual revenue produced from this source is about 5,000 *langas*, *i. e.*, about 1,000 rupees, or 100 pounds sterling. The washing of gold appears to be carried

¹ This may appear strong language, but it is undoubtedly true, and has been confirmed by every one I have spoken to who has been in the country.

² An intoxicating drug made from the hemp flower; it is one of the principal exports from Yárkand both to Badakhshán and to Hindustán.

on in the usual manner by pouring water over soil collected from the river bed. In a good day's find the men of one Karchal sometimes collect as much as two *tillas*¹ worth of gold. One miskal sells for about 20 tangas. Gold is also found in the neighbourhood at Shahr-i-Buzurg and Da-ungh villages, which lie to the east of Samti, on the left bank of the Oxus.

On the south side of the Oxus, at Samti, there is a guard of 24 Afghán soldiers, who permit no one to leave the country unless provided with a passport from the Hákim of Rusták. The Havildár fortunately had his *en règle*. The passage was effected on rafts made of inflated skins; the horses, guided by ropes, swam alongside. The river is 800 paces wide, and the current is very rapid. On the north side the hills come down close to the bank, but on the south side there is a very rich and fertile strip of land, about a mile in width, between the river bank and the stony hills to the south. Numerous springs here issue from the ground, and the water from them is conducted into large artificial reservoirs, where it settles beautifully clear; fish of many kinds are seen disporting themselves therein. These tanks are surrounded by vineyards and orchards of mulberry and apricot, while wheat grows in great profusion all around—a charming spot, but the inhabitants are terribly oppressed by their Afghán rulers.

The Oxus River here separates the dominions of the Amír of Afghánistán from those of the Amír of Bokhára. The river from this point upwards, as far as Wakhán, is generally called *the Panjah*; below Samti it is more generally known as *the Amú*.

On reaching the north side of the river, the Havildár seized the first opportunity he could get of concealing his instruments, for he had been forewarned that at Boharak, the first village on the Koláb frontier, all travellers are carefully searched to see that there is no attempt to smuggle gold, on which a tax of 2½ per cent. is levied. Before entering the village the baggage and persons of himself and followers were thoroughly examined, but his forethought saved the instruments from discovery. The following morning, after an inventory of their merchandise had been taken, the party proceeded to Koláb, which they reached the same evening. The road passes over low undulating hills, covered with rich cultivation: wheat grows in such profusion that it was sold at about 240lbs (3 maunds) per Kábuli rupee,² and is so plentiful that when the harvest is gathered people give or throw away their old stocks. Horses are fed exclusively on wheat.

Three villages were passed on the road, besides numerous encampments of Uz-beg nomads, which are scattered all over the country. The Havildár states that these people do not appear to be confined to any one piece of ground, but move about and cultivate or graze their flocks where they please. Although the country is well populated, the soil is so rich that there appears to be room for all and more besides. In addition to the Uz-begs, the hereditary lords of the soil, there are said to be in Koláb 4,000 houses of refugees from the south side of the river—men from Kattaghán, Ghorí, Baghlán, and Kunduz,³ subjects of the Amír of Kábul, who have fled from the oppression of Mír Alum Khán, the present Governor of Turkistán. While the Havildár was in Koláb, letters came to the Amír of Bokhára from Kábul demanding the extradition of these people, who positively refused to return, saying they would rather fly to Khokand and Káshghar than return to their own country.

¹ The value of the *tilla* varies in different parts of Asia. It is coined in Bokhára, Khokand, and in Káshghar. In Bokhára in keeping accounts 20 tangas go to a *tilla*, but the actual rate of exchange is generally from 24 to 28 tangas. A British rupee (present value 1s. 9½d.) is worth about 5 tangas, so that a *tilla* may be roughly said to be worth about ten shillings. The Havildár met in Koláb with some of the Amír of Káshghar's *tillas* (which were coined for the first time, while Sir D. Forryth's mission was in Káshghar) in the name of Sultán Abdul Aziz of Turkey. The coins passed current the same as those of Bokhára.

² The Kábuli rupee is worth about ½th of a British Rupee, i. e., about one shilling and a penny.

³ Among them were many Afgháns, probably adherents of Abdul Rahmán Khán, the exiled nephew of Sher Ali and now resident at Táshkand.

The changes in Central Asia brought about by time are indeed curious. The Havildár visited Badakhshán in 1870 and again in 1874, and states that the contrast, even after this short interval, is most striking. Villages which during his first visit were flourishing and thickly inhabited he now found in ruins. Many families had fled, and others had been forcibly transported to Báikh, and Muhammad Alum threatened to supply their places with families of Afgháns. Turning, however, to the brighter side of the picture and comparing the state of Koláb as it now is with what it was forty years ago, at which period we know on Dr. Lord's authority that Murád Beg, the ruler of Kunduz, finding that all attempts at pacifying the Kolábis were useless, at last treated them as he had done the Badakhshis—he razed their town; and the inhabitants, at least such as survived, were seen by Dr. Lord occupying two villages on the road from Kunduz to Khánabád. Dr. Lord also saw some other exiles from Mominabád, whom he came across near Hazrat Imám, also in the Kunduz district, at a village where he "was astonished to see a graveyard, in which he counted no less than 300 graves, while probably half as many more remained uncounted. These were quite recent, insomuch that on but few of them had the grass begun to grow. 'Tell me,' said he to one old man, who was lingering near the spot, 'what people you are, and what misfortune has befallen you.' 'We are Tájiks,' replied the man, 'from Mominabád: last Ramzan was a twelvemonth since Muhammad Beg brought fifteen hundred families of us here, and I take an oath that not eight hundred individuals are now remaining. This graveyard,' added he, 'is only half; there is another equally large at the end of the village.'"—Koláb and Mominabád are now flourishing and prosperous towns.

The city of Koláb is on the left bank of the Yakh-sú¹ River, the bed of which is one mile across, but the water is in several channels, so that the river is easily fordable at all times of the year. The city, including the bazár, contains 500 or 600 houses, mostly built of clay. A few of the mosques and better class of houses are built of burnt bricks. There is a garrison of 50 Bokhára soldiers. The inhabitants are in the proportion of two-thirds Uz-begs to one-third Tájiks: all of them are Súnnis. In the Koláb bazár reside many Kábuli and Bokhárián merchants, as well as some goldsmiths from Chach (Hazára) in the Punjab.²

The Havildár found the Kábulis very inquisitive as to who he was and where he was going to. The story which he told at Koláb was that he was going to Darwáz to try and recover a large sum of money of which he had been defrauded by a man who was now residing there. The Havildár had received in Badakhshán, from the Naib Salár Háfizulá, letters of introduction both to Kachana Bi, the governor of Koláb, and to Sháh Muhammad Suraj Khán, the King of Darwáz. He was also provided with letters from other Afghán friends, but he found the feeling of the people so hostile to the Afgháns generally that he judged these letters might do him more harm than good, and in consequence never presented them.

Gold is brought into Koláb in considerable quantities from many of the surrounding districts, notably from Tagnao and Ragnao (districts on the Oxus between Darwáz and Samti) and the upper course of the Yakh-sú Valley, above Koláb. The gold from the last-mentioned place is considered the best. Much of it is made up into ornaments, such as earrings, &c., for the Uz-beg women, by whom golden ornaments are much worn, for which high prices are given.

The Havildár remained in Koláb till the 25th May, having been there for nearly a month, and states that during his stay the rulers of the neighbouring countries of Kartigin and

¹ This is the pronunciation given by the Havildár, but possibly Ak-sú is the correct word. The former means ice river, and the latter white river.

² Near Attock.

Darwáz both passed through the place on their way to pay their respects to the King of Bokhára at Shahr-i-Sabz.¹

In the early part of May much rain fell. The season for snow and rain is during the months of March, April, and May. This rainy period is called "chakak" both in Koláb and in Badakhshán. The Havildár states that it sometimes rains there as violently as in Hindustán during the monsoon.

Koláb to Darwáz.

The first day's march from Koláb was to Mominabád. As far as Dahána the road lay up the Yakh-sú Valley, here from one to two miles broad, with gently sloping sides covered with pasture and cultivation. At Dahána the road passes up a narrow valley, and then over an open plateau to Mominabád, a town of 300 houses, situated in a richly-cultivated plain. At a distance of about three miles in a north-east direction there are bare stony hills. Numerous springs issue from, and tend to fertilise, the plain. The inhabitants are all Tájiks. From Mominabád a road goes over some high snow-covered hills which lie to the east of the town, to the district of Tagnao, situated at one and a half days' journey from Mominabád, on the bank of the Oxus. One day's journey farther up the river is the district of Ragnao. These districts contain several villages and belong to Koláb. There is said to be no practicable road down the river, but communication is carried on between these villages and Samti by means of boats made of inflated skins.

The next day's march (26th May) was to Khuwálin (or Khwáling). The road descends to the Yakh-sú River, up which it ascends for awhile, and then passing on to the right bank, crosses a range of hills by an easy pass rising about 2,000 feet above the river bed. From the pass a fine snow-covered range of mountains was visible, running nearly north and south at a distance of about 20 miles; beyond it lay the Oxus. A few miles to the north of the pass is Khwáling, a flourishing town of about 500 houses.

Khwáling is under the orders of the Hákim of Baljuwán, a large town lying about one day's journey off in a westerly direction. A stream rising from springs near Khwáling is said to flow to Baljuwán, and thence to pass to Kangurd, near which it joins the Wákah River.²

The districts of Baljuwán and Koláb are under governors (hákimis), who are immediately subordinate to the Chief of Hissar³ (a son of the Amír of Bokhára). The district governors

¹ This incident is of considerable moment, as it appears that the ruler of Karátigin now acknowledges the supremacy of the King of Bokhára. Karátigin is a country of considerable importance, and is said to contain a population of 100,000 souls. It consists of the upper portion of the valley of the Sarkháb River (which is also called river of Karátigin) and its tributaries. Like other inaccessible Central Asiatic States, it is sometimes entirely independent, and at other times admits the supremacy, more nominal than real, of its strongest neighbour. It is not many years since it was tributary to Khokand, but as that country has lately lost much territory and power, the ruler of Karátigin now appears inclined to submit to its more powerful neighbour, the Amír of Bokhára. The ruler of Karátigin is on very friendly terms with our ally the Amír of Káshghar, with whom he is intimately connected by marriage.

² It is on this statement, which is confirmed in some essential particulars by the late Mr. Fedchenko, that the construction of the portion of the map to the west of Koláb depends. We have now set at rest the disputed question as to whether Khwáling and Baljuwán are or are not identical, and we are enabled for the first time to reconcile the different accounts that have been given us of the journey between Khokand and India by Abdul Mejid and Sulán Muhammad, our only authorities hitherto for the geography of this portion of Asia, and these very vague and unsatisfactory.

³ Hissar, which is now an integral part of the dominions of the King of Bokhára, was two hundred years ago, according to Dr. Lord, an independent Uz-beg State under the rule of the famous Kataghán chief Murád Beg, an ancestor of the present ruler of Kunduz. Murád's son, Muhammad Khán, rendered himself so obnoxious to his neighbour, the King of Bokhára, that the latter sent an army against him and drove him out of Hissar. Muhammad Khán, retiring before the forces of Bokhára, seized the neighbouring country of Koláb, (a) and then crossing the Oxus, obtained possession of Hazrat Imám and Kunduz. Although he never regained possession of Hissar, he laid the foundation of the

(a) Turning out Abdulla, a chief of the Karzma tribe of Uz-begs, who seems to have followed the example of Muhammad Khán and settled down in Tashkurghán, of which place he took possession. One of his descendants, Kilich All Beg, was subsequently ruler of Tashkurghán and Balh, and was a great antagonist of Muhammad Murád Beg.

are frequently changed by order of the Amír, in order that they may not oppress the people. The Havildár states that the latter are all well contented with the Bokhára rule; revenue is paid in kind and in quantities strictly in accordance with the *shara* or Mahomedan law, (i. e., $\frac{1}{10}$ th of the produce of the fields and $\frac{1}{4}$ th share of live stock). These legitimate taxes only are taken, and no oppression is committed by the local Governments. In fact, the Havildár speaks very highly of the moderation exercised by officials throughout the whole of the Bokhára dominions—a striking contrast to what goes on south of the Oxus. Property is very safe, robbery being generally punished with death.

On arrival at Khwáling the Havildár met with another serious delay. It appears that during the absence of the King of Darwáz from his country no stranger is allowed to enter for fear that emissaries of the King's numerous enemies should gain admission. The King did not return from Bokhára till the middle of June, up to which time the Havildár had to remain at Khwáling. On the 17th June, in company with a Kábuli merchant, whose acquaintance he had made at Koláb, he marched to Saripul, the frontier post (on the left bank of the Yakh-su River) and village of Darwáz. It is a small place, although the residence of the headman of the Yákh-su District, which comprises the upper portion of the valley of the same name, and extends from Saripul to Talbur, a village one day's march higher up the stream.

In this portion of the stream gold is found in considerable quantities by washing the *débris* obtained from the river bed.

There are several small villages in the valley containing stone-built habitations. There is scant cultivation here and there, but from Saripul the soil is very stony and poor; the pastures which in Koláb covered the hills enclosing the valley, are here replaced by rocks and stones.

The Havildár reached Talbur on the 28th June, and on the 29th had a long and difficult march to Kila Sághri Dasht, crossing *en route* two high ranges by difficult passes.¹ After traversing the second pass, the road follows a stream down to Kila Sághri Dasht,² a fort situated on an elevated plain, over which are scattered ten or twelve small villages. The fort itself is surrounded by about forty houses. The Havildár's baggage was again searched, but he had fortunately had time to conceal his instruments beforehand. The Saghri Dasht plain is the most fertile portion of Darwáz, but is very poor as compared with Koláb. The grain grown is principally barley; but it is insufficient in quantity to support the population, which is mostly dependent on Koláb for its supply of grain. From Sághri Dasht to Kila

larger state of Kunduz, which after many vicissitudes, and having been successively tributary both to the famous Nadir Shah of Persia and to the Afgháns and to Badakhshán and Bokhára, probably attained its maximum importance under Muhammad Murad Beg, the 6th in descent from Murad Beg. He was the ruler of the country in 1838 when it was visited by Dr. Lord and Lieutenant Wood, and was then the acknowledged ruler over nearly the whole of what is now called Afghán Turkistán, as well as the districts of Koláb, Kubáshian, and Kurghán Tapa, all on the north of the Oxus. Mir Murad Beg is believed to have been murdered by his son Mir Atalik in 1850, prior to which date he had given in his submission to Dost Muhammad of Afghánistán. Prior to Murad Beg's death, Kolab appears to have been formed into a semi-independent State. In 1869 its ruler, Mir Sara Beg, a man of much energy, had obtained considerable influence over the neighbouring districts of Darwas and Karatigin. The Amír of Bokhára took a large army against him, conquered and took permanent possession of the country, and ejected the Mir, who is now an exile in Kábul, where he is much looked up to, and is said to be in receipt of a large allowance from the Amír of Kábul.

¹ Between these two ranges flows northwards the Tawil Dara stream, which flows past a village of the same name, below which, according to the Havildár, lies the district of Wákhia Bála or Upper Wákhia. The knowledge of the Havildár as to the country off his line of road is extremely limited, and I am inclined to think that the late M. Fedchenko was correct more probably in stating, as the result of inquiries made by him on the subject, that Tibi Darah or Tawil Dara, and Chibul Darah or Tchiwil Darah are both villages of Wákhia. Abdul Medjid in returning from Khokand must have come up the Tawil Darah and joined the Havildár's route at Talbur.

² It is an interesting study here to follow M. Fedchenko in his researches as to this part of the country—see Bulletin de la Société de Géographie, Paris, June 1874. Many of his notices have been of use to me in the compilation of the map.

Khúmb (or Khum), the capital of Darwáz, is a long day's march; the road ascends an easy pass, and then descends by a very difficult road into the valley of the Goshán River, down which a very bad path leads to the fort, which is situated on a plain at the junction of the Goshán River with the Oxus. The Havildár went straight to the house of the local governor, Mír Mirza Abdulla, a very influential man in these parts, and in great favor with the Sháh-i-Darwáz.¹ The Mír took the Havildár on the following day to visit the king, who asked him what business he, an Afghán Pathan, had in the country of Darwáz. The Havildár said he had come to trade, and that he was a resident of Koláb, and a subject of the King of Bokhára. The Havildár was evidently looked upon with suspicion, both by the King and his people, but his host, the Mírza Abdulla, appears to have been very kind and to have taken his part; after a delay of only three days, permission was obtained for the Havildár to proceed to Shighnán,—the great object of his journey.

On the 3rd of July the Havildár left Khúmb, his road lying up the Oxus Valley, on the right bank of the river. The first halt was at the village of Jarf, the second at Kurgawad, and the third Wadkhud; on the fourth day he left the Oxus and went up a large tributary stream to Kila Wanj,² the chief town of Eastern Darwáz, and the residence of Muhammad Khán, a younger brother of the king. Between Ságghri Dasht, which has already been mentioned as the most fertile part of Darwáz, and Wadkhud, a distance of more than fifty miles, although numerous villages are scattered along the road, grain (barley) is only cultivated at two places, *vis.*, in small quantities at Kila Khúmb, and on a tolerably large scale at Mai Mai³ between Jarf and Kurgawad. At all other places in the valley the inhabitants prefer devoting themselves to the cultivation of cotton which they themselves manufacture into coarse cloth, and get in exchange from Koláb a far larger supply of grain than they could probably themselves raise on the few scanty patches of land which is all they are able to reclaim for cultivation from the stony valley of the Oxus. Fortunately for the people, vines, mulberry, apricot, and apple trees abound. The horses are fed on *dried mulberries* as a substitute for grain, and are probably not badly off, for we have already seen that the inhabitants of the Parwán valley have nothing else to live upon but flour made from mulberries: this article in times of scarcity is also used by the inhabitants of Darwáz.

After giving some valuable presents to the governor, the Havildár received permission to continue his journey. It was no easy matter to get leave, as there is very little communication between the countries of Darwáz and Shighnán, whose rulers and people are very hostile from both political and religious⁴ considerations. On the 9th July the Havildár left Wánj, reaching in the evening Kila Yaz Ghulám, the frontier village of Darwáz; the road was very difficult indeed, and a very high pass was crossed *en route* which is said only to be open for two months in the year, *vis.*, July and August. An alternative path goes from Kila Chumarj⁵ up the Oxus River. This road, which is said to extend all the way to Boshán, is only open to foot passengers. In many places the cliffs are perpendicular, and the pathway consists of supports made of rope, attached to iron pegs driven into the rock. The traveller makes his way along with his feet on the rope supports while he holds on to the pegs with his hands. This

¹ The King of Darwáz.

² Wanj contains about 300 houses.

³ A place famous for the beauty of its scenery and its women. In Darwáz the latter are allowed to go about unveiled.

⁴ The people of Darwáz are Sónnis and those of Shighnán Shiáhs—a fact quite sufficient to account for the most bitter enmity. I have seen it stated (on Mr. Wood's authority, I think) that the people of Darwáz are Shiáhs, but this is not the case; the inhabitants of Koldb Darwáz are all good Sónnis, although the inhabitants of the neighbouring country of Karáshigin are, I believe, Shiáhs.

⁵ Or Jamarj, a large village on the left bank of the Oxus, opposite its junction with the Wanj River.

causeway is said to be hundreds of years old. Of course no traffic can be carried on by such a route.¹

Yaz Ghulám consists of a fort and village of about eighty houses. It is situated on a small tributary of the Oxus, only two miles from the big river, although perhaps 2,000 feet above it. It is the frontier village of Darwáz, and there the Havildár was told that one long day's march over a high and difficult pass² would see him safely in the country of Shighnán; but most unfortunately he was never destined to make the journey. Had he accomplished it, he would have connected his route survey with that of Munshi Abdul Subhán, who, working entirely independent of the Havildár, and in complete ignorance of his whereabouts, had determined the position of Shighnán and its northern dependency of Roshán, just two months prior to the arrival of the Havildár at Yaz Ghulám. A few hours after the Havildár's arrival, a letter reached the governor of the fort containing an order which had been sent from the Sháh-i-Darwáz for the despatch of the Afghán back to Wanj. This order was carried out, and on return there the Havildár was interviewed by Sháh Muhammad, who told him that there was a revolt in Badakhshán, and that he was suspected of being engaged in some political intrigue in connection therewith. By dint of bribes and presents the Havildár got Muhammad Sháh to write to the King, stating that he would detain him at Wanj until the disturbances were over, in preference to sending him to Kila Khúmb in compliance with the orders given.

The Havildár was kept in confinement at Wanj for twenty-three days, at the end of which he was told that he would not be allowed to proceed to Shighnán, but must return to Koláb. On the 9th of August he commenced his return journey.

The whole of the Oxus valley from Wadkhud to Yaz Ghulám is under the orders of Sháh Muhammad, who is described by the Havildár as a clever and intelligent man, and a just ruler. Wanj, the chief town, is a place of some importance, and contains about 300 houses. The Wanj River, which takes its name from the town, is said to come from the Alai. For a distance of 2½ days' journey above Wanj, the valley is inhabited by a fixed population, living in numerous small scattered villages of three or four houses each. There are no nomadic tribes in Darwáz, probably because it does not possess any great extent of pastures. There are often, however, grazing grounds (siláks) above the villages where the sheep and donkeys, which are very numerous, are sent to feed.

A road formerly lay up the Wanj valley to Khokand, by which the latter place could be reached in eight days from Wanj, but the Havildár was told that the road had been closed by a glacier for some fifty years or more. The higher portion of the valley is said to be inhabited by the Alai Kirghiz (subjects of Khokand).

The neighbourhood of Wanj is celebrated for its iron,³ as is also the adjoining district of Roshán.⁴ Swords, guns, hoes, spades, &c., are manufactured there in considerable quantities.

¹ Since the above was written I have come across the following note by Mr. Fedchenko:—"The direct road between Kila Khúmb and Shighnán presents many obstacles; during certain months it is impracticable, and then the only means of communication between the two countries is by means of baskets (corbilles). I had often heard of this kind of carriage at Samarkand, on my voyage to Khokand, and at first I did not believe the accounts, but I finished with being convinced that there was some truth in it. In impracticable defiles where some large river flows, they can only get along, I was told, by imbedding iron pins in the rocks, and suspending from them baskets attached to cords at intervals of about seven feet. The traveller places himself in the first basket, swings himself along, passes into the second basket, and so on to the end."

² Open for only two months in the year.

³ According to the Russian General Abramoff, *Waná*, which is doubtless the same as *Wanj*, has been celebrated from time immemorial for its good weapons.

⁴ Belonging to Shighnán.

The Havildár estimates that there are about 12,000 houses in the Darwáz country, which, allowing six inhabitants to each house, would give a total population of 72,000 souls. The trade of the country is inconsiderable, and consists almost exclusively in the exchange of iron and the cotton cloths¹ of Darwáz for grain from Koláb. With the exception of the Havildár's travelling companion, not another merchant was met during the whole of the Havildár's stay in the country. His friend lost by his speculation, for the King took all his goods and repaid them in sheep at a very unfair rate of exchange. There are no *serais*² in the country, and the Havildár used generally to reside with the headmen of the villages where he encamped. The inhabitants of Darwáz boast that no enemy can penetrate their country on account of the badness of the roads, but that even if they should succeed in effecting an entrance, they would very soon starve when they get there.

With the exception of grain the people are tolerably independent of outsiders; having plenty of iron, they manufacture their own guns and other weapons. In every house is a gun and a sword. There are no *sarbásas*, or regular troops, but every man is accustomed to fight, and most of them are good marksmen, as they have a good deal of practice in shooting, deer, wild sheep, and pheasants.³ They manufacture their own gunpowder, all the materials for which are found in the country.

The men usually wear turbans and long woollen cloaks (*chakwán*); the richer classes wear white under-clothing, but always woollen garments outside; when travelling they always carry swords. The women also wear long cloaks, and seldom wear any head-dress, although, like the sex generally, they are very fond of gold and silver ornaments. They go about unveiled.

There are but few horses in the country, and no camels. Donkeys are the most common beasts of burthen, there generally being two or three to every house; they are employed in bringing grain from Koláb. Sheep are tolerably plentiful, and are also occasionally used for burthen.

The houses are built of stone cemented by clay; the forts are generally well constructed and would form a good protection against musketry, but would of course be useless against artillery. There is only one piece of ordnance in Kila Khúmb, and it is of great antiquity.

It has been already mentioned that grain is very scarce; what there is, is chiefly barley. Vegetables are almost unknown. Fruit trees are plentiful, more especially the mulberry, the walnut, and the apple.

The inhabitants are Súnni Mahomedans, are religious, and very regular in their devotions. They are a quiet, hospitable race. They are, most of them, able to read and recite the Korán, and there are a great many Mullahs or religious instructors.

The only law known is the "Shara" or written law derived from the Korán, and the Hadís or precepts of the Prophet. The king is the dispenser of all punishments, and, as is frequently the case in Mahomedan countries, the penalty of mutilation or death so surely follows on theft that this crime is almost unknown.⁴

¹ Called *Kubos*.

² Covered enclosures built for the accommodation of travellers and merchants.

³ The Havildár brought back to India the head of a male mendí pheasant, which he assures me was shot near Wangj.

⁴ In the neighbouring countries of Koldáb and Kowadián the rule enforcing the wearing of veils is strictly enforced. This is also the case in the towns of Badakshán, but a good deal of latitude is allowed in the country.

⁵ In all Musulmán countries the law founded on the Korán and the Commentaries upon it is held to be sufficient for all purposes of civil and criminal jurisprudence. In practice, however, Musulmán rulers are often guided by their own fancies or by custom. This *lex non scripta* is known as *úf* (that which is known or established by usage).

Little or nothing is known to us of the ancient history of Darwáz, and the Havildár is unable to add to our knowledge of the subject. Like other *Galcha*¹ rulers of Central Asia, the kings of Darwáz claim descent from Alexander the Great, and, like all other States in its neighbourhood, it has sometimes been independent and sometimes tributary to whatever powerful neighbour may have attained a temporary pre-eminence. It is said at one time to have formed part of the dominions of the King of Shighnán; later on Darwáz and Karátigin appear to have had a common ruler.² In recent years both were invaded by and made tributary to the King of Khokand;³ but since the decline of that State's importance (owing to wars with Russia and Bokhára) Darwáz again became independent, but some four or five years ago its then ruler, Shah Abdulla Khán, was ejected by the present king, Shah Muhammad Siráj Khán, who ever since his accession to the throne has considered himself as tributary to Bokhára, and, as we have seen, prior to the Havildár's visit, paid his respects to the Amír at Shahr-i-Sabz. His subjection is doubtless more nominal than real, but the two countries are bound together by many ties, of which a common hatred of the Afghán appears to be by no means the least strong.

The language of the country is nearly a pure Persian, and the Havildár states that he had no difficulty whatever in understanding it and in making himself understood.

The Havildár returned to Kila Khúmb by his former road. He stayed there from the 11th to the 15th August, and had to disgorge a considerable portion of his merchandize for the benefit of the king, who however gave him, as an equivalent, an order on the Mír of Ságghri Dasht for fifty sheep. It appears that the very few traders who do come to Darwáz are compelled to take sheep in exchange for their merchandize. These fetch a good price in Koláb, from Rs. 4 to Rs. 8 each, while in Bokhára they are very much dearer.⁴ From Kila Khúmb the Havildár was directed to return to Koláb, where he arrived on the 26th August.

Return to Badakhshán.

The Havildár now determined to make one more attempt to visit Shighnán, this time *riá* Badakhshán and Ishkashm. He returned to Faizabád by his former route, arriving there on the 8th September. He found the country in a very different state to what he had left it in

¹ The *Galchas* are hill tribes of Tájiks, whose ancestors were probably the early inhabitants of the plain country, prior to the invasions of the Arabs and Turks, by whom they were driven into the hilly and more inaccessible parts of Central Asia. Darwáz, Karátigin, Shighnán, Wakhán, Chitrál, Kanjnd, are among the more important of these tribes. The rulers of nearly all these countries claim descent from Alexander the Great. Most of the *Galcha* tribes are Shiáhs, but Darwáz is an exception to this rule. These countries have separate dialects, in all of which Persian forms a principal ingredient. The term "*Galcha*" according to Yule signifies a *rustic*.

² According to Mr. Fedchenko, Karátigin and Darwáz formerly constituted but one State. "After the death of a certain ruler, this was divided between his two sons. Hence several of the later sovereigns of Karátigin made efforts to subdue Darwáz, and in return some princes of Darwáz succeeded in conquering Karátigin."

Mr. Fedchenko is my authority for this. The Khokandian troops left *Garm*, the chief town of Karátigin (which was then subject to Khokand, but is now believed to be tributary to Bokhára), and after traversing some mountains "arrived in the valley of a certain river (probably the same which lower down in its course is called the *Khulá*), along which are scattered villages forming the country of *Wákhia*. This country ought to be very extensive, as there exist routes leading to the *Wákhia* valley starting from places much higher up the *Sarkháb* River than *Garm*." * * * From *Wákhia* the road goes in a southerly direction, and crossing a mountain is carried over the plateau of *Ságghri Dasht*. * * * Thence the road crosses a pass and descends to *Kila Khúmb*, capital of Darwáz, called by the inhabitants *Iskander-Zindán* (prison of Alexander the Great). So far Mr. Fedchenko's description of the road, which was obtained from native information, is very correct, but he then proceeds to attempt to prove that *Kila Khúmb* is *not* on the Oxus, although he evidently has his misgivings on the subject; for he continues: "I have not placed this town on the principal stream of the Oxus because it is not down in a list which I possess of the villages on the *Panjah* River (or *Oxus*), in which such a point as *Kila Khúmb* would surely not have been omitted." He then correctly continues: "*Wákhia* and *Ságghri Dasht* form part of Darwáz, which extends a considerable distance to the north-east of *Kila Khúmb*, as is proved by the fact that after leaving the *Muk-su* valley and crossing the *Khoja* top (or *Taingli*) Pass you arrive at the town of *Wanch* (*Wanj*), celebrated for its iron."

⁴ In Bokhára the *damba* or fat-tailed sheep of Badakhshán sells for Rs. 16 or Rs. 20. They are exported in thousands from Badakhshán and *Bálkh* for the Bokhára market.

some months previously. During his absence Jahándar Sháh, the ex-Mír of Badakhshán, had made another attempt to recover his lost dominions. Emerging from Chitrál, where he had spent the winter (*vide* the account of the Mullah's travels), he was joined by almost the whole of the inhabitants of the hilly districts of Badakhshán, and had blockaded the Afghan garrison in Faizabád. The Havildár's nephew, who had been left behind there, states that the inhabitants and the garrison were reduced to great straits for want of food. The cavalry regiments were called in from Daraim and Jerm, and large reinforcements were sent from Bálkh, so that at last the mountaineers were beaten off. The latter were very badly armed, and had never ventured to assault the place, although they were in such numbers that they were able to prevent foraging parties from going out, and had reinforcements not arrived, the garrison might have been starved out.¹ On the Havildár's arrival he found a very large force collected under Muhammad Alum, the Governor of Turkistán,—six regiments of infantry, three of cavalry, and three batteries of artillery. Although Jahándar Sháh had fled, there were still disturbances going on towards the east of Zebák, and in the northern districts of Bágh, Yaftal, and Mughal.² By the 4th October the whole country had been quieted, and the Naib Muhammad returned to the seat of his government at Mazár-i-Sharíf, taking with him the whole of the reinforcements he had brought, together with several hundreds of Badakhsahi families, whom he was deporting from Badakhshán, with the intention of making them settle near Bálkh. On the 15th, the Havildár was given permission to proceed to Shighnán. The person to whom he had to apply was Brigadier Kádír Khán, who was now commanding in Badakhshán in the place of Naib Háfízúla, who had, during the Havildár's absence, been summoned to Kábul and disgraced.

The Naique was ill and was left behind in Faizabád. The Havildár went to Ishkashim *via* Zebák and then proceeded down the Panjah valley as far as Gharán Bála, the frontier village of the Gharán district (about 35 miles below the great bend of the Oxus at Ishkashim), where he handed over to the guards on the Shighnán frontier the letter he had received from Kádír Khán for the King of Shighnán. This letter was forwarded to the King, but was returned, with an intimation that no one would be permitted to enter the country unless provided with a letter from the Governor of Turkistán.³

Badakhshán via Kusbádian to Bálkh.

The Havildár now gave up in despair all further attempt to enter Shighnán and returned to Faizabád, which he reached on the 27th October; he quitted it again on the 29th and returned to Koláb, in order to carry out the instructions he had previously received to follow the direct road thence to Bálkh. He reached Koláb on the 7th November, and started for Bálkh on the 9th.

His first march from Koláb lay across cultivated plains to Ulbak. He passed *en route* the village of Kaftarkhána, whence a road diverges to Hissár.⁴ His second march to *Chakma-i-Shor* (or salt springs) was over an uninhabited waste. On the third day a range of hills was

¹ It is said that while these disturbances were going on, the Sháh of Shighnán (probably the most powerful State of Badakhshán) had collected some 2,000 retainers, and was waiting on the frontier to see the result of the fighting. Had the Afghans got the worst of it, he was prepared to pounce down and help to exterminate them.

Jahándar Sháh, after his defeat, fled towards Kásghar, and, while in the mountains, wrote to the Amír, asking what assistance he would give him. It is reported that the Amír offered to give him the governorship of the Barikol (Tashkurghán) district, and that Jahándar Sháh, a king without a kingdom, was so offended at the offer, that he listened instead to overtures from the Khán of Kokand, to which country he subsequently proceeded.

² In the course of this rebellion about 20 Afghan sepoy deserters joined Jahándar Sháh with their guns and ammunition. This is not surprising, as Jahándar Sháh is a bosom friend of Abdul Rahman Khán, the exiled nephew of Sher Ali.

³ The country of Shighnán had been visited a few months prior to this by Abdul Subhán, the account of whose journey was submitted by me to Government in 1874.

⁴ Unfortunately the Havildár could give me no details whatever about this road, or about any other roads to Hissár from Koláb and elsewhere.

crossed by a pass, the height of which the Havildár estimated to be between 2,000 and 3,000 feet above the plains on either side. This range divides the Koláb district from that of Kúrghán Tapa, another province of Bokhára. The chief town of this district, which bears the same name, was seen by the Havildár at a distance of a few miles to the north of his route. It has a fort, which is said to be surrounded by about 300 houses. The Kúrghán Tapa district is well cultivated, and much cotton is grown there. Fruit trees of various kinds abound.

The range of hills crossed by the Havildár separates the drainage of the Koláb or Yákh-sú River from that of a large river which was struck near Kúrghán Tapa, on the fifth day's march, at a point nearly due west to Koláb and at a direct distance from it of 62 miles. This river was called the *Wáksh*, and the Havildár was informed that it came from Karátigin, in which country it was known by the name of the Surkháb.

Here, then, we find the solution of one of the great problems of modern geography, as in addition to the positive identification of the *Kizil-sú* or *Surkháb* (the Turki and Persian equivalents for *Red River*), or *River of Karátigin*, with the well-known classical *Wáksh*, the result of this exploration also proves that the Surkháb River does not join the Oxus near Koláb, as has long been supposed, but more probably at a point about 80 miles lower down. The idea which modern geographers have hitherto entertained regarding the lower course of the Surkháb appear to have been inherited from Macartney, who, in the geographical memoir accompanying the report on Elphinstone's mission to Kábul in 1808, states that "the Surkháb " or Karátigin River rises in the Pámir ridge, and after a course of 180 miles empties itself into "the Oxus, 80 miles above the Kokcha, on its right bank." In conformity with these views the Surkháb has been usually shown hitherto as passing close to Koláb and joining the Oxus at some distance below that town. The Havildár came across a small river near Koláb, which he was informed joined the Oxus at a short distance to the south: this river, however, was not the Surkháb, but the river we have already noticed which is known in its upper course as the Ak-sú or Yákh-sú and lower down as the Koláb River. The Havildár did not come upon the Surkháb River until he reached a point in latitude 37°35' by longitude 68° 32', more than 60 miles to the west of Koláb. It did not occur to him to follow either of these two rivers down to their junction with the Oxus; but there can be but little doubt that the respective points of junction have been given us by Lieutenant Wood, in whose map a small stream is made to join the Oxus not far from the position assigned by Macartney for the junction of the Surkháb, and another stream is made to join the Oxus a few miles to the west of Hazrat Imám. No name is given in Wood's map to either stream; but Mr. John Walker, in his well-known map of Afghánistán, names the eastern one the Surkháb and the western one the Wagish. Where he got these names from is unknown to me; most probably that of the eastern stream from Macartney, and that of the western from Wood.

Now the Havildár reports that the Surkháb River is more generally known in its lower course as the Wáksh than as the Surkháb. His map shows that when he crossed the Wáksh it was trending southwards in the direction of the junction of Mr. John Walker's Wagish with the Oxus, which circumstance, combined with the similarity of the names, appears conclusive as to the identity of the rivers Wáksh and Wagish, and consequently as to the point of junction of the Surkháb with the Oxus.

Geographers have always felt as a difficulty regarding the originally adopted point of junction, that Wood should have known nothing about it, though he was believed to have been so close to it; and Colonel Yule, in his preliminary essay to "Cathay and the way thither,"¹ and in the map accompanying it, actually abandoned that point in favor of what is now shown to

¹ Published by the Hakluyt Society in 1866.

be the correct junction; but he did so with considerable misgivings, and mainly on the grounds that his hypothesis had "at least the advantage of not flying in the face of an honest and able traveller." Subsequently, however, he became a convert to the generally received view of the matter, and in his preliminary essay to the 2nd edition of Wood's Oxus he says: "It has been the fashion in modern maps to represent the junction of the Surkháb with the Panjah as occurring a few miles to the north of the confluence of the Kokcha." * * * * "There can be little doubt that the real confluence is where Macartney's map placed it, viz., at least 30 miles above the Kokcha junction, considerably to the north of Said, and beyond the utmost reach of Wood's ride in the vicinity of a place called Kúrghán Tapa." There is some truth even in this, but Kúrghán Tapa turns out to be 50 miles to the west of the position given in it in Colonel Yule's last map.¹ In the accompanying map the junction of the river of Karátigin, or Kizil-sú, or Surkh-ab, or Wáksh-ab with the Panjah is made to take the place of Mr. John Walker's Wagish, and the Yákh-sú (or Aksuwa), or river of Koláb, is made to follow the course of Wood's nameless tributary near Said.

We may now continue the account of the Havildár's journey. He crossed the Wáksh-ab on the 13th November. The stream flowed in two channels, each about 200 yards across; the water being up to the horse's girths, the current rapid, and the bed of the river stony, the passage was effected with great difficulty. From the river the Havildár proceeded for about 25 miles in a south-west direction to Kubáidian (or Kuwáidian), a large town on the left bank of the Káfirnihang River. The greater part of his road lay over a tolerably level plain, with hills visible on both sides at a distance of several miles from the road.

Kubáidian is a large town of about 1,000 houses, and its bazár contains about 200 shops, the contents of which were chiefly Russian goods. To the south of the town is the Kila-i-Afraniáb, south of which again is a suburb containing 100 houses. The country is ruled by a Mír, who is subordinate to the Governor of Hissar. The district is fertile, and numerous small villages are scattered about, surrounded by dense groves of mulberry trees. These are mostly pollarded, and are only allowed to grow to a height of 8 or 10 feet.

At one mile from Kubáidian the Káfirnihang River (the bed of which is about 500 paces wide) was crossed by an easy ford, and the road followed its right bank to Shahr-i-Tuz, where the Havildár arrived on the 16th November. Tuz is now merely a small village, but was formerly a large city, as the surrounding ruins testify. After leaving it the road lay for 21 miles on or near to the right bank of the Káfirnihang, up to the Aiwáj² village, situated near the junction of the Káfirnihang with the Oxus. The country is open, and the road runs through high grass jungle. A few small villages were passed surrounded by open clearings. At Aiwáj Ferry the width of the Oxus River was estimated by the Havildár to be 1,000 paces; the water was deep and clear, and the current slow. From the ferry to Khulm is a long day's march in a south-west direction over a flat and sandy plain. An old ruined fort and a village named Chiterábád were crossed *en route*.

The Havildár left Khulm on the 28th November and went to Rusták, where he had left a servant in charge of some of his property; he arrived there on the 30th November, and after a halt of two days started on his return journey to India, going *via* Talikhán, Baghlán, Heibak, and Bamian. He reached Kábul on the 28th December 1874 and Peshawur on the 11th January 1875.

¹ As an instance of how easy it is to err in these matters, I may mention that prior to the return of the Havildár to this country, I had in my possession what I thought was overwhelming evidence to prove that the Surkháb joined the Panjah considerably to the north of the extreme north position assigned to it in Colonel Yule's last map (1872); and this erroneous position has been given to it in my map of Eastern Turkestan, published in January 1876.

² Probably the *Isackik* of some maps.

The Havildár's route from Kábul to Faicabád in Badakhshán.

No. of stages.	Name of Camp.	District.	Distance in miles.	REMARKS.
1	Kábul to Dih-i-Khú-dádád.	Kábul	3	A village of 20 houses. At 2 miles pass village of, Hímaru, 1 mile on left of road. Road generally good
2	Khoja Chásh	Ditto	7½	A village of 50 houses. At 3 miles village of Turakhail, 2 miles village Deh-i-Ahya. Road good.
3	Kara Bég	Kohi Daman	16	A village of 200 houses. Road good, and passes through a well-populated district.
4	Chárikár	Chárikár	9	A town with a bazár containing 100 shops. Road good, and passes numerous villages.
5	Parwán	Ditto	12	A large village. Road for first 9 miles good, and then stony. At 1½ miles pass the village of Bayán.
6	Náwách	Ulang or Silang	9	A village of 25 houses. Road up the river Ulang (or Silang), which is crossed several times. At 1½ miles a small village; at 1 mile village Bégbi Lala, 2 miles Taghma, 2½ miles Pajah. Road bad and stony.
7	Ulang	Ditto	13	A small village of one house. At 8 miles village Dwaó, from which a road goes over the Báj-gab or Parwán pass to Inderáb; at 3 miles Híján, 3 miles Ahingarán. Road up-stream bad and stony.
8	Doshák	Khinján	9½	A camp at the junction of the Ulang and Kasobán streams: water, fuel, and grass abundant. At 8½ miles crossed the Hindú Kásh by the Ulang Pass. Road stony, but otherwise easy.
9	Khinján	Ditto	17	A scattered town of 200 houses. At 9 miles village Takh-tasang of 2 houses. Road stony. From Khinján roads diverge in all directions.
10	Khúsh Darah	Ditto	12	A village of 7 houses. At 1½ miles fort of Khinján; at 2 miles a small village; 3 miles the village of Dashti Amrud. Road generally good.
11	Camp in jungle	Nárin	20	A camp; fuel and grass in abundance. The road passes for 12 miles over a flat, uninhabited plain to the foot of the pass of Buz Darah; then steep ascent for 3 miles to top of pass, where is a small spring of drinking water called Chashma-i-Murghán. From this spring a road goes west to Ghorí. From the foot of the pass to camp, road bad.
12	Nárin, market-place	Ditto	16½	A village with bazár on every Monday and Thursday. Road for 3 miles stony and then good; water in abundance, but no fuel or grass. At ½ mile a small village of 4 houses; 5½ miles first village of Buz Darah; at 2 miles second village of Buz Darah; at 3 miles Báj Kila on right-hand side, 1½ miles from road.
13	Chashma-i-Máh	Ishkimiah	14	A village of 12 houses. At 2½ miles a small village of 10 tents. Road over level plain.
14	Ishkimiah, market-place.	Ditto	12	A town with a bazár on every Monday and Thursday. Scarcity of water, fuel, and grass. At 5½ miles village Khoja Bandkuaba, where extensive grassy marsh; road easy over plains, and crosses River Bungi by a wooden bridge 40 paces wide. Steep descent to Bungi River.
15	Khanakó	Talakán	11	A village of 60 houses. At 7½ miles a village. Road for 8 miles good, and then stony.
16	Camp in jungle	Kalaoghán	22	Camp in jungle, where water, fuel, and grass plentiful; at 7 miles village Namaká. Road bad, constantly ascending and descending; 8 miles cross River Tali-khún by a difficult ford; width of river about 80 paces.
17	Kalaoghán Fort	Ditto	6	A fort and village: supplies in abundance; at 3½ miles village Akbulak. Road over easy plains.
18	Mashád	Kiahm	8	A village of 50 houses. At 1 mile old village of Kalaoghán, left of road. Road good.
19	Teshgán	Teshgán	13½	A village of 20 houses. Road through uninhabited country; numerous ups and downs.
20	Bal-íle	Faicabád	12½	A village of 80 houses. At 7½ miles village Darah Dar-him. Road hilly.
21	Faicabád	Ditto	12	A town with bazár of 200 shops and fort, also cantonment of 3 Afghan infantry regiments, and 1 battery of artillery. At 4 miles village Argh; 6 miles Bégbi Sháh. Road good.
		Total miles	263½	

The Havildár's route from Faisalábád to Koldb.

No. of stages.	Name of Camp.	District.	Distance in miles.	REMARKS.
1	Faisalábád to Serni Durah.	Faisalábád	16½	A village of 10 houses. At 6 miles Arpé village; 1 mile village Moghol; 1 mile village Khakhrá; 1 mile post Khár; ¼ mile Shatak. Road good.
2	Ilkhábia	Busták	18	A village of 80 houses. Road stony and difficult. At 3¼ miles village Karamábia; 3 miles Ahyra Jalap; 3 miles cross the River Kokoza by a wooden bridge.
3	Busták	Ditto	12	A town with banar of 300 shops. Road good. At 1 mile village Daahti Chinár; 1 mile ruins of Diwari Taag; 5 miles village Sar-i-Busták; 3 miles village Murghian; 1 mile village Khatakáb.
4	Chaidb	Ditto	17	A town with a banar. Road generally good. At 1½ miles village Haarat Sakh; 1 mile village Saagi Báha; ¼ mile Akhjar; 1½ miles Chopahana; ¼ mile Kirdi Kila; 1 mile Bai Kasta; 1 mile Yaka Tár; 3 miles Dabábi Kalván; 3 miles village Khoja Jarghábia; 3 miles Takhsabábi.
5	Bahárák	Koldb	14	A village of 20 houses. Road good. At 8 miles village Palah; 3 miles village Kudak; 3¼ miles village Dabábi-l-ahár; 4½ miles village Sami; 1 mile Upper Sami; cross River Amá by <i>jald</i> or raft of inflated skins; easy ferry; width of river about 600 paces.
6	Koldb	Koldb	15½	A town with banar of 200 shops. At 3¼ miles pass village of Týra Bai; ¼ mile Koldb; 3 miles village Sar Chashma, up to which place road is good; thence to Koldb, road bad.
			Total miles	93

The Havildár's route from Koldb to Yas Ghulám viá Kila Khámab.

No. of stages.	Name of Camp.	District.	Distance in miles.	REMARKS.
1	Koldb to Mominábád	Koldb	18½	A town with a banar of 50 shops. Road for 6 miles good, and then difficult. At 5 miles village Afsáik; 3 miles village Ziraki; 3 miles village Dabána.
2	Khawáing or Khawáin.	Baljuván	10	A town with a banar of 5 shops. Road stony and difficult. At 8 miles village of Dagur.
3	Saripal	Darwá	7½	A fort and village of 30 houses. Road good. At ¼ mile village of Chashma-i-Kashábia; 3 miles village Khamakáb, at 1 mile beyond which is a low pass.
4	Talbar	Ditto	16	A village of 10 houses. Road up Yákhád stream, stony and difficult. At ½ mile village Lohá; 3 miles village Sarab; 1 mile village Teri Kappa; 3 miles village Tangado; 1 mile Shákár; 3 miles Kila Khojab; 3 miles village Shunguo.
5	Sághri Dabá	Ditto	17	A fort and village of 40 houses. Road stony and difficult. At 2 miles cross a high pass and descend into the Tavi valley; then ascend to another high pass and descend to camp. Road very bad throughout, and in many places goods have to be shifted from the pack animals and carried by hand.
6	Kila Khám or Khámab	Ditto	18½	A large fort and village of 80 houses. Road stony and very difficult. At 6¼ miles crosses a high pass; at 7 miles road passes through the villages Khawáb and Ráhdá; at 2 miles crosses river Gushan by a wooden bridge; width of river is 20 paces. At 3 miles village Zee; 1 mile village Shárg; very steep descent to the valley of the Orta.
7	Jarf or Jarf	Ditto	9	A village of 80 houses. Road along the right bank of the Orta stony and difficult; passes through the villages Madraa, Kila Nimi, Zingara, Barval, Kevra.
8	Karpárad	Ditto	12	A village of 80 houses. Road stony and difficult; passes the village Vashkar. At 3 miles crosses river Ukhbar by a wooden bridge; width of river 20 paces; ¼ mile village Shatak; 1½ miles village Mái Mái; 1 mile Tangand; 3 miles village Mái Mái, End.
9	Wadhárad	Ditto	15½	A scattered village of 50 houses. Road stony and over rocky spurs; passes the villages Ghuch, Wand, Rawand, Pashkar, and Binágh. White stream crossed by a wooden bridge near Karpárad.
10	Wanj or Kila Wanj	Ditto	6½	A fort and village of 80 houses. Road good up the Wanj valley; passes through the village of Wanj at 4½ miles; 3 miles beyond this is the fort Wanj of 70 houses.
11	Yas Ghulám	Ditto	14	A fort and a scattered village of 80 houses. Road stony and difficult. At 5½ miles crosses the Yas Ghulám, a high and difficult pass.
			Total miles	149½

The Havildar's route from Kolab to Tashkurgahn.

No. of stages.	Name of Camp.	District.	Distance in miles.	REMARKS.
1	Kolab to Uihak ...	Kolab ...	10	A village of 25 houses. Road easy and over a plain; passes through the villages of Abasi and Kaptarkhina, from which place a road goes to Hissar.
2	Chashma-i-sher ...	Kiargahn Tapa ...	20	A camp near a spring of salt water. Road easy and passes through desert. Fuel and grass in abundance, but scarcity of water. From Uihak at 24 miles is the tomb Masari Shahid; 12½ miles cross a small stream of Ab-i-Tadair, which flows into the Kolab River.
3	Camp in jungle ...	Ditto ...	16	A camp; fuel and grass in abundance, but scarcity of water. Road easy. At 44 miles cross 2,000 or 3,000 the pass of Chashma-i-sher.
4	Jarkishik ...	Ditto ...	16	A village of 10 houses. Road over easy plains. At 13 miles Tughlang; at 1 mile Ishmaar.
5	Camp in jungle ...	Ditto ...	13	A camp; fuel and grass in abundance, but scarcity of water. Road over easy plains. At 2 miles cross the river Wakah or Vakhab by a difficult ford; the river is in two streams, each about 200 paces across.
6	Kahdhan ...	Kahdhan ...	11	A large town with a bazar of 200 shops. Road generally good through desert plains.
7	Shahr-i-Tis ...	Ditto ..	10½	A village with 40 houses. Road very good. At 1 mile cross river Kafirahang by an easy ford, 500 paces across; at 7 miles village Charabanda; 1 mile Masar Khoja Jan.
8	Camp ...	Ditto ...	21	A camp on the bank of River Amá. Fuel, grass, and water in abundance. Road good through the high grass jungle. At 3 miles village Arghandak; 1 mile Baydi; 15 miles Aiwaj village.
9	Tashkurgahn, Khrain	Balkh ...	23	A large city. Road over sandy plains. Crosses River Amá by ferry; width of river 1,000 paces. At 17 miles village of Chitrahid of 15 houses. No other village on road.
		Total miles...	180½	

The Havildar's route from Tashkurgahn to Bostak.

No. of stages.	Name of Camp.	District.	Distance in miles.	REMARKS.
1	Angbarik ...	Balkh ...	13	A village of 30 houses. Road good.
2	Abdán, 2nd ...	Ditto ...	26½	A tank of water. Road good.
3	Camp on the bank of Kundus River.	Kundus ...	31	Road good. At 13 miles Abdán, 3rd; 6 miles Arghama Pass.
4	Chogbachi ...	Ditto ...	23	A village of 12 houses. Road good. At 3 miles Kundus City, 3½ miles Hamra Gad, 9 miles Yashán Top, 4 miles Khanabád, and at 2½ miles Chogbachi.
5	Talikhán ...	Talikhán ...	20	A large town with bazar. Road good. At 4½ miles cross River Bangi by an easy ford, 20 paces in width; at 6 miles village Khojah Jaqal; 5½ miles village Aminabag; at 3½ miles cross Talikhán River by an easy ford.
6	Khojah Lamtar ...	Ditto ...	18	A village of 60 houses. Road stony and difficult. At 1½ miles village Baghak; 7 miles village Uchkaduk; 3½ miles cross the pass of Uchkaduk.
7	Bostak ...	Bostak ...	20½	A large town with bazar. Road stony. At 4 miles cross River Korcha by an easy ford. Close by the river, village Kila Girdeb; 3 miles village Naristán; 4½ miles a spring of drinking water; 1½ miles cross a pass.
		Total miles...	149	

III.—THE MULLAH'S JOURNEY FROM JALÁLABÁD TO SARHADD-I-WAKHÁN BY THE BAROGHIL PASS.

Jalálábád to Asmár.

THE Mullah,¹ who was employed on this exploration, is a native of the Peshawur district, and a brother of a Pathán sapper, an employé of the Great Trigonometrical Survey, who was murdered in 1869 while carrying on an exploration in Swát. He is a well-educated man, skilled in Arabic, and in his capacity of Mullah can travel unquestioned about Swát and other parts of Yághistán.² His first connection with the Survey Department was subsequent to his brother's death, when he was despatched by Major Montgomerie to try and recover the papers and effects of the murdered man. He succeeded in his endeavours, mainly through the influence of the Akhúnd of Swát, who is an old acquaintance of his family; and all the sapper's papers and surveying instruments were safely brought back to India. Shortly afterwards the Mullah entered the service of the Havildár, and accompanied him on an exploration to Báikh. On his return to India he was instructed by the Havildár in the use of the prismatic compass. When the latter started on the expedition which has been described in the former part of this paper, he was directed to take the Mullah with him as far as Jalálábád, and then to despatch him on an independent exploration up the Chitrál River. The two accordingly proceeded together to Jalálábád, from which place the Mullah took his departure on the 28th September 1873. His party was a small one, consisting of himself, a young Pathán servant, and one pony. On the latter was loaded his small stock of merchandise consisting of about six hundred rupees³ worth of muslin, silks, and cloths from Loodhiana and Peshawur.

On the first day's march the travellers crossed the Kábul River in a large boat, and, passing over fairly level ground, halted the first night at Lamba Taka, where they struck the right bank of the Chitrál River. The second day they only went a very short march up the Chitrál Valley to Khewa⁴ or Shewa, the chief town of Shigar, a sub-division of Jalálábád.

It was here necessary to obtain a small guard,⁵ as the road ahead was said to be infested by robbers. The Mullah went to pay his respects to the governor, Mír Akhor Ahmad Ali Khán. There happened at the time to be present the malak⁶ or headman of Chigur Serai, a village some marches higher up the river, and the Mír Akhor arranged for this man to accompany the Mullah as far as Kunar, up to which place there was danger from robbers. The Mír also gave the Mullah a *rahádari* (or passport), permitting him to proceed to Asmár, at which place the Mullah pretended he was going to purchase timber to float down the river to Peshawur. The malak and the three Patháns accompanying him were all armed with guns, swords, and pistols. In fact, in this country no man moves about unless well armed, and the villagers carry weapons with them even when ploughing in the fields. The road followed is only used by Bajasori⁷ merchants going to Dir, by country people passing to and fro, and by timber-merchants going to Kunar.

¹ Or Moulvi, i. e., a learned man.

² Literally "the country of the insubordinate," a name appropriately applied to all the countries living under republican institutions on our North-Western frontier.

³ About sixty pounds sterling.

⁴ Also known as Khessa. "The Persian *sh* is frequently changed in Pushtu into *shh* as Pakhsháwar for Pesháwar. The *shh* of the latter language is by a similar process pronounced by the Western Afgháns *shh* or even *sh* as Pakshétú or Pushtu for the Pakshétú of the Yusufzais and Eastern Afgháns.—J. M. T.

⁵ Termed *Badrags* throughout Afghánistán. The word is a Pushtu rendering of the Arabic *Badraka*.—J. M. T.

⁶ A title corresponding to the lumberjacks of Hindustán.

⁷ Bajasori is a mountainous district of Yaghistán lying to the east of our traveller's route. Its inhabitants are famous as enterprising traders in these parts of Central Asia; a common line of traffic is from Peshawur *viâ* Dir, Chitrál, and Badakhshán, to Yarkánd; and return thence *viâ* Ladakh to Peshawur.

On the 30th September the party, reinforced as above, took a long march of 25 miles to Zor (i.e., old) Kunar, crossing the Chitrál River (here called Kunar) by rafts of inflated skins (*jálas*). The stream at the ferry was about 50 paces broad,¹ but rapid and deep. The horses swam across, guided by men on the rafts. The road on the right bank of the river is much infested by robbers, and although there are several villages along it, solitary travellers are never safe. Old Kunar is a large town of about 1,200 houses. It was formerly capital of the large district of Kunar, which was ruled by a family of Syuds, and included the whole of the Chitrál Valley from below Khewa to above Chigur Serai. The districts about old and new Kunar are still held as a separate jagír by the Syud Baba Jan, but Khewa and Chigur Serai are under the direct rule of the Amír of Kábul. The inhabitants of the Kunar district are mostly *Dek-gans*, a tribe of Afghánistán, supposed to consist of converted pagans of Indian origin. They are only found in Kunar and the district of Laghmán to the west of it. They speak an entirely different language to the *Pushts* which is spoken by all the surrounding Afghán tribes.²

On the 1st October the Mullah marched to Pashat, or new Kunar, also on the left bank of the river, a town containing about 1,000 houses, and the residence of Syud Baba Ján, who is given the honorary title of Pádsháh, or King.

At Pashat the Mullah had the good fortune to find an old friend of his family, one Kázi Mír Jamál, a man of much influence in the country; to him he confided his intention of proceeding up the river to Sarhadd, and the Kázi gave him a letter of introduction to Mír Ján, the Kázi of Asmár, which subsequently proved of much value to him.

Escorted by the Kázi's son the Mullah marched on the 20th October to Sarkáni, and on the following day to Maraora, keeping along the left bank of the river the whole way. In the second day's march he passed, on the opposite side of the river, the small village of Chigur or Chigat Serai,³ where a large stream called Pech joins the Chitrál River on the right bank. The Pech stream comes from the district of the same name lying between Kunar and Laghmán. A few miles up this stream is an affluent from the north called Kattar, after a town of that name inhabited by the Srah Káfirs.⁴ In 1841 the inhabitants of Kattar were all pure Káfirs (infidels), but a few years ago the people of Bajasor, Asmár, and all the surrounding countries combined together and took this town from the Káfirs, killing many, and sparing only those who consented to become Mahomedans. These converted Káfirs are called *Shékhs*, and are also sometimes known as "Nimchas" or half-Musulmán. They keep on friendly terms both with their own countrymen and the Mahomedans, and generally form the medium of communication between the two.

¹ Dr. Griffiths crossed here in January 1840, and described the river as "with difficulty fordable; the streams are three in number, the last almost brimful and very rapid."

² Of the Deb-gi language Elphinstone writes: "The Doggauns (Dohgan) speak the language which is mentioned under the name of Lughmani in the Commentaries of Baber and other places. It seems to be composed of Sanskrit and modern Persian, with some words of Pushtu, and a very large mixture of some unknown root."

³ The well-known Chighar Serai which was captured by the Emperor Baber from the infidels in A.D. 1514.

⁴ From *scr*, red; plural, *arek*. Some of the inhabitants of Kattar were met with by Dr. Griffiths while residing in the neighbourhood in 1841. He describes them as "a fine-bodied people and very active, but excessively dirty and not very fair; mostly dressed in skins, having the hair inside, armed with bows, either straight or like cows' horns, and daggers. The chiefs were much fairer than their followers, and in the expression of face and eyes European, but in all cases the forehead was very slanting, and head generally badly developed. * * * On the whole, these people present nothing peculiar as compared with other hill people: like them they are vindictive, savage, poor, dirty, remarkable for great cupidity, fond of red cloth, beads, &c. They are a mixed race, some are like Indians, some like Europeans, but in all the forehead is low. Tartar eyes, often light brown or grey, hair often light. Put them among the Nagas, &c., of the Assam frontier, and none would notice them. * * * They are independent, appear to delight in talking over their victories over the Musulmán, but the oddest peculiarity as compared with Asiatics is their shaking hands, which is certainly done like us in the European custom." Dr. Griffiths also notices that they play a game called *abstruck*, exactly like our English "leap-frog."

On the 4th the party went from Maraora to Asmár, a long and difficult march of more than 20 miles. Maraora is the frontier village of the Jalálábád district, and the greater part of the road, which continues along the left bank of the River Chitrál, passes through an outlying district of Bajor, which extends here down to the river bank. The Mullah on this march met with an unpleasant adventure. He had been loitering to get some compass bearings, but hearing a great noise ahead he hurried on, and found that his baggage had been stopped by a party of scoundrels from Bachi, a Bajori village lying a short way off the road. These men, about twenty in number, having heard that the pony and its burthen belonged to a man of Peshawur, quickly appropriated a valuable sword, pistol, and shield belonging to the Mullah, and told the latter that they had been defrauded by a Peshawur timber-merchant of Rs. 400 (the value of the articles now taken), and they offered to give the Mullah a cheque for the amount drawn on the defaulting merchant at Peshawur. No amount of remonstrance on his part and of the men of the Pashat villages who were accompanying were of any avail, so he had to trudge on, leaving his valuables in their hands. The end of the story is a curious one, and throws a curious light on the manners and customs of the country. The Mullah, on arriving at Asmár, an independent state, acknowledging no head but its own chief, appealed to this chief to aid him in recovering the stolen property. The latter tried hard to obtain restitution of the goods, and went so far as to threaten the offending village with fire and sword, as soon as the Ramazan¹ should be over, but during the few days' stay of the Mullah at Asmár all endeavours made to recover his property were unsuccessful. Some weeks later when at Chitrál the Mullah was no less surprised than pleased at receiving a very polite letter from his friend the Kázi, accompanied by the pistol, sword and shield, which were restored uninjured and without any demand for payment.

The Mullah remained at Asmár from the 4th to the 17th October in hopes of being able to carry out the instructions he had received, and make his way up the river to Chitrál through the Káfir country which intervenes between the latter place and Asmár. Most unfortunately the chief of Asmár at this particular time was on very bad terms with his neighbours up the river. A few days prior to the arrival of the Mullah in Asmár, the Káfirs had made an attack on Gujartangi,² a village belonging to Asmár, and situated a few miles higher up on the left bank of the river. A return raid had been organised, and some 50 or 60 of the relatives of the murdered men had penetrated into the Káfir country in hope of revenge. On the third night of the Mullah's stay in Asmár—the fourth from the departure of the marauding party—an alarming report was brought that these men had met with a reverse and were being pursued down to the river. Asmár Khán started with a large force to their relief, but was agreeably surprised at meeting them returning victorious. They had attacked unawares a party of Káfir shepherds, killed six of their number, and carried off the whole of their flocks. As a proof that the plunder was not inconsiderable, 40 sheep were given out of the captured flocks as a present to Asmár Khán.

Under these circumstances the chief would not entertain the idea of allowing the Mullah to proceed up the river, although otherwise he would probably have done so, as, for a period of several years previous to these occurrences, Asmár Khán had, as a rule, been at peace with his neighbours, and his subjects could travel with impunity up the river to Chitrál. The Mullah could learn but little about this road, but Asmár was said to be only three days' journey from Mirkandi (in Chitrál). The path is said to be on or near the river the whole way, and

¹ The 5th month of the Muslimán year, during which no good Muslimán eats food between sunrise and sunset. Exceptions are made in favor of travellers, but I have known many of the latter to adhere strictly to the rule.

² So called from its being inhabited by Gujars, a name given to a tribe supposed to be of Ját descent, although now Muslimáns. They are termed by the Pathans *Hindki*, and are frequently met with in the pastoral districts of Yaghistán. They are employed in tending the flocks and herds of the Patháns, who are the present lords of the soil. They are said to be descendants of the aboriginal inhabitants of the country.

passes through several Káfir villages; horses can travel it with difficulty, and it is probably altogether impracticable for baggage animals. If at peace, the Káfirs permit men to pass between Asmár and Chitrál, but otherwise all travellers are murdered. Merchants never use this road.

The Chitrál Valley, up which our traveller had come, narrows at Salampúr (a little above Khewa) to about a mile in width, and exceeds that breadth only in the neighbourhood of old Kunar, where it widens to about 3 miles. Numerous villages of various sizes are scattered along it throughout its length. These are generally situated at the junction of small tributary streams from the hills which enclose the valley. As a rule, it is these tributary streams only that are used to irrigate the fields; but in the lower part of the Chitrál Valley in many of the larger towns such as Khewa, Nurgál, old and new Kunar, the fields are irrigated by canals from the main river. Above Maraora, the bed of the stream being low, irrigation is entirely dependent on the tributary streams. In most villages there are wells for drinking water.

The hills enclosing the valley are generally stony, but more or less covered with grass, affording good pasturage. Occasional patches of cultivation occur low down. Below Asmár there does not appear to be much forest; in the main valley all the higher portions of the tributary valleys appear to be well wooded. About and above Asmár there are fine pine trees of which large numbers are floated down to Peshawur and sold there.

The principal crops in the valley are rice (for which Kunar in particular is very famous, it being exported to Peshawur and even to Báلكh), wheat, barley, and almost every kind of grain. The soil is very fertile. The principal fruit is the mulberry, but other kinds such as melons, pomegranates, apples, pears, grapes, &c., are tolerably plentiful. The people are generally well off, are well clothed, and get plenty to eat.

While at Asmár the Mullah had several interviews with the Khán, whom he describes as being outwardly very religious, but at the same time utterly regardless of taking life. He frequently puts his own subjects to death with his own hands for the most trifling crimes. He spends much of his time in reading, writing, and religious exercises, and the Mullah used to be called to him every day to explain certain religious and other matters which were beyond the intellect of the Khán. His bloodthirsty reputation made the Mullah fear and tremble, and he never went into the presence without a loaded and freshly-capped pistol in his aleeve. He appears, however, to have been well treated, and on his departure the Khán gave him letters for the chiefs of Dír and Chitrál. The Khán is about 30 years of age, of moderate height, and has a very stern cast of countenance. He has many enemies, and is always surrounded by numerous well-armed retainers. Like most chiefs in this part of Asia, he has a good collection of English guns and pistols. He is married, but has no sons. He has one brother¹ and a sister, who is married to Amán-i-Mulk, the King of Chitrál.

The town of Asmár consists of a square fort and 200 houses built of stone and mud. The Khán and some 50 or 60 of his followers live in the fort. The State is quite independent, and its chief is on very friendly terms with the rulers of Dír and Chitrál.

The country is probably capable of mustering some 2,000 armed men, of whom perhaps one half could be supplied with guns. The dominions of the Khán include that portion of the Chitrál Valley which is in the neighbourhood of Asmár, and the valley of Kátkod.

¹ Subsequently at Chitrál the Mullah heard a rumour that the Khán had put his brother to death.

Asmár to Dir.

On the 16th of October the Mullah started for Dir. The first day's march was to Kátkod up the valley of the same name. On the 17th he went to Bánshi, crossing the range of hills which separates the Chitrál and Panj Kora Valleys (all the most prominent peaks of which have been fixed by Captain Carter's triangulation) by a pass at the head of the Kátkod Valley.

The path was good, but the whole of the country to the north of the road between Asmár and Jánbattai is at times frequented by Káfirs, and every here and there the Mullah's companions would point out a spot where some former traveller had been murdered. Bánshi is the frontier village of the Baráwul district of the Dir country. This district extends down to Ijri, a village at the junction of the Baráwul and Panj Kora Rivers.

No taxes are levied on any one entering the country from Asmár, and there is no *chawki* or guard on the frontier.

On the 18th the Mullah made a short march down the Baráwul stream to Kuneh, and on the following day continued down the river to Jánbattai, passing *en route* several small villages. Jánbattai is a large place with a fort and about 1,000 houses, the residence of a Khán, who is subordinate to the ruler of Dir. At the time of the Mullah's visit both these chiefs were away on an excursion against the Jandúl district of Bajaur. The expedition was a success, for the Mullah subsequently heard at Chitrál that the Khán of Jandúl had been defeated and taken prisoner to Dir.

It appears that the political divisions in this part of the world are undergoing constant change. When the Havildár visited Jánbattai in 1870,¹ Mian Kilai, the chief town of Jandúl, was the capital of Bajaur, and was ruled over by Faiz Talab Khán, whose brother and subordinate resided at Jánbattai, the capital of the Baráwul district, which was then under Bajaur. Faiz Talab Khán, who was a man of great eminence, having died, Rahmutdíla Khán, of the neighbouring country of Dir, has been enriching himself at the expense of the Bajauris. The Mullah reports that Baráwul, a district which could probably muster 4,000 fighting men, now forms an integral part of the territories of Dir, while the present Khán of Jandúl has himself been taken prisoner and his country captured; he is said only to have been released and to have had his dominion restored to him on condition of paying tribute to Dir.

From Jánbattai to Chitrál the Mullah followed the same road that had been taken by the Havildár. On the 20th he continued down the Baráwul River to Kila Hamid Khán, passing *en route* the large town of Bandai on the left bank of the stream; the next day he reached Kotkai, having followed the Baráwul River to Ijri, where it meets the Panj Kora, up which he marched to Tungali opposite Dodka, where the Dir stream joins the Panj Kora. The latter river, at the junction, narrows between rocks to a width of 30 paces, but is very deep and rapid. Ascending the Dir stream, the Mullah reached the town of the same name on the 22nd.

The Dir and Baráwul Valleys, both of which drain into the Panj Kora River, resemble on a smaller scale the Chitrál Valley. Varying from a half mile to two miles in breadth, they contain a succession of villages surrounded by rich soil and good crops. The villages generally consist of houses clustered together like those of Hindustán. Rice is grown in the lower portions only of the valley. The other productions are the same as those of the lower portion of the Chitrál Valley. Large quantities of honey are collected,—the inhabitants building hives for the bees in the walls of their dwelling-houses. On the hills enclosing the valleys is excellent pasturage, affording good grazing to the numerous large herds of sheep, goats, and

¹ *Fido B. G. S. Journal for 1872.*

cattle, partly belonging to the villagers from below and partly to Gujurs who dwell on the hills for the greater part of the year, only descending to the upper valleys when forced there by snow. The Mir and Atunár Darahs (valleys) to the north of the Baráwul River are particularly rich in flocks.

Dir to Chitrál.

Dir is a town of 1,000 houses, about the same size as Jánbattai and Bandai. The Mir was absent in Jandúl, so the Mullah made no halt, but after paying the few rupees that were demanded for customs duty, continued his journey. The first march was to the village of Mirgah, the road lying up the narrow and well-wooded valley that leads from the Lahori Pass. Near the foot of the pass the Mullah had to halt two days, till a number of travellers collected together; the country ahead was infested by Káfirs, so that it was impossible to proceed without an escort.

The Chief of Dir is at bitter enmity with the Káfir tribes, who often ravage the villages on his frontier. The usual escort for a party of travellers consists of ten or twelve well-armed men. This is sufficient for defence against any ordinary attack of the badly-armed Káfir robbers, who, however, keep their spies in Dir, and if any large and valuable caravan is known to be on the road, they assemble in great numbers, and a much larger escort than usual is then necessary. Fifty rupees, or an equivalent amount of goods, is the sum usually paid for the services of an escort of ten men.

The Mullah left Mirgah on the 27th October; at a distance of three miles is the Lahori Pass, leading over the same range of hills that was crossed between Asmár and Baráwul. This pass is much the higher and steeper of the two, and is generally closed by snow from November till April or May; while the Baráwul Pass, although occasionally blocked up for a day or two by a heavy fall of snow, is never closed for any length of time.

The road from the Lahori Pass to Galatágh in the Chitrál Valley is said to resemble one continuous graveyard, so great is the number of travellers who have perished there. From the pass the road traverses a deep defile bounded by precipitous rocks, scattered over which are numerous small stone breastworks, erected by the Káfirs, in positions inaccessible from below, from which to attack travellers. Two miles below the pass a stream is encountered, and from this point the hills on the road-side are covered with the most magnificent pine trees,¹ the seeds of which are much used for food. At eight miles below the pass is the village of Ashreth, where the valley opens somewhat; the side hills being more accessible, the escort skirmished along the edges of the hills skirting the road, but only one Káfir was seen. The allegiance of the village of Ashreth is somewhat dubious. It formerly belonged to Dir, whose ruler is still said to claim it, but whose territory is now practically limited by the Lahori Pass. Its fields are now cultivated by the Mahomedan subjects of Chitrál. It has in former years been several times plundered by the Káfirs, but the latter are now on friendly terms with the Chitrálie, who are therefore able to cultivate the fields in the neighbourhood; and being in the centre of the Káfir country, the cultivators naturally keep on good terms with the infidels, and allow them to pass freely in and out of their walls. The travellers were advised not to halt here, but to push on to Galatágh on the Chitrál River, where they arrived the evening of the day on which they left Mirgah. The guard was discharged on reaching the Chitrál River at Mirkandi, between which place and Galatágh, being Chitrál territory, there is no fear of

¹ These pines are locally termed *ashátar*, which is the Pushtu equivalent for the Indian *oak*. There are, according to the Mullah, two kinds found in Chitrál, the *pushtá* and the *rusz-rak*. From the latter, which is the best timber tree, an oil is extracted, which is much used as an external application for itch. The seeds of this variety are also extensively used for food. They are, however, smaller and more bitter than the seeds (*chilghom*) which are imported in large quantities into Hindustán from Kábel.

attack by large parties of Káfirs, although solitary travellers are frequently waylaid by small bands of robbers, who swim across the stream, plunder the rash passenger, and then return with their booty.

At Mirkandi the stream from the Labori Pass falls into the Chitrál River, and from this point the Mullah succeeded in following the latter right up to its source at the Baroghil Pass. On the 28th he reached Darosh fort, which is surrounded by a large scattered town of about 1,000 houses. In Chitrál the towns and villages do not consist of a large number of houses clustered together as in Dir, but are composed of numerous hamlets containing from five to ten houses each, scattered about the valley, so that a so-called town may extend over a distance of several miles. The soil—what there is of it—is good, although it will not compare with that of Kubar. The area of culturable land is smaller, and the people are not so well off as their neighbours of Dir. At Darosh the Mullah was detained two days by very heavy and continuous rain. On the 30th he reached Braz, and on the 31st Chitrál.

On arrival at Chitrál the Mullah found that the road to Yárkand *via* the Baroghil Pass was jealously closed. It appears that a little more than a year previous to the Mullah's visit Máhmud Sháh, the Governor of Badakhshán, had pursued with a considerable force Jahándar Sháh, the ex-Mír of that country, over the Baroghil Pass into Upper Chitral, ever since which event the road has been closed. It was only by an ingenious stratagem that the Mullah ultimately succeeded in getting leave to go by that road. During his stay in Chitrál he resided with an old friend of his family, a wealthy merchant and contractor of Peshawur, who will here be called the Mián. One day while looking over some papers at his friend's house he came across a letter from another merchant, a Syud of Peshawur, asking the Mián to use his influence with the king to seize and recover some money from a defaulting agent who was expected shortly to arrive in Chitrál from Badakhshán. The idea occurred to the Mullah to pass himself off as an agent of the Syud sent to Chitrál to recover the money. A friend of the Mián, a slave-merchant named Inayat Ali, was going to Badakhshán with some slaves for sale on account of the king, and the Mullah was ordered to accompany him. He evaded this by pleading illness, and said it was impossible for him to walk, which he would have been obliged to do, as the pass was already closed to horsemen by snow.¹ Inayat Ali left Chitrál on the 24th October, and was commissioned by the Mullah to make enquiries after the defaulting merchant without letting it be known to the latter that any one was after him. Inayat took with him over the Nuksán Pass eight or ten Chitráli slaves. He returned on the 28th of February and reported that at Faizabád there were two or three Peshawur merchants going to Koláb, whom, from the description, the Mullah at once recognised as the Havildár and his party. There was another merchant going to start from Faizabád in about twenty days' time to Yárkand, whose descriptive roll tallied sufficiently near with the designedly very vague description that had been given by the Mullah, as to justify the latter in asserting that this merchant was the very defaulter he was in search of. He at once petitioned the king to be allowed to start by the short cut by the Baroghil Pass so as to intercept at Sarhadd the defaulting merchant, while on his way from Badakhshán to Yárkand. With great difficulty, and chiefly through the good offices of his friend the Mián, he at last obtained permission to go by the Baroghil route. He did not, however, get away from Chitrál till the 22nd March.

¹ At Durband, in Upper Chitrál, Jahándar Sháh turned upon his pursuers and defeated them with heavy loss. They recrossed the pass and returned to Badakhshán. In consequence of this defeat, the Amir of Kábul removed Máhmud Sháh from his governorship, and replaced him by Naib Muhammad Aiam Khán, the present Governor of Turkestan.

² There was a very heavy fall of snow on the 18th and 16th November, which entirely closed, except for foot passengers, the Dora and Nuksán, the two principal passes between Chitrál and Badakhshán. In the winter months travellers can only get across by the aid of the king, who sometimes despatches some hundreds of laborers to assist in forcing a way through the snow. The passes are generally closed from November to May.

The winter in Chitrál appears to have been severe, and from the 19th November until early in March snow continually lay on the ground. Snow usually fell four or five times a month, and the people said the winter was more severe and the snow-fall¹ greater than ordinary. The Mullah kept to his friend's house, where he seems to have had very comfortable quarters, and to have lived in the best society. The Mián and his friends lived well on mutton, fowls, and wheaten bread. Meat is eaten by well-to-do people, but the majority of the inhabitants are poor and live chiefly on bread. Tea and spices are very rare, and are only to be found amongst the most wealthy.

The language spoken in the country is Chitráli, a dialect in which there are many Persian words. It is spoken throughout the Chitrál Valley from its head down to the Káfir country below Mirkandi. The Lahori Pass separates the Chitráli language from the Pushtu, which is spoken in Dír, Baráwul, and all Afghán countries. The Káfirs have, as is well known, a language of their own. Most of the chiefs and the higher classes in Chitrál are acquainted with Persian.

The king had occasional shooting parties in which the Mullah used to be invited to join. A party of 200 or 300 beaters would be sent out over-night towards the head of a ravine a few miles from Chitrál. In the morning these men would form a long line and drive the deer² (who kept low down on account of the quantity of snow above) in such numbers that 20 to 30 head of game were often killed in a morning. Jahándar Sháh³ (the ex-Mír of Badakhshán), the Mián, and Khali Ján,⁴ the ambassador from Báikh, used always to join in these parties. Late in the season they used also to play *chagan bázi*,⁵ or hockey on horseback (*polo*).

The King Amán-i-Mulk is about 50 years of age, and is described as a fine stalwart man; although he has the reputation of being very treacherous, the Mullah was favorably impressed with his manner.

The Pádsháh has two legitimate wives, one a sister of Rahmatulla Khán of Dír, and the other a sister of Aemár Khán. By the former he has a son Sardar 10 or 11 years old, and another young child. By the latter he has no family. He has also three illegitimate sons, Murid⁶ Sháhmulk, and Ghulám. Of these Ghulám is about 12 years old, and a very active and clever lad, but has already shown signs of a bloodthirsty disposition, as he is said on one occasion when in a rage to have shot dead one of his brother's attendants. The administration of the country is very severe; crime is generally punished by confiscation of property and person, *i. e.*, the king thinks nothing of selling his own subjects into slavery, and often does so merely out of caprice. The people of the country are naturally much intimidated and hardly dare hold up their heads.

The town of Chitrál is of little importance, not containing more than 600 or 700 houses. The king resides in the Nughur Fort close by.

¹ It was on March 21st that a party of the Mission left Káshghar for the Pamirs and Wakhán; we received the same information as to the snow-fall having been much greater than in ordinary years.

² Markhor, as far as I can make out from the Mullah's description.

³ The same to whom allusion is made in the Havildár's narrative. He is intimately connected by marriage with the King of Chitrál.

⁴ Khali Ján was the Elchi or ambassador from Muhammad Atam Khán, the Afghán Governor of Turkestan, the seat of whose government is at Báikh.

⁵ Chagan bázi is the Persian name for the game, but in Chitrál it is called *gházi*.

⁶ A sister of Murid is the wife of Mír Wali Khán, the murderer of Mr. Hayward.

The ruler of the country is called *Pádsháh* or King when addressed by letter or otherwise, but when spoken of is termed *Mihár-i-Chitrál*.¹

During his stay in Chitrál the Mullah on several occasions saw Káfirs from various parts of Káfiristán. They appear to be on very friendly terms with the Chitráls, and pass to and fro unhindered. I imagine, however, that it is only a few of their more enterprising spirits who do so. The Mullah says that they so resemble the Chitráls both in features and dress, and in the way of arranging the hair of their faces, that it would be impossible to distinguish them, were it not for the fact that the Káfirs all wear a tuft of hair on the crown of the head. This, however, cannot be seen when a turban is worn.²

The chief trade of Kashkár is carried on during the hot season from July to September, the passes on all sides being closed for traffic throughout the winter. This trade is principally carried on by traders of Bajasor and the family of Káká Khels. Goods are carried on ponies, mules, and donkeys. The chief articles of import from Peshawur are salt,³ muslin, and cloths of various kinds, as well as firearms and cutlery in considerable quantities. The exports chiefly consist of orpiment⁴ (yellow arsenic), cloths and cloaks (*chogæ*) made of wool and of *patt*,⁵ hawks, &c.

From Badakshán are imported salt, horses, and cash, in return for which slaves are exported.⁷ The sale of slaves in the Afghán dominions has, however, quite recently been partially, if not wholly, put a stop to.

The king himself is the chief merchant in the place, and takes from other traders whatever he fancies, always giving a very moderate equivalent in exchange. The Mullah's small stock escaped any heavy loss on account of his friendship with the influential Mukaddar.

The principal fruits of the country are apples, pears, pomegranates, mulberries, grapes, plums, and apricots; the pears and mulberries are better of the kind than the Mullah had seen elsewhere. Chitrál was once famous for its wine, and is said by tradition to have been the wine-cellar of Afrasiáb, but the Mullah reports that it is not now drunk. Wheat and barley⁸ and

¹ Or "Prince of Chitrál." The rulers of Central Asiatic countries are generally called after the names of the towns in which they reside; thus we have the *Mihárs* of Chitrál and of Mastuj, while the *countries* ruled by them are respectively called *Kashkár Paín* (low) and *Kashkár Bála* (high). The countries are also sometimes named after the residence of the rulers; thus these countries are sometimes called *Chitrál* and *Mastuj*.

² This refers to the clipping of the central portion of the mustaches, which is very general amongst Mussalmáns.

³ This information would not appear to tally with what we learn about these Káfirs from the accounts of Elphinstone, Masson, and others whose accounts, however, are *inter se* somewhat discordant. As far as dress is concerned, these Káfirs who came down into Chitrál for trade, or other purposes, would probably assimilate their dress as far as possible to that of their Mahomedan neighbours in order to save themselves from insult. The tuft of hair worn by Káfirs on the crown of the head is alluded to by nearly every one who has collected information about this little-known tribe. As to the similarity of features, I think it extremely probable that the Mullah's account is correct. It is well known from the writings of the Emperor Baber and others that the Káfirs formerly occupied a very much larger extent of country than they at present hold. The Hindú Kúsh from the Khawak Pass (long. 70°) to Kashmir, with the valleys and ramifications to the south, was probably almost entirely occupied by Káfirs. Bajasor is described by Baber as a land of infidels. Kathor, moreover, the ancestral family name of the Kings of Chitrál, is probably identical with Katwar, a district of infidels mentioned by Baber as lying to the east of the Khawak Pass. On the whole there is, I think, much evidence to account for the strong resemblance in features said to exist between Káfirs and Chitráls.

⁴ From the neighbourhood of Bunnoc.

⁵ Called *Har-yawal* in Chitrál and *Harál* in Hindustán.

⁶ *Patt* is the name given to some very fine wool which is obtained from combing the fleeces of the wild sheep which are shot in large numbers in the snowy mountains of Hindú Kúsh. In very cold climates this wool is obtained from most animals of the sheep and goat tribes, and is moreover often found on dogs.

⁷ Men and boys sell for from Rs. 100 to Rs. 200, *i. e.*, ten to twenty pounds each, but the females are worth more than double the sum. The Chitráli females are very beautiful, and are much sought after in Central Asia.

⁸ Throughout the Chitrál Valley horses are chiefly fed on barley. In its absence they get Indian corn, which in Yárland and Káshghar is almost the only food given to horses.

Indian corn are the most common grains; rice is grown in the lower portions of the valley. The soil is generally rich and fertile. The valley contains a good deal of jungle wood, but not many timber trees.¹

Chitrál to the Baroghil Pass.

On the 22nd of March the Mullah left Chitrál, accompanied by two servants and a sepoy of the king. The latter had apparently received orders to delay him on the road as much as possible and prevent him from taking long marches. The road lay along the left bank of the Chitrál River; the first night the Mullah encamped at Rágh, and the following day marched to Muri, crossing *en route* by a ford the Kuland, a large stream nearly the same size as the Chitrál River, which latter here goes by the name of Mastúj. On the third day's march the Mastúj River was crossed at Muri by a wooden bridge about 40 paces wide.²

Three more short marches up the stream brought the Mullah to Drasan, a village of about 300 houses, and the residence of a young son of Amán-i-Mulk. On the 27th he continued along the river bank to Avi,³ passing by Buni, the frontier village of Mastúj.

The soldier who was with him would not allow him to march more than a few miles every day, the reason assigned being that the Baroghil Pass was not yet open, and it was undesirable that the Mullah should halt any considerable time at any one village; this he would be compelled to do if he arrived at the foot of the pass before it was open.

On the 3rd he reached Chinar, crossing *en route* the Lásipur stream, about the same size as the main river. Up it a road goes to Ushgúm (Yássin). At the junction of the Lásipur with the Mastúj River is the fort and town of Mastúj, the residence of Mihtar Pahlwán Khán, the ruler of Upper Kashkár. At the time of the Mullah's visit Pahlwán Khán was absent in Yássin, so there was no occasion for the Mullah to halt there.

The district of Upper Kashkár (Kashkár-bálá), also called Upper Chitrál, would appear, from the best authorities on the subject, to include both Mastúj, which forms the upper portion of the Chitrál Valley, and Yássin, Ushgúm, or Varshigúm, which lies at the head of the Gilgit Valley, the drainage of which falls into the Indus River near Búnji. Upper Chitrál has until very recently been quite independent of Kashkár or Lower Chitrál, and the two countries have always been ruled by two different branches of the same family, descended from a common ancestor named *Kathor*, the *Khushwaktia* branch ruling in Upper and the *Sháh Kathor* in Lower Chitrál. Of late years the influence of Amán-i-Mulk, the present representative of the Sháh Kathor branch, has decidedly preponderated, and he exercises considerable authority over both Mastúj and Yássin as well as in his own hereditary dominions. When Mír Wáli (who was the representative of the Khushwaktia branch) murdered Mr. Hayward, he was expelled from his government by order of the Amán-i-Mulk, and his (Mír Wáli's) cousin Pahlwán Khán was put to reign in his stead. Mír Wáli was subsequently re-installed, but was again exiled. He took refuge with Mír Fatch Ali Sháh, the late ruler of Wakhán, and was absent in Badakhán when I visited Wakhán in 1874, since which time he appears to have made a fresh attempt to recover his dominions, as it has recently been reported that he has been killed in a fight with his cousin Pahlwán Khán, the present ruler of Upper Chitrál.

¹ From the Shushi Darah, a large stream joining the Chitrál River near Darosh, a large quantity of timber was recently purchased by a Peshawar merchant, who floated it down to Peshawar and made a large profit out of it. It is said that the timber rafts took only three days to reach Jalálábád, and two days more on to Peshawar. There is only one difficult place for navigation, near Asmár, where the rafts have to be abandoned and rejoined again a little lower down. Taxes are levied on the timber at Asmár, Jalálábád, and Lalpúra. Large quantities of timber are floated down from Asmár, the hills in its neighbourhood abounding with the *sakálar* or pine.

² This river is said to be only fordable by baggage animals in one place below Mastúj, *viz.*, at Ain, near Brus; even this latter ford is impracticable in the hot weather. There are numerous bridges near the principal villages.

³ From Avi a road goes to Istrugh, a town and district on the Panjah River below Wakhán.

The ruler and the inhabitants of Upper Chitral are of the Shiá sect, while the ruler and inhabitants of Lower Chitral are all Súnis, in spite of which the reigning families intermarry. The Shiá princes of this part of Central Asia have a base pre-eminence in that they are in the habit of selling their own subjects into slavery. The Shiás of Wakhán, Kanjúd, &c., recognize Ágha Khán of Bombay as their leader, and send money contributions to him. He appears to occupy amongst the Shiás a position somewhat similar to that of the Akhúnd of Swát amongst the Súnis. The latter receives visitors from Arabia and all parts of Asia.

On the 2nd April the Mullah marched to Praib, passing the village of Khush, near which is a place called Kanhariawal (or orpiment mine), from which orpiment (hariawal) of a very superior kind is extracted. This mine was only discovered a year previous to the Mullah's visit by Khush, a younger brother of Mihtár Pahlwán; the orpiment is of better quality than any hitherto met with, and is exported in considerable quantities to Peshawur. It is sold on the spot at about 4 seers the rupee. On the 3rd the Mullah marched to Dezg, the residence of the governor (hákim) of the district, extending from Chivinj to Darband. The Hákim, Chust by name, was absent at Darband Fort, a few miles up the river, and as the pass was not yet open, the Mullah was detained a whole month in the neighbourhood. Meanwhile the Hákim made one or two unsuccessful attempts to induce the Mullah to present him with a large share of his stock-in-trade. During this enforced detention the Mullah had some good sport after wild sheep¹ in company with the people of the country, who are very fond of shooting, which is both an exhilarating and a profitable amusement for them.

It was not till the 5th May that the Mullah left Gazan, which is the highest inhabited village in the Mastúj Valley, and is close to the fortifications of Darband, which not only cover the road from Baroghil, but also another road which joins here from Uahgúm.²

The Mullah was accompanied from Gazan by the Hákim and a numerous suite as far as the ruined fort of Topkháná Ziabeg, a distance of ten miles. The road along the valley is up a gentle but stony ascent. There is no habitation above Darband, although there is abundance of grass, wood, and water on the surrounding hills. The country about here has always been a bone of contention between the Chitralis and the Wákhis, and the Ziabeg Fort is named after a Badakhsli official who held that part of the country many years ago. The district is now a regular no-man's land, and, like the rich pastures of the Great and Little Pámirs, has been abandoned as a grazing ground for cattle on account of the insecurity of life and property. Like the Pámir also, these hills are the favourite abode of large flocks of wild sheep.

Four sepoy accompanied the Mullah for 5 or 6 miles above Ziabeg, and he was then left to continue the journey alone with his two servants, one of whom had fortunately traversed the road before. His route lay through a marsh, covered with a dense low jungle, through which they had great difficulty in making their way. This marshy jungle is famous as a breeding ground for hawks, which are caught by the Chitralis in considerable numbers when young.³ Emerging from the marsh the path lay along a frozen stream, where the snow in places lay in deep drifts; and night coming on they had to halt near the jungle. Fortunately there were large quantities of dry wood lying about, so that they were able to make blazing fires with

¹ The Burrell.

² It was at Darband that the Chitralis defeated Muhammad Sháh's force, advancing from Badakhslián, which, being composed entirely of mounted men, could make no head against the fortifications, which extend up the hills on both sides of the stream, here running through a very narrow gorge. The Badakhsli were defeated with heavy loss, both in men and horses, and fled over the pass back to their own country.

³ The *modus operandi* is as follows:—The huntsman constructs a place of concealment in the jungle, with an opening at the top just sufficiently large to enable him to pass a hand through. He ensconces himself therein, and having fastened a pigeon above the aperture, secured by a strong string, has not long to wait before a hawk comes down and seizes the pigeon, when the latter is drawn towards the hole, and the hawk is easily caught by the feet and secured.

which to keep out the cold. The next morning they continued up the Mastúj stream, but after a time the road strikes off to the right up a spur, and rises about 2,000 feet¹ by an easy but steep ascent of about 2 miles. The path skirts on the right hand a large glacier which extends for 3 or 4 miles in a south-east direction, and drains into the Mastúj River at a point a mile below where the Mullah quitted it. Near the foot of the glacier is a small lake which is estimated by the Mullah to be about two-thirds of a mile in circumference. At the top of the ascent the road passes for about a mile in a north-east direction over nearly level ground, surrounded by hills, which were estimated by the Mullah to rise to about 1,500 feet above the pass. On the plain a few stone huts were seen partially buried in the snow. The Mullah was subsequently told that the name of this elevated plain was Chattiboi, and that from it a road passes above the glacier before alluded to, to Yássin. From the north edge of the plateau the road makes a sharp descent of about a mile, returning into the Mastúj Valley, the stream through which is here a rapid current passing between nearly perpendicular rocky walls, about 100 feet in depth. This chasm is crossed by a strong wooden bridge 11 paces (33 feet) in width. The stream is principally fed by warm springs rising in the neighbourhood, but partly from the snow which was rapidly melting on the adjacent heights. A footpath leads down the Mastúj stream from the bridge, by using which the Chattiboi Pass is avoided, but the Mullah had been warned that this path could only be used by hardy mountaineers and was utterly impracticable for laden animals.

From the bridge is a gentle ascent of $1\frac{1}{4}$ miles to a camping ground called Safr Beg, where the Mullah passed the night; the next morning an ascent of a mile, the first half of which was steep, led on to the nearly level Dasht-i-Baroghil, the watershed between the Sarhadd branch of the Oxus and the river of Chitrál. The road traverses this plain in a north-east and easterly direction for about 5 miles, the valley varying from $\frac{1}{2}$ to $\frac{3}{4}$ mile in width with low hills on both sides; the road then descends for about $1\frac{3}{4}$ miles in a north-east direction, and meets at the foot of the slope a small stream which flows from the west into the Sarhadd River. Thence the path runs due north through an open grassy valley to the village of Sarhadd, nothing but a few unoccupied stone huts being passed *en route*.

The height of the watershed on the Baroghil plain² has been estimated by Captain Biddulph at about 12,000 feet. The Mullah states that in traversing it for a distance of 5 miles there was no appreciable rise or fall, while Captain Biddulph, who reconnoitred it in 1874 from the direction of Sarhadd Wakhán, states that he reached a point, about $1\frac{1}{4}$ miles short of the crest, which

¹ A rough estimate of the Mullah.

² There is but little doubt that the Baroghil Pass is the proper name given to the watershed between the Sarhadd and Chitrál Rivers, although the Mullah states that the name is properly applied to the first ascent he made, *viz.*, that of the Chattiboi plain to the south of the bridge. This ascent was doubtless more severe than that to the Dasht-i-Baroghil, which, although a principal watershed, the Mullah will not dignify with the name of a pass at all. There is always doubt as to the nomenclature of places in these regions. Wakhs and Chitráls have often different names for the same place, while the Bajarri merchants frequently employ a third. I give below Mahomed Amin's account of the latter portion of this route, the only account with which we have hitherto been acquainted. It is taken from the Punjab Trade Report.

"*27th March, from Jaldádd.*—From Kila Ziabeg to Ab-i-garm (c) or Chattiboi, 15 kos; no habitation. A hot spring and a lake at the foot of the Chitrál Pass, which is at times closed by avalanches from the pass (Chitrál) for two or three years continually, after which it bursts forth in a torrent which falls into and swells the river Kunar, that rises in the pass and runs about a mile to the west of the lake. It is a small stream here, and known by the name of the pass."

"*28th March, Fir Khar, 15 kos.*—Beyond the pass which runs across the range (Karakorum) for 11 kos, thus: from the base near Chattiboi to the summit, a gentle gradual ascent for about 3 kos. Thence a plateau or elevated plain about 4 kos wide, flanked by high ridges on either side, through which the road lies in length from south to north about 5 kos. The descent from the northern extremity of the plateau to the base on the other side of the range equally gentle and sloping with the ascent. A staging place at the base called 'Kampir Pilat,' 3 kos. The plateau, which is known by the name of Dasht-i-Baroghil (*i. e.*, Baroghil plain), is a rich pasturage, where both the Badakhsháni and Chitrál people take large herds of cattle, sheep, and goats."

(c) Literally "warm water."

he estimated to be not more than 200 feet higher than where he stood. This pass is generally believed to be the lowest depression in the great chain that separates India and Afghanistan from Northern Asia.

In summer the Baroghil plain is covered with rich pastures, and is a favorite grazing ground for the cattle from the Wakhán Valley. When the Mullah crossed, there was still snow on it, and the only person he met on the road between Gazan and Sarhadd was a solitary individual in search of *yák* (mountain oxen) that had strayed from Sarhadd.

Return to India.

The Mullah reached Sarhadd on the 8th May, and was detained there till the 18th, as the local authorities would not let him pass on without the written permission of Mir Fateh Ali Sháh, the ruler of Wakhán. This chief was at the time in great difficulties. He had a few days before seized two of his own subjects, young girls of Sarhadd, to send as a present to Naib Muhammad Alum, the Afghán ruler of Turkistán. The people of Sarhadd, her relations, had gone to Panjah and had blockaded the old Mir in his own fort, so that communications were interrupted between himself and his lieutenant in Sarhadd. The Mir, however, appears to have got the best of them, for I notice in my report on Munshi Abdul Subhán's visit to Shighnán that on the 31st May (a few days after the departure of the Mullah from Sarhadd) no less than five female slaves were despatched by Mir Fateh Ali Shah¹ from Wakhán for the Governor of Báikh. This is an undoubted fact, and is a proof that the abolition of slavery throughout Afghanistan has not yet been effectually carried out. The Mullah adhered to his story that he was in pursuit of a defaulting merchant; the latter was now supposed to have made his way to Yárkand, and the Mullah at last got leave to start in pursuit. He was accompanied the first day out by some Wákhis, but was then left to find his own way to Tashkurghán. He proceeded over the Little Pamir by the ordinary caravan road which has so recently been described at length² that it is unnecessary to repeat anything about it here. After incurring considerable danger from floods caused by the rapidly melting snow, he reached Tashkurghán on the 26th May. Halting there three days, he went to Yárkand *viâ* the Charling River route, and arrived there on the 8th June. He was detained till the 19th September, when he got his passport and proceeded *viâ* the Karakorum route to Leh. He started with a very large caravan, and the merchants composing it were in a state of great exultation at having received permission to start so early in the season,³ it having been the custom of late years not to allow the caravans to start till the winter time.

"29th March, to Sarhadd-i-Wakhán, 6 kos."

It seems from the Mullah's description that the main levated map of the Hindú Kúsh was traversed while crossing the first pass. The Chitral stream appears to rise immediately to the north of the range, and then to flow through it towards the south. The Darkot Pass leading from Sarhadd into Yásin also crosses over the same range, as appears from the following description (extracted from the Royal Geographical Society's proceedings of 1871) given by Ibrahim Khán, a trustworthy and intelligent traveller: "From Darkot (a) to Kotal (the pass) it is 3 kos. On the Kotal mountain nothing can be seen besides snow and stones. On the skirt of the mountain, however, grass and fuel are plentiful. From Kotal Darkot to Banda Baroghil, belonging to Wakhán, under Panjah Chief, 8 kos. For 4 kos the road lies over snow. This snow never melts, and there are fissures in the snow 180 feet deep (b), and horsemen travelling without a guide run the risk of falling into them. The road remains open from June to September. The waters from the south side of Kotal flow towards Yásin, and the waters from the north side flow into the Chitral River. After crossing a stream coming down the eastern mountains, and flowing towards Chitral, by a bridge, you come to Banda Baroghil. * * * Travellers to Yárkand go straight to the villages of Sarhadd Wakhán at the distance of 6 kos from this place, and then crossing the River Pamir they go to Langar."

When I first read this description two years ago, I came to the conclusion that Ibrahim Khán had blundered terribly in his ideas of the drainage of the country. The information now supplied by the Mullah proves Ibrahim Khán's statement to have been perfectly correct.

¹ Since dead.

² In the reports on the Yárkand Mission.

³ This was one of the good results of Sir D. Forsyth's Mission.

(a) Darkot is a village at the head of the Yásin Valley. (b) Evidently a glacier.

The Mullah hurried along ahead of the caravan and reached Ladákh on the 24th of October, and proceeded *vid* Kashmir to Peshawur, where he arrived on the 9th December 1874.

The Mullah has made a very careful route survey of the whole road from Jalálábád to Sarhadd, and thence to Yárkand. The first section—*viz.*, from Jalálábád to Sarhadd—is a distance of 380 miles, mostly new, and gives us very valuable additions to our geographical knowledge, besides enabling us to correct certain errors made by the Havildár in his exploration through Dir and Chitrál in 1870. The remainder of the Mullah's work is unfortunately of little use, as it had been anticipated by the surveys of myself and others under my orders in connection with Sir D. Forsyth's last mission to Yárkand. I have plotted out various portions of his route survey to compare them with my own, and the result has invariably shown such remarkable accordance that it has given me very great confidence in that portion of his work which cannot be subjected to a similar check. His survey is much more carefully executed than that of any of the Mahometan explorers before employed by the Great Trigonometrical Survey. His route from Jalálábád to Sarhadd shows 183 bearings with the prismatic compass, or one in every two miles,—a very good performance indeed, considering that the country is thickly inhabited, and that throughout the whole of it the discovery of his employment would probably have entailed short shrift and sudden death.¹

This was the Mullah's first exploration, and as he was traversing a country where detection would be a most serious matter, it was not thought desirable to encumber him with anything more than a prismatic compass. Hence there are no observations for latitude or for height above sea level. The former are of little importance, as the position of Jalálábád was accurately determined during the Afghán war; while Sarhadd, the closing point of this most important route, has been rigorously determined by myself. His position of Sarhadd accords very fairly with my own determination, and altogether the Mullah's journey has given very satisfactory results.

¹ His presence of mind saved him from trouble on one occasion when in the Yárkand district. Near Tash-kurgán he was crouching in the grass, having taken a bearing, as he thought, unobserved, and was quietly recording it in his book, when he looked up and saw a Kirghis watching him intently. The Mullah immediately spread his carpet and proceeded to say his prayers, after doing which he explained to the man that his compass or Kibla-numá indicated to him the exact time for prayers. The Kirghis was astonished at his wisdom, and immediately insisted on getting from him a *tasbeeh* or written charm. On going to the village he had to write these for a large number of people, but was well rewarded for his trouble by removing suspicion and getting ample supplies of food. In uninhabited countries the danger of detection is a minimum and the quality of the actual survey is superior; although, on the other hand, the explorer is perhaps unable to give any of the names of rivers, mountains, or camping grounds. Thus in traversing the Pámir, the Mullah was unable to record the name of any of the camping grounds passed *en route*. During his journey up the Chitrál River he had to feign illness several times a day and lag behind, while, to keep up the delusion and avoid suspicion, he had to be always asking for medicine at the different villages he passed through.

IV.—ROUTE FOLLOWED BY THE MULLAH FROM JALÁLÁBAD TO SARHADD-I-WAKHÁN.

JALÁLÁBAD TO

1. *Shéwa or Khéwa, 14 miles.*—After a half mile cross the Kábul River in large ferry boats; stream 200 paces across. For four miles the road passes through a populous district, and then crosses a bare stony plain, where there is considerable danger to travellers from Shinwári robbers. Strikes the Chitrál or Kunar River at the village of Lamba-taka, three and a half miles beyond which is Khéwa, a town of about 1,000 houses and the chief place in the Shigar district; road generally good. There are two alternative roads from Jalálábád to Shéwa, but the above is much the shortest.

2. *Nurgal, 13 miles.*—Road along the right bank of river, stony and bad in places. At two miles pass village of Islampur (or Salampur). Nurgal is a village of about 60 houses. Robbers infest the road.

3. *Zor-kunar or Old Kunar, 11½ miles.*—Road continues along right bank of river to village of Patan, two and half miles beyond which the river is crossed by rafts of inflated skins; the river is here about 50 paces across, and may sometimes be forded in the very cold weather. A road goes along the right bank from Patan direct to Chigur Serai; road passes through well-cultivated and populous districts. Kunar is a large town with upwards of 1,000 houses.

4. *Pashat or New Kunar, 15 miles.*—Road good, and passes along the left bank of the river through a populous and well-cultivated district. The villages of Kunar, Ali Dost, Kuligram, Shankar, Shadalam, and Barabát are successively passed before reaching Pashat, a town about the same size as old Kunar.

5. *Sarkáni, 7 miles.*—Road stony, passes by the small important villages of Janga, Lamba Taka, and Donai. Sarkáni contains about 300 houses, and from it as well as from Kunar and Pashat there are roads to Bajor passing over the hills. Danger from robbers on this day's march.

6. *Maraora, 12 miles.*—A village of 200 houses, the frontier village of the Jalálábád district. Road through uninhabited waste on left bank of stream. Shortly before reaching camp, Chigor Serai is passed on the opposite bank at the junction of the Pech or Kattar with the Chitrál River.

7. *Asmár, 20½ miles.*—The residence of the Khán of Asmár, a fort with village of about 300 houses; road along left bank of stream, bad and stony, with a great many ups and downs. Pass on the way the villages of Shigal and Shártan (80 houses) belonging to Bajor.

Jalálábád to Asmár, 93 miles.

8. *Zor or Old Baráwul, 24 miles.*—A village of 200 houses, at the head of the Kátkod valley, up which the road goes, passing by the villages of Bedád, Dánggramler, Kátkod (50 houses), and Mulaiyan, all belonging to Asmár. Road stony but good as far as Kátkod, (16 miles), after which there is a steepish ascent to Baráwul.

9. *Jánbatái, 24 miles.*—A town of 1,200 houses, the residence of the Hákim of the Baráwul district (of Dir). At half mile above Zor Baráwul is the pass of the same name; ascent easy; descent into the narrow Baráwul valley; road stony, passing *en route* the villages of Banshi (120 houses), Kuneh (30 houses), Súni (15 houses), Khára (20 houses), Shaftálu (20 houses), Tulekha (40 houses), Tikakot, and the fort and village of Sháhikot (50 houses).

10. *Kila Hamid Khán, 13 miles.*—A fort and village of 50 houses. On leaving Jánbatai, ford the Mír stream, which flows through the well-inhabited valley of the same name; road down the left bank of the Baráwul stream very stony; pass the villages of Banda (10 houses), Darikand (40 houses), Kila Fakir Khán (40 houses), Bandai (a town containing about 1,000 houses), and Dir-kile (30 houses). Before reaching camp cross the Asmár stream.

11. *Dír, 16 miles.*—A fort, the residence of the ruler of Dír, and a town of about 1,000 houses. The road follows the left bank of the Baráwul River by the villages of Langri, Barubát, Larsabát, Abakand, Saidán (the frontier village of Dír), and Ijri, where the Baráwul River flows into the Panjkora. The road then follows up the right bank of the latter river by the villages of Tunga and Kodkai. The villages mentioned on this march contain about 50 houses each. Road good throughout.

Asmár to Dír, 77 miles.

12. *Mirgah, 10 miles.*—A village of 100 houses near the head of the Dír valley. The road crosses the stream by a wooden bridge at one mile above Dír, and continues up the valley, passing through the villages of Balaoghar (30 houses), Káshkári (30 houses), Bar-kulandi (40 houses), Ler-kulandi (25 houses), and Miána (50 houses). Road stony and difficult.

13. *Badolgáh, 16 miles.*—The road passes Gujár, the frontier village of Dír, and after four miles of steepish ascent crosses the Lahori Pass; the road then descends through a very narrow defile for about two miles; the road very stony and bad, and infested by Káfirs; the valley then opens somewhat; and the hills at side are covered with very fine pine forests; road continues down a small stream by the village of Ashreth to Mirkandi on the Chitrál River, two miles up which is Badolgáh, a Chitráli village of about 40 houses.

14. *Darosh, 10½ miles.*—A large scattered village of about 400 houses. The road lies up the left bank of the Chitrál River; road stony, and passes over several spurs from the hills on right. Only one village (Galatágh) passed *en route*, near which a considerable stream has to be crossed.

15. *Braz, 16 miles.*—Road up stream good, but stony and hilly. At two miles, ford the Shushi-darah River, which is but little smaller than the main Chitrál stream; pass *en route* the villages of Keshi (200 houses), Chargu-kila and Bibi-kila (20 houses). The river is easily fordable in the cold weather.

16. *Chitrál, 10 miles.*—Fort and town on right bank of river, which is here crossed by a wooden bridge. Road good, passing along left bank of river through villages of Chumarkand (150 houses), Choghúr (100 houses), and Doshákkel (15 houses).

Dír to Chitrál, 62½ miles.

17. *Múri, 17 miles (150 houses).*—Road up left bank of river, passing through villages of Danfi (200 houses), Kári (40 houses), Rágh (30 houses), and Kirghiz (25 houses). Road stony and bad. Between Kirghiz and Múri cross the Buland stream, easily fordable in the cold weather.

18. *Gugtr, 15½ miles (150 houses).*—At Marz, one and a half miles, the road passes over a bridge on to the right bank; a few scattered habitations along the road, which is very hilly and stony, and very difficult to traverse (in March) on account of snow.

¹ Above Danfi the Chitrál Valley narrows considerably, and is not more than 400 or 500 paces across. It continues narrow up to Mastáji, where it is about one and a half miles broad.

19. *Dráas*, 10½ miles.—Road very hilly and stony, and distant about two miles from the river; on its right bank pass several small scattered hamlets.

20. *Míragam*, 10 miles (70 houses).—Road up stream stony and bad; pass villages of Búni (150 houses) and Avi (100 houses). From Avi, where the river is bridged, a footpath leads across the Hindú Kúsh to Ishtágh in the Wakhán Valley, which is reached in six marches from Búni. The stages, according to Muhammad Amin, are—1, Miragám; 2, Shagram; 3, Kut; 4, Fort of Ishtágh Pass; 5, Camp without name beyond the pass; 6, Ishtágh. It is a difficult road, impracticable for laden animals, and never used by caravans. Avi is the frontier village of Mastúj or Upper Chitrál.

21. *Kila Mastúj*, 10½ miles, the capital of Upper Chitrál.—Road stony and bad; pass the small village of Tichan Sanoghar; cross the Chitrál River twice by wooden bridges. One mile short of Mastúj, the Laspur River is crossed by an easy ford. The main valley at Mastúj is about half a mile broad.

22. *Praib*, 10½ miles.—Road good, but somewhat stony; pass *en route* the small villages of Chiuar, Cherinj, and Chapria.

23. *Pawar*, 12 miles.—Good road; cross Mastúj (or Chitrál) River by an easy ford; pass the villages of Dezg (40 houses) and Bang (20 houses).

24. *Tophána Ziabeg*, 16 miles.—Road for six miles along the river bank very stony and bad as far as Darband Fort, which is situate at the junction of the Gazan Darah, with the Mastúj River. A mile short of the fort is the village of Gazan, the highest village in the Mastúj valley. Road very stony up narrow defile. A road goes up the Gazan Darah to Yámin. From Darband Fort to Ziabeg the road is bad and stony; the valley is from two to five hundred paces across; patches of thick brushwood here and there. At Tophána Ziabeg are the ruins of an old fort; a footpath leads from it to Yúr, a village in the Wakhán Valley.

25. *Camp in Jungle*, 16 miles.—Path up stream through an open valley; road bad, and much of it through a marshy forest, which the horses had considerable difficulty in getting through. Plenty of firewood and grass.

26. *Camp Safr-Beg*, 12½ miles.—Road ascends stream through narrow valley (about 100 paces wide) bounded by lofty mountains. At seven miles from camp, ascends a spur on right for two miles (rising about 2,000 feet), skirting on right of road an enormous glacier. At top of ascent is about one mile of level (the Chattiboi plain) followed by a sharp descent to the Chitrál River, which here flows through a rocky defile, and is crossed by a strong wooden bridge. This ascent and descent may be avoided by hardy mountaineers, who sometimes follow a very difficult path which follows the stream throughout. From the bridge is half a mile of ascent to camp, where plenty of grass and wood are to be had.

27. *Sarkadd-i-Wakhán*, 16½ miles.—The road ascends for a mile on to the nearly level Baroghil plain, about 12,000 feet (above sea level), along which the road passes for some five miles; this is followed by a descent of some two miles into a broad open valley which leads due north to Sarkadd, the highest inhabited village of the Wakhán Valley. A few huts half-buried in the snow are passed *en route*. The road from Darband is closed by snow for several months in the winter.

Chitrál to Sarkadd-i-Wakhán, 147 miles.

Total distance, Jalálábád to Sarkadd, 379½ miles.

¹ Many streams which are easily forded in the winter often become impassable during the summer floods.

V.—ON THE CONSTRUCTION OF THE MAP ILLUSTRATING THE ROUTES OF THE HAVILDAR AND THE MULLAH.

SHORTLY before the construction of the map which accompanies these reports, Colonel Walker, R.E., the Superintendent of the Great Trigonometrical Survey, had made a careful examination of all the existing data for fixing the positions of the towns of most importance in Northern Afghanistan, with a view to the compilation of his new map of Turkistán (published in July 1875), for which he was anxious to secure the most accurate data. He drew up a memorandum on the subject, for the guidance of his chief draftsman, a portion of which is subjoined:—

"The primary elements must be taken partly from Lieutenant Wood of the Indian Navy and partly from Captain Trotter. Wood's determination in 1838 of the extreme point he reached, the west end of Lake Victoria, is absolutely identical with the recent determination by Captain Trotter, *viz.*, North Latitude $37^{\circ} 27'$ and Longitude $73^{\circ} 40'$ east of Greenwich. Unfortunately full details of Wood's results are not now forthcoming; his book gives the two co-ordinates of his extreme point only (the west end of Victoria Lake), and it gives the latitude of four other points,¹ but no other latitudes or longitudes.² For the co-ordinates of the remaining points, we must go to Mr. John Walker's map of the countries on the North-West Frontier of India, on the scale of about 21 miles = 1 inch, and to Colonel Yule's map on the scale of 50 miles = 1 inch, in the 2nd edition of Wood's *Oxus*. Now, in neither of these maps does the position of the west end of Lake Victoria exactly agree with Wood's numerical data; by Mr. Walker it is in Latitude $37^{\circ} 28'$ and Longitude $73^{\circ} 35'$; by Colonel Yule it is in Latitude $37^{\circ} 25'$ and Longitude $73^{\circ} 30'$. These discrepancies might have arisen from carelessness on the part of the draftsmen by whom the lake was delineated, as its form differs materially in the two maps. I have therefore compared the position of Ishkashim, of which place Wood gives the latitude = $36^{\circ} 42' 32''$; the position by Mr. Walker is Latitude $36^{\circ} 42'$, Longitude $71^{\circ} 33'$; by Colonel Yule $36^{\circ} 42'$ and $71^{\circ} 30'$; while by adopting Captain Trotter's value of Panjah, Latitude $37^{\circ} 0'$, Longitude $72^{\circ} 45'$, and the mean of the three differences of latitude and longitude given by Munahi Abdul Subhan, the Mirza, and by protraction from Wood, Ishkashim is placed in Latitude $36^{\circ} 41'$ and Longitude $71^{\circ} 46'$. Thus the difference in longitude with Mr. Walker's map is increased from + 5' at Lake Victoria to + 13' at Ishkashim, and with Colonel Yule from + 10' to + 16'. Clearly, therefore, the difference of longitude at Lake Victoria cannot be due to the errors of the draftsmen, but must have been made intentionally. No reasons for the alterations are now forthcoming. In Mr. Greenough's anniversary address to the Royal Geographical Society on 25th May 1840 (see vol. X, Journal, Royal Geographical Society), Wood's lake is stated to be in Latitude $37^{\circ} 27'$, Longitude $73^{\circ} 40'$, 'as nearly as we can judge from calculations not yet worked out.' Hence it seems possible that some revision of the calculations was made and used by Mr. Walker; on the other hand, the fact that the original position is given in both editions of Wood's book implies either that the calculations were not revised, or that the revision did not affect the results.

"Panjah is not shown either in Wood's or Mr. Walker's map. If protracted on Wood's map by Captain Trotter's bearing and distance from Langar Kiah, its difference in longitude with Lake Victoria is five miles greater than by Captain Trotter. The accuracy of Captain

Isar, North Latitude	$37^{\circ} 27' 10''$
Ishkashim, North Latitude	$36^{\circ} 42' 32''$
North edge of Nuria Plain, North Latitude	$36^{\circ} 4' 13''$
Khewak, North Latitude	$36^{\circ} 37' 36''$

¹ Major Montgomerie, in paragraph 8 of his report upon the Mirza's work, gives Wood's position of Panjah "from his last set of chronometric observations;" but Wood says that his last set of chronometrical observations were taken at Langar Kiah (p. 233); and Major Montgomerie's values appear to have been obtained by protraction from Langar Kiah, and not to have been given directly by Wood.

“Trotter’s chronometric determination of this difference cannot be impugned; the difference between the results must therefore be due to an error either in Wood’s work or in Walker’s map. Captain Trotter’s determination of Panjah will therefore be adopted.

“Wood spent a week at Kunduz, during which he would have had ample time for fixing its position, and must probably have done so. I have therefore adopted his value thereof as taken from Mr. Walker’s map, *viz.*, Latitude $36^{\circ} 45'$ and Longitude $68^{\circ} 54'$.

“For fitting in the principal points intermediate between Kunduz and Panjah, the following data were available. First, Wood’s maps, and those of Mr. John Walker and Colonel Yule, which were based on his surveys. Secondly, the maps of the routes of the Mirza, the Havildár, and the Munshi. These last were all plotted to scale from the records of the magnetic bearings and paced distances, on the assumption that 2,000 paces were equivalent to one mile, which has been found to be fairly applicable in the long run, being as often over as under the mark; the bearings were duly corrected for magnetic variation, and for the index error of the compass employed; the details were plotted on sheets of paper on which the lines of latitude and longitude had been drawn, and thus the differences of latitude and longitude between any two points not very far from each other could be obtained with fair approximation by measurement from the map. Starting from Kunduz the differences in latitude and longitude for each point in succession were found from the available data. In every instance three independent values were forthcoming, the arithmetical means of which were adopted as the preliminary data. Finally, the differences between the co-ordinates of Panjah thus obtained and Captain Trotter’s values were dispersed by proportional corrections over the whole of the points between Panjah and Kunduz.”

It is unnecessary to reproduce the whole of the numerical data in this place where it will suffice to give the results:—

	Latitude.	Longitude.	
Kunduz	$36^{\circ} 45'$	$68^{\circ} 54'$	From Wood.
Khánabád	$36^{\circ} 42'$	$69^{\circ} 8'$	} From Wood, the Mirza, and the Havildár.
Talikhán	$36^{\circ} 45'$	$69^{\circ} 30'$	
Faizabád	$37^{\circ} 4'$	$70^{\circ} 36'$	
Zebák	$36^{\circ} 35'$	$71^{\circ} 38'$	} Wood, Mirza, and Munshi.
Ishkashim	$36^{\circ} 42'$	$71^{\circ} 43'$	
Panjah	$37^{\circ} 0'$	$72^{\circ} 45'$	From Captain Trotter.
Sarhadd-i-Wakhán	$36^{\circ} 58'$	$73^{\circ} 37'$	Ditto ditto.

For Rusták the position of $37^{\circ} 4'$ by $69^{\circ} 50'$ was found by applying to the above co-ordinates of Talikhán and Faizabád the mean results of the Mirza’s and the Havildár’s surveys from these places to Rusták.

For the determination of the position of Dír, Chitrál, &c., the primary elements are the values of Sarhadd-i-Wákhán, and Zebák as above; Jalálábád, Latitude $34^{\circ} 25'$, Longitude $70^{\circ} 25'$, and the Malakand Pass, Latitude $34^{\circ} 34' \cdot 5$, Longitude $72^{\circ} 0' \cdot 3$, both taken from the Indian Atlas Sheet No. 4. For Chitrál a position in Latitude $35^{\circ} 56'$, Longitude $72^{\circ} 1'$, was determined by combining the Havildár’s route from Zebák with the Mullah’s from Sarhadd; and another position $35^{\circ} 50'$ by $71^{\circ} 53'$, was determined by combining the Mullah’s route from Jalálábád with the Havildár’s from the Malakand Pass. The final value adopted for Chitrál is the mean of these two, *viz.*, $35^{\circ} 58'$ by $71^{\circ} 57'$.

In the course of the investigation of the position of Chitrál, the four following values were determined:—

	Latitude.	Longitude.
Dír	$35^{\circ} 11'$	$71^{\circ} 59'$
Lahori Pass	$36^{\circ} 21'$	$71^{\circ} 55'$
Drósh	$36^{\circ} 34'$	$71^{\circ} 56'$
Chargo Kila	$36^{\circ} 44'$	$71^{\circ} 54'$

As these values differ to some extent from those in the map illustrating Major Montgomerie's published account of the Havildár's journey, it is necessary to state that the differences arise partly from the circumstance that the mean values of the results by the Havildár and the Mullah have now been used, but mainly because, on a comparison by Colonel Walker of the two surveys of the route between Dír and Chitrál and an examination of the field books, it was found that the Havildár had made a clerical error of 180° in one of his principal bearings. The circuitous bend in the Chitrál River, which is shown in the Havildár's map, is due to this error, and has no existence in reality.

The latitude of Chitrál, as fixed above, is $8' 20''$ to the north of the position deduced from the Havildár's star observations in 1870. His field-books, however, show that his astronomical observations were far from satisfactory; the result obtained from them has therefore not been made use of.

In determining the latitude of Koláb, Colonel Walker adopted $37^\circ 50'$, the mean between the Havildár's astronomical value ($37^\circ 55'6''$) and the position obtained by his route survey from Rusták ($37^\circ 43'7''$). The Longitude $69^\circ 38'$ is deduced by the route survey from Rusták.

The position of Kila Khúmb, Latitude $38^\circ 22'$, Longitude $70^\circ 32'$, was similarly determined. The astronomical latitude was 8 miles in excess of the latitude as determined from Koláb by route survey.

The position of Kila Wámur, the chief town of Roshán, Latitude $37^\circ 56'$, Longitude $71^\circ 42'$, depends on the Munshi's route survey from Ishkashim in 1874. It is unchecked by astronomical work, but some 30 miles of it, from Ishkashim up to the frontier of Shighnán, was re-surveyed by the Havildár in his last attempt to reach Shighnán. The work of the two agrees well, although that of the Munshi depends on distances estimated by time of travelling, while the Havildár's was measured by pacing. The Munshi is a careful and experienced observer, and I feel assured that the position now assigned to Kila Wámur is not very far from the truth.

It is most unfortunate that a gap exists in our surveys between Kila Wámur, the most northerly point in Roshán reached by the Munshi, and Yaz Ghulám, the most easterly point in Darwáz visited by the Havildár. The relative bearing of these places and the distances between them, as far as can be learned from the statements of the explorers, are not inconsistent with the positions that have now been assigned to them.

In filling in the details of the map, an endeavour has been made to utilise all available data, so as to make as complete and accurate a representation as possible, not only of the lines of road followed by the explorers, but of the whole of the country to the north of the British dominions on the North-Western Frontier of India, including that portion visited by members of the recent mission to Eastern Turkestan. The list appended of authorities that have been consulted shows the work to have been one involving considerable labor, especially when it is considered that in very many instances these authorities are inconsistent, and that on important points a careful examination of all available maps, books, and reports is necessary before a satisfactory decision can be arrived at. It is impossible here to enter into detail on the numerous points, both important and unimportant, that have arisen in connection with the compilation of the map, but a perusal of the discussion on the probable position of the junction of the Surkháb and Panjah Rivers, given in the body of the Havildár's report, is sufficient to show the amount of labor which is necessarily involved in the conscientious construction of a map of countries about which the information we possess is in so many instances meagre, inconsistent, and untrustworthy.

In some cases it is possible that an incorrect decision may have been arrived at, and that a more complete investigation of the subject with ampler data would have led to a different conclusion; again, as in other subjects, it is quite possible for two individuals having the same data to go upon, to arrive at opposite conclusions. I cannot therefore expect that the resulting map will not present some points which are exposed to just criticism and open to correction. Geographers will appreciate the difficulties of the situation, and will I hope make liberal allowances for them.

The following are the chief materials that have been used in the construction of the map in addition to Colonel Walker's memorandum on the positions of the towns of Northern Afghánistan, from which extracts have been given :—

I.—MAPS.

1. The manuscript map of the Havildár's route, as described in the narrative report.¹
2. The original map of the Mullah's route from Jalálábád to Sarhadd-i-Wakhán, as described in the present paper.
3. The original map illustrating the explorations of the Mirza from Badakhshán across the Little Pámir to Kásbghar in 1868-69.
4. The original map of the Havildár's route from Peshawur to Badakhshán *via* Swát, Dír, and Chitrál in 1870; and the same explorer's route from Kábul to Bokhára in 1872.
5. The original map illustrating Abdul Subhán's journey from Wukhán to Kila Wámur (Roshán) in 1874.
6. Captain Trotter's map of Eastern Turkistán, 1875, and his original notes and surveys.
7. Colonel Walker's map of Turkistán and the countries between the British and Russian dominions in Asia, 3rd edition, 1875.²
8. Colonel Montgomerie's trans-frontier maps, Nos. 4 and 7.
9. Mr. John Walker's map of Afghánistán, 1844, corrected to 1857.³

¹ The survey of the Havildár has given us fairly approximate positions of the points visited by him, and has enabled me to utilise and combine some of the details furnished in the accounts of the routes between India and Khokand given by Abdul Medjid and Sultán Mahammad, as well as the information contained in General Abramoff's account of Karátigin, and in Mr. Fedchenko's more recently published maps.

The delineation of Karátigin is entirely derived from these sources, taken in combination with the altered position of the lower portion of the Surkháb River which has been before discussed. Although there are numerous inconsistencies in all these data, even in some instances between the letterpress and maps of Mr. Fedchenko, it is believed that the resulting map is very fairly accurate.

As regards the map of the country to the north-west of the Havildár's route from Koláb to Khulm, I have there also endeavoured to utilise all the existing information to which I have been able to procure access, but the few accounts we have of the routes in the country of Shahr-i-Sabz and Hissar are so meagre and inconsistent, that it is impossible to combine them in a thoroughly satisfactory manner. In compiling this portion, I have received considerable aid from a member of the suite of Mahammad Sharif Khán, one of the exiled brothers of the present Amír of Afghánistán, now residing in Mussoorie. A servant of the Khán accompanied the army of the Amír of Bokhára which attacked and captured Hissár in 1869; and although his recollections of the country he traversed are not very vivid, they have been of some use to me in filling in names, on what has hitherto been almost a vacant space, on both Russian and English maps. It is possible that before this appears in print, the results of the Russian exploring expedition to Hissár and the surrounding country will have been given to the public, with a map which will of course supersede the present compilation. It will be a source of great satisfaction to geographers if the Russian explorers succeed in reaching Koláb and connect their more scientific survey work with our own native explorations in those regions.

² That portion of Colonel Walker's map which includes the countries that have now been described has been based on the original maps of the Havildár and the Mullah. My own map being on a larger scale than Colonel Walker's, there is room for the insertion of many new names.

³ In many instances I have had to return to Mr. John Walker's map in preference to making use of more recent compilations. Amongst others is the case of the Rivers Alishang and Alingar, northern tributaries of the Kábul River. A perusal of Maason's Travels (published in 1844) shows clearly that Mr. Walker's representation of those rivers is more correct than many others that have since appeared.

10. Map of Afghánistán compiled in the Quartermaster-General's Office, Simla 1871.
11. The maps in the 2nd edition of Wood's Oxus, edited by Colonel Yule.
12. A trace from Wood's original maps of the road from Kábul to Heibak.
13. Mr. Hayward's map of Yássin, published in the Royal Geographical Society's Journal.
14. Mr. G. Hayward's map (photograph from the original) of Eastern Turkeistán.
15. Mr. R. B. Shaw's map of the country between Ladákh and Eastern Turkeistán (photograph).
16. A manuscript map of Badakhshán by Colonel Yule.¹
17. Captain Carter's chart of trigonometrically-fixed points, west of the Indus, between the British Frontier and the crest of the Hindú Kúsh, 1869-70.
18. Map of Central Asia by the Russian Topographical Department, 1868, corrected to 1873.
19. Map of Khokand and the Upper Syr Darya, by M. and M^{me}. Fedchenko, 1874.
- 20.² Map of the countries between Kashmir and Panjkorah, by E. G. Ravenstein (from Geographical Magazine of August 1875).
- 21.² Sketch map by Mr. R. B. Shaw of the head-waters of the Yárkand River (1875).

II.—ITINERARIES, BOOKS, &c.

1. Travels in Central Asia by Mir Izzat-Ullah in 1812-13.
2. Journey from Pesháwur to Kashghár by F. B., 1870.
3. Route from Khokand to Pesháwur *via* Karátigin by Sháhzáda Sultán Muhammad.
4. Abdul Medjid's itinerary from Khokand to Pesháwur.
5. General Abramoff's account of Karátigin published in Royal Geographical Society's Journal for 1871.
6. Paper by Mr. Fedchenko on the Khanate of Khokand in the *Bulletin de la Societé de Géographie, Paris, June 1874*.
7. Davis' report on the trade and resources of the countries on the N.-W. Frontier of British India, 1862.
8. Pundit Manphul's and F. B.'s reports on Badakhshán, &c.
9. Ibrahim Khán's route in 1870 from Gilgit to Sarhadd-i-Wakhán in 1870, published in Royal Geographical Society's proceedings of 1871.
10. Various unpublished routes of traders and others between Bokhára and Kábul.
11. Masson's travels in Afghánistán.
12. Dr. Griffith's printed journal of travels.
13. The Emperor Baber's memoirs (Erskine and Leyden).
14. Various papers in the Asiatic Society's Journal.
15. Various papers in the Royal Geographical Society's Journal.
16. Various papers in the "Ocean Highways" and in the "Geographical Magazine."

¹ A compilation by Colonel Yule, C. B., which he sent to Colonel Walker for incorporation in the 3rd edition of the Turkistán map. It contains many names which have never appeared on any previous map.

² These maps have only come to hand just in time to be acknowledged here. The narrative is being printed some time prior to the completion of my map.

VI.—ACCOUNT OF THE PUNDIT'S JOURNEY IN GREAT TIBET FROM
LEH IN LADÁKH TO LHÁSA, AND OF HIS
RETURN TO INDIA *VIA* ASSAM.

Nain Singh, the explorer who undertook this journey, is the original Pundit whose journey to Lhása in 1865 from Katmandhú, the capital of Nepál, was described at length by Colonel Montgomerie, R.E., in the Trigonometrical Survey Reports for 1866-67. The Pundit had been in the service of the brothers Schlagintweit while they were carrying on magnetic and other scientific observations in Ladákh and Kashmir in 1856 and 1857; he was subsequently appointed Head-master in a Government Vernacular School in his native district of Milam in Kumaon, and remained in the Education Department until 1863, when, at the instance of Colonel J. T. Walker, R.E., the Superintendent of the Great Trigonometrical Survey, he was entertained for employment as a Trans-frontier explorer and duly trained. From that time to the present he has been constantly engaged either in carrying on explorations himself or in training other natives to follow in his footsteps. In 1865-66 he made the famous journey alluded to above from Katmandhú to Lhása, and thence to the Mansarowar Lake and back to India. This exploration earned for him the present of a gold watch from the Royal Geographical Society of London, which unfortunately was subsequently stolen from him by one of his own pupils. In 1867 he went in charge of a party of natives and did excellent service in exploring and surveying the head-waters of the Sutlej and the Indus Rivers.¹ In 1870 he was deputed to accompany Mr. (now Sir Douglas) Forsyth's first mission to Yárkand, but shortly after the mission left Leh he was sent back to India, as it was thought that his presence might compromise the mission. In 1873, he was sent under my own orders with Sir Douglas Forsyth's second mission to Yárkand, in connection with which he did much good service. In July 1874, while I was at Leh, after the return of the mission, the Pundit having volunteered to make a fresh exploration, I was authorized by Colonel Walker, R.E., to dispatch him on the journey to Lhása now to be described. His instructions were to proceed by a much more northerly route than the one he had previously followed. From Lhása he was to endeavour to get attached to the caravan which proceeds thence every three years to Pekin.² If he failed in accomplishing this he was to endeavour to return to India by an easterly route from Lhása, down the course of the Brahmapútra if possible.

It had originally been proposed that another Pundit (No. 4) should accompany him on the journey, but the exposure this man had been subjected to while returning from Yárkand had laid him up and incapacitated him for the time being for any further exertion.

As Pundit Nain Singh had on his former visit made a stay of several months in Lhása, and had also of late years been frequently in Leh, and was there known to be in the employment of the British Government, it was by no means easy to make the necessary arrangements for smuggling him safely across the Tibetan frontier; thanks, however, to the active assistance of Mr. W. H. Johnson,³ the Wazir or Governor of Ladákh, under the Maharája of Kashmir, all difficulties were surmounted. The Kárdár or headman of the district and village of Tánksé—the latter a place of some importance, five days' march to the east of Leh, and near the frontier of Tibet—was summoned to our council at Leh, where it was arranged that the Kárdár

¹ *Vide* Great Trigonometrical Survey Reports for 1867-68.

² I provided the Pundit with a letter of introduction to our Minister at Pekin, containing a request that should the letter ever be presented by the Pundit in person, arrangements might be made for sending him by sea to Calcutta.

³ Well known for his adventurous journey to Khotan in 1864. He is the only European who has visited Khotan in modern times.

should return to his village and collect a number of sheep for the Pundit and party, who were to follow in a few days' time, ostensibly with the object of going to Yárkand *via* the Changchenmo route, which passes through Tánksé. The Pundit was to be accompanied by four attendants, two of whom were natives of Tibet, who had accompanied him on former explorations; the third man was a native of Leh; and the fourth, Kunchu Dunduk by name, belonged to the village of Chushul in the Tánksé district, and was a nominee of the Kárdár.

It was arranged that the Pundit and three of his servants should enter Tibet as Lámás going on a pilgrimage to a temple near Rudokh, while Kunchu Dunduk, who was well known in the frontier districts, would purchase wool as an agent of the Kárdár.

Provision was thus made for the first great difficulty which might be expected to be encountered, *viz.*, the crossing the frontier; once well in Western Tibet the Pundit would have to trust to his own devices to enable him to reach Lhása. To enable him, however, to take a journey thence to Pekin, it was indispensable that he should be well provided with funds at Lhása to enable him to make the necessary arrangements. It was clearly impossible for him to carry a large sum of money, or even valuable merchandise, through the tribes of wandering robbers that he expected to meet with *en route*. His life would certainly have paid forfeit had such an attempt been made.

It happened that just about the time the Pundit was making his preparations to start from Leh, the usual triennial mission,¹ half mercantile, half political, was being despatched to Lhása under the command of the Kahlón, a high official at Leh. With the aid of Mr. Johnson, this officer was prevailed on to take a considerable sum of money in charge, on the understanding that an equivalent amount was to be paid by him to Nain Singh in Lhása, whenever he should make personal application for it. It was thus hoped that want of money would not stand in the way of further exploration after arrival at Lhása. Most unfortunately the Kahlón died on the journey, and, as will subsequently appear, the Pundit did suffer at Lhása for want of funds, and had to return to India by a direct route.

Leh to Noh.

These preliminary arrangements having been made, suits of Lámás' clothing were secretly made up in Leh and carefully packed so as to be available when occasion required. On the 15th July 1873 the Pundit and his companions left Leh in their ordinary costume, giving out that they were going to Yárkand. On the 21st they reached Tánksé, where they remained for two days in the house of the Kárdár, who accompanied them to Chágra, three marches further on: at Chágra they found a summer encampment of shepherds, the last inhabited spot

¹ It appears that ever since the conquest of Ladákh some 150 years ago by the Sokpo Gyalpo Galdán Cháng, the Rájá of Lhása, it has been customary for a large caravan to leave Leh for Lhása once in every three years. The leader has the honorary title of Lopelák,* and is generally one of the leading officials of Ladákh. The party leaves Leh in July and August and proceeds *via* Gartokh, Mansarowar, Shigátzé, and Tádum to Lhása, where they generally arrive the following January. Lengthened halts are made on the journey at the above-mentioned places for the sake of trade. The caravan remains at Lhása till June or July, and then returns by the same route to Leh, which place they reach in December, *i. e.*, after an absence of one and a half years.

While in Tibetan territory the districts through which they march are bound to furnish gratuitously three hundred yáks for the carriage of merchandise, as well as supplies and food for the travellers. As the quantity of merchandise sent with the caravan rarely attains the full amount for which carriage is sanctioned, the Lopelák in charge receives from the villages he passes *en route* some equivalent for the balance of carriage not required. As the Lopelák thus has his goods carried gratis, and receives in addition considerable payment in lieu of carriage, he is naturally well able to make a large profit on his venture. He is provided by the Kashmir authorities before starting with fifteen thousand rupees' worth of goods, chiefly silks, shawls, and saffron. On his return he is expected to pay into the treasury double the amount of the advance that was made to him. This he does from the proceeds of the tea, wool, turquoises, and silver bullion which he obtains from Tibet in exchange for the wares taken from Ladákh.

* The Tibetan official, who heads a similar caravan which goes every three years from Lhása to Ladákh, is termed Jung Chongpen or Cha-aba.

on the road to Yárkand. At night under cover of darkness the Pundit and his three men cast off their old garments and donned their Lámás' clothes. Before morning they were all well on the road.

For the first day they followed the Changchenmo route to Yárkand, halting at the foot of the Lankar or Marsemik Lá¹ (Pass). On the following day they crossed the pass (18,420 feet high) and then quitted the Yárkand road, and turned off to the east,—crossed the Kiu Lá, still higher than the Marsemik, and encamped for the night at Pángur Gongma after a march of nine miles.

The Pundit was obliged to travel slowly, as the whole of his worldly possessions, including tent, bedding, and commissariat for the whole party, had to be carried on the backs of sheep. It is astonishing what admirable beasts of burden these animals make in a pastoral country. The Pundit started with twenty-six sheep from Tánksé. Of these some were eaten on the road, some became ill and were exchanged for fresh ones, but four or five of the original lot reached Lháas, having in less than four months carried loads of from 20 to 25 lbs. each, over a distance of more than a thousand miles. Throughout the journey they never received a single ounce of food beyond what they could pick up for themselves on the road and at the camping grounds.

On the 28th July the party descended the stream from the Kiu Pass to Ningri,² a camp which takes its name from a large heart-shaped mountain which overhangs it. On the following day after descending the same stream to Mandal they reached its point of junction with the Niágzu stream, up which they proceeded as far as Niágzu Rawang, encountering *en route* a large party of Tánksé villagers returning from Rudokh with wool and salt. Our Lámás, somewhat nervous lest their identity should be discovered, concealed themselves in a jungle of willow trees, while Kunchu and a companion in charge of the sheep met the traders, and narrated how they were travelling alone to Noh to purchase wool for the Kárdár. This anxiety removed, they again had their nerves somewhat unstrung on arrival at camp at finding some half-dozen natives of Rudokh collecting saltpetre. The travellers were somewhat reassured, however, at finding that there were no suspicions raised as to their being anything else than Lámás.

The men who were collecting saltpetre stated that the Jungpon or Governor of Rudokh had ordered them to pay their taxes for the current year in that article. It is obtained by digging up the soil, which is placed in brass vessels; hot water is poured over it; the water dissolves the saltpetre and is then decanted off into another vessel; after a time the water cools and the saltpetre is precipitated. One man can manufacture a sheep-load or about 20 lbs. weight of saltpetre in the same number of days.

At Niágzu Rawang is the boundary between Tibet and Ladákh;³ the right bank of the stream belongs to the latter and the left bank to the former. The Pundit's companion, Kunchu Dunduk, appears to have successfully interdicted the Rudokhis from taking saltpetre from the

¹ *La* is the Tibetan word for *Pass*.

² *Ning*, heart; and *ri*, mountain.

³ According to the Indian survey maps the boundary line between Ladákh and Tibet is a good deal to the west of the line as given by the Pundit. The latter states that the stream of the Niágzu valley which flows southwards near the meridian of 79° from Mandal to the Kburnak Fort is the true boundary. The one given on the survey map, *viz.*, the watershed to the west of the above-mentioned stream, is derived from Major Godwin-Austen's plane-table survey of the country to the north of the Pangong Lake in 1863. This survey extends to within a few miles of Noh, and the details of it generally agree most satisfactorily with the Pundit's route survey from Lukong to Noh, although there is this discrepancy in the position of the boundary line.

I find on a reference to Mr. Walker's map of the Punjab and Western Himalayas which accompanies General Cunningham's well-known work on Ladákh that Niágzu is there also given as the boundary between the two countries, but that south of Niágzu the watershed to the east of the Niágzu or Chang Parma River is shown as the boundary. The Hoang (or Rawang) stream which enters the main valley north of Niágzu is there shown as belonging to Tibet, but it appears from the text of the Pundit's narrative that he ascended the Hoang stream and found there butts and a grazing ground belonging to the people of Tánksé.

left bank of the stream. A day's halt was made here to rest the sheep, and the Pundit made an excursion a few miles up the Rawang stream to Rawang Yokmá, a winter encampment belonging to the mon of Tánksé, in the neighbourhood of a favourite grazing ground, where, in addition to abundant supplies of grass, there is also—a rare thing in Ladákh—a large supply of jungle wood.¹

From Niágzu six short marches brought our travellers to Noh. The country through which they passed was almost uninhabited; a few solitary tents belonging to Noh shepherds, and a single hut at Gonu Chowki, occupied by a small frontier guard, were the only habitations passed *en route*.

[As an appendix is given, describing at considerable length each day's march throughout the whole of the journey from Leh to Lhása and thence on to India, it is unnecessary here to describe the road in detail. Maps of the country about the Pangong Lake up to within a few miles of Noh have already been published by the Great Trigonometrical Survey Department; the Pundit's route from that point is shown on the maps which have been drawn to accompany this narrative, which have been carefully constructed from the Pundit's route survey, based on his astronomical observations for latitude and his hypsometric observations for height above sea level.]

Noh is a small village in the Rudokh district, containing about twenty huts, built of stones cemented by mud. It has a small permanent population, which is increased largely in the winter months by numerous shepherds, who during the summer are scattered in tents in twos and threes in whatever parts of the district grass and water are to be found in sufficient abundance for their numerous flocks of sheep and goats. The chief man of Noh, Changkep by name, whose official title is *Lhámba*, was at the time of the Pundit's visit at a camp called Pángdá, about three days' journey north-west from Noh. Kunchu Dunduk had been despatched to him while *en route* to Noh for the purpose of obtaining the requisite *Lhámik*² or *passport* and permission to proceed. The *Lhámba* of Noh and the *Kárdár* of Tánksé occupy similar positions on their respective frontiers, and appear to mutually respect each other, even to the extent of remitting taxation on all goods exported or imported by either party. The Pundit thus not only obtained his passport without difficulty, but also escaped the usual impost duty of 10 per cent. which would otherwise have been levied upon the valuables he had with him.

The *Lhámba* is under the immediate orders of the Jungpon or Governor of Rudokh, whose jurisdiction extends over that portion of North-Western Tibet which lies to the north of the Singhikhá branch of the Indus as far east as the Thok Jálung gold-fields.

The Jungpon of Rudokh is in his turn subordinate to the Gárpon of Gártokh, who has also under his orders the Jungpons of the large districts of Gugi (Duba) and Purang, as well as other independent Pons (or *Rájás*) of Western Tibet. The Gárpon is under the immediate order of the Gyálpo or *Rájá* of Lhása. The office of Gárpon is only tenable for three years and is always held by a native of Lhása who is appointed by the Gyálpo. The Jungpons are also generally changed every three or four years.

The province of Western Tibet is frequently termed Nari Khursum. The inhabitants of the northern portion, *i. e.*, the district through which the Pundit travelled, are called by the settled population to the south Champas or *Changpas*, *i. e.*, literally *Nord-men*. By the inhabitants of Turkistán they are called *Tághlik* or mountaineers. The Champas encountered

¹ The wood is of three kinds; *changma*, willow; *shukpa*, pencil cedar; *womphu*, ? tamarisk.

Lhámik would appear to be the literal Tibetan equivalent for the Persian *Ráhdári*, which is much the same as our English word *passport*.

by the Pundit were, contrary to the generally received opinion of them, quite inoffensive people, of the same class as the people of Rudokh and the more civilised districts farther south.¹ They are all Buddhists, but religious edifices are scarce in their country. On the Pundit's route through this portion of Tibet he came across no *Gonpa* or monastery, although he occasionally encountered *Alánis* and *Chartáns*.²

The road near Noh skirts the Pangong Lake, which at Noh is joined by a stream from the north-east, up which goes a good road to Khotan *viâ* Polu and Kiria.

The distance to Khotan by this road is about 450 miles. For a distance of 40 miles from Noh it gradually rises up to a height of 15,500 feet, and then for about 160 miles as the crow flies, crosses, in a north-easterly direction, a series of elevated plains and ridges before it descends somewhat suddenly, to the plains of Eastern Turkistán. The average height above sea level of the halting places on the elevated plain to the north of Noh is 16,500 feet.³ This vast highly-elevated plateau over which the road passes is the eastern continuation of the Ling-zi-thang and Aksu Chin plains, which lie at a similar, or in places even a higher, elevation in a north-westerly direction from Noh, between the Changchenmo River and the Kuen Luen range, and have to be crossed by the traveller who adopts the eastern (or Changchenmo) route between Leh and Yárkand. To the north of the Kuen Luen there is a rapid fall into the plains of Eastern Turkistán.

This Tibetan plateau extends eastward, as we shall see in the course of this narrative, as far as the head waters of the great rivers which water China,—up in fact for a distance, as the crow flies, of more than eight hundred miles, to the Bourhan Búda Mountains (south-west of the Kokonur Lake on the road between Lhása and Peking), where we still find, according to the Abbé Huc and the still more recent researches of the Russian Captain Prjevalski, a table-land rising from 14,000 to 15,000 feet above the sea level, above which tower gigantic snow-covered mountains.

Seven miles to the east of Noh is the eastern termination of the series of lakes known to us as the Pangong, but better known to the Tibetans as the *Chomo Gna Laring Cho*, which, being literally interpreted, means "female narrow very long lake." Its extreme length from the west end at Lukong is exactly 100 miles, while its breadth probably nowhere exceeds six or seven.⁴

At its eastern extremity it is entered by a small stream 3 paces broad and 1½ feet deep. Although the greater portion of this lake has been previously surveyed and described, its eastern limit has now been determined for the first time. It is a curious fact that the water at the eastern extremity is sweet and good to drink, while that at the west end is very brackish. It has been conclusively shown by Major Godwin-Austen that this lake once upon a time drained into the Shyok, but at present it forms the most western of a numerous series of inland lakes with no outlets, which we shall find stretch for a considerable distance across the elevated plateau of Central Tibet.

¹ I have myself encountered Champas in the Rupshu district of Ladákh to the west of Chinese Tibet. The habits and customs of these people appear to be just the same as those of the same class who live over the border.

² A *churtan* or *chhartan* is defined by Cunningham as a "holy receptacle" or "offering repository." It is a pyramidal-shaped building erected in honor of some of the holy Buddhas. A *mánf* is an oblong dyke or pile of stones 4 or 5 feet high and from 10 to 12 feet broad, varying in length from 20 feet to nearly a mile. They are entirely composed of stones said to be deposited one by one by travellers passing by. On each surface stone is generally inscribed the well-known Buddhist formula, "*Om maní padmí hung.*"

³ For details of this road see Route XIV of Section G of Geographical Appendix to the Report on the Survey Operations in connection with the mission to Yárkand and Káshghar in 1873-74.

⁴ The depth of the Pangong Lake at its west end was found by soundings that I made in 1873 to be nowhere greater than 136 feet.

Noh to Thokdaurákpa.

From Noh the Pundit toiled on for many weary marches over this Tibetan plateau; his road lay eastward along a wide open grassy valley varying in width from six to ten miles, bounded on the north and south by low grass-covered hills, through which occasional openings gave a view of extensive plains stretching away as far as the eye could reach. Beyond the hills sometimes appeared snow-capped mountains, while an occasional shepherd's tent in the foreground, and the frequent appearance of large herds of wild asses, antelope, and gigantic wild sheep,¹ helped to relieve the monotony of the journey. In almost every day's march large sheets of water were passed, generally salt but occasionally fed by fresh-water springs. At the latter, the Pundit and his companions would fill their water skins,² as they rarely knew from day to day whether or no they would be able to obtain a fresh supply on the road. More than once their supply of this precious fluid was exhausted, and on one occasion the whole party were for more than 20 hours without fresh water. For fuel, also a traveller's necessary, they were better off; the *argols* or dung of the numerous flocks of wild animals were a never-failing source of supply, while occasionally, but rarely, firewood was obtained in considerable quantities. At Tchachap Cho, a fresh-water lake, eight miles to the east of Noh, and the 27th halting place from Leh, a large stream flowing from some snow-covered hills to the north-east of the lake was found to be covered on both banks with a dense forest of willow, tamarisk, and other trees and shrubs.³ For the first thirty marches from Noh the heights of the camping grounds varied between 13,700 and 15,000 feet, and for the rest of the journey to Namcho the ground was somewhat higher, but there was no considerable rise or fall throughout this portion of the Pundit's route. The large, flat, open valleys traversed by the Pundit, locally termed *Sangs*, appear to be much of the same nature as the *Pámírs* between Eastern and Western Turkistán and the *Jilgas*⁴ of Northern Ladákh. These *Sangs* of Tibet, however, would seem to have more of plain and less of precipitous mountains than either the *Pámírs* or the *Jilgas*.

The road for the first ten marches from Noh passes through the Rawang *Changma* or *Northern* Rawang district, and is nearly parallel to, and north of, at a distance in places of only a few miles from, the route followed by another Pundit on a former occasion while on his way from Rudokh to Thok Jalung through Rawang *Shoma* or the *Southern* Rawang district, which is separated from the northern one by a low range of hills.

The Pundit passed *en route* the salt marshes of Khai Cháká and Dakdong Cháká, from which the people of the surrounding country collect large quantities of salt, which they carry for sale to Ladákh. He states that the salt forms a crust lying like a sheet of ice on the surface of the mud. The salt-seekers sink through this crust up to their loins in mud and water, and remove the salt, which they subsequently wash, clean, and dry in the sun.

At Chabuk Zingá or *village* (14,400 feet above sea level) were two huts built of wood, and in the neighbourhood some twenty tents of shepherds, were visible. Here there were a few fields where barley is grown, the first signs of cultivation that had been seen since leaving *Noh*. The Pundit is of opinion that were the country more thickly populated, there would be no difficulty in finding plenty of ground fit for cultivation. The Champa inhabitants appear, however, to care but little for grain, and live almost entirely on meat, milk, butter, and cheese, the produce of their numerous flocks and herds. One sheep-load, *i. e.*, 20 lbs., of flour, affords an ample supply for the consumption of eight or ten men for a couple of months. At their permanent camps they had large cauldrons, generally made of stone; in these they

¹ The *Ovis Ammon*.

² Made from sheep's stomachs; two of them would be slung across the back of a sheep.

³ Termed *Pena*, *Birhá*, and *Dáwá* (furze).

⁴ *Jilga* is the Turki word for a broad open valley.

used to make a very weak soup, into which they threw a handful of flour. This constituted the dinner for a large party. At their moveable camps they cook in smaller vessels made of stone or copper (both of which are imported from Ladákh). All articles of copper or iron are very much valued, and a small axe of the Pundit's, which he kept for the purpose of breaking up ice, he might at any time have exchanged for two or three sheep.

The only articles that these people themselves manufacture are tents and very coarse woollen clothing. The former are black, and are made from yák's hair, and the latter from the fleeces of their sheep, which also produce the material for making the bags in which they take salt for sale in Ladákh.

Their wealth consists of their horses, flocks, and herds, from the products of which they are mainly supported; also in salt which they carry for sale to Ladákh, and in return for which they obtain flour, copper, stone vessels, and hardware. Most families possess a matchlock, generally of Nepál manufacture, and the men of the Rudokh district seldom move about without either a gun or a bow and arrows, in the use of which latter they are very expert. Like the inhabitants of other parts of Central Asia, they fire their guns while lying at full length on the ground, the muzzle being supported by a prong about a foot long, generally made of antelope horns. Each gun has a piece of white bunting attached to the barrel, which is thus converted into a flag. Gunpowder is very scarce, and is generally preserved for special occasions.

The Pundit states that on a former journey, when he visited a large fair at Gártokh, the young men, who are all expert horsemen, used to practise very successfully at a mark while going at full speed on horseback.¹ Each competitor carried two guns and a bow and arrows, and having fired off his gun used to discharge his arrows.

The Champas are keen in the pursuit of game, which they kill in large quantities, partly with firearms and bows and arrows, but chiefly with a kind of trap called Redokh Chum,² very similar in principle to an English rat-trap. It consists of a ring made of rope, to whose inner surface are attached elastic sharp-pointed slips of wood converging towards the centre of the ring, where a space is left sufficiently large to allow the passage through it of an animal's foot. Small holes are dug in the ground near the water which the wild animals are known to frequent. These traps are placed at the top, hidden from view by a covering of earth, and attached by a strong rope, also concealed from view, to a stout peg which is driven into the ground at a considerable distance off. The animals on their way to the water pass over the holes, and the weight of the body drives the foot through the ring. Once through, it is impossible for the animal to free his foot from the trap, and he soon falls a victim to the sword and spear of the hunter, who lies concealed somewhere in the neighbourhood. Great numbers of wild horses, sheep, and antelope are killed in this manner.

For ten marches from Chabuk Zinga to Hissik Cháka the country was uninhabited; the road lay over a plain way similar to what had already been traversed between Noh and Chabuk. The Champas at the latter place had given our travellers general instructions as to the line of road to be followed; but it appears that the latter had diverged too much to the north, and missed the encampment of *Gargethol*, which the Pundit had been previously told lay on the route to *Lhásn*, and which he had intended visiting, as one of his servants had a friend there through whose influence they hoped to receive assistance in prosecuting the onward journey. The Pundit had now entered the Khámpa or Kampa district, renowned for the bad character of its population, and on arrival at Hissik Cháka (on the 25th August) was greatly disturbed in mind at seeing men approaching them from a distance with

¹ This is an amusement I have often myself seen in Eastern Turkistán.

² Literally *animal-catcher*.

yáks and ponies. Not knowing what to expect, he immediately concealed in the earth his instruments, the greater part of his clothes, and a few bags of grain, and remained behind, while he sent on two of his men to reconnoitre and make enquiries.

The strangers fortunately turned out to be residents of Gargethol, the place the Pundit was aiming at reaching, and which lay about a day's march to the south-west of Hissik Cháka. On the following day (25th August) they travelled together to Gargethol, where they found a large encampment of Khámpas, and had the great good fortune to encounter the man they had been looking for. It appears that in years gone by the Pundit's servant had struck up a great friendship in Ladákh with one Dingmo, a medical practitioner, who was now a man of great influence amongst the Khámpas. It was in order to find him that the Pundit had turned back to Gargethol. Dingmo did not deny his old friend, but, on the contrary, was of the greatest assistance, as he gave letters to the Pundit for Chiring Dunduk, the Gombo¹ or headman of Garchethol, another Khámpa district several marches further east.

The Khámpas who inhabit these two districts of Gargethol and Garchethol must not be confounded with the Changpas or Champas, an entirely different race. The Khámpas originally came from the country of Khám, which lies to the north-east and east of Lhása.² They number in Gargethol about seventy tents, with a population of 800 or 700 souls. In Garchethol there are about a hundred tents.

These Khámpas had migrated from their own country (near Ziling³ to the east of the Kokonur Lake) about twenty-five years prior to the Pundit's visit. They travelled *viá* Lhása and the Manasarowar Lake, near which place they plundered a caravan, and fled with their booty to their present camping grounds, which, prior to that time, were uninhabited. Soon after settling there, they were called on by the Garpon of Gártokh to pay tribute, which they now do annually to the extent of 5,000 Nák-tang or Tankas, *i. e.*, about rupees two thousand (£200), or its equivalent in gold, ghi,⁴ horses, and cattle. This tribute is paid in Gártokh, and a punctual payment doubtless secures a certain immunity from their peccadilloes being enquired into. They possess large herds of cattle, &c., each tent possessing from ten to sixty horses and from 500 to 2,000 sheep. They despatch annually to a fair at Gáui-ma, near Manasarowar, large quantities of sheep and goats' wool, salt, and gold, and according to their own account, when they have finished their mercantile transactions, they send back the cloths, &c., that they have purchased, under the escort of the older and less active members of the tribe, while the young men start on some marauding excursion, the victims of which are generally travellers and strangers to the country. The Khámpas are well armed with guns and swords, which latter are constantly worn even by boys. The scabbards are often handsomely ornamented with gold, turquoises, and coral.

The men are fine, large, broad-shouldered fellows. They wear both in summer and winter *postlins* made of sheep-skins, the hair being turned inside. These coats are worn short, extending to the knees only, and are fastened round the waist by a woollen girdle, above which the coat is roomy and capacious, affording ample space for the storage of their goods and chattels when on a journey. They have felt hats, resembling in shape a broad-brimmed English *wide-awake*, and leather boots with woollen tops and curved pointed toes. They

¹ *Gombo* is the Tibetan term for headman, and corresponds to the Ladákhí *Goba*. The equivalent word in Nari Khursum is *Gadpu* or *Ganpu*.

² Mr. Cooper, the traveller, in his attempt to ascend the Brahmaputra River came across a tribe called *Khámtis*, who were said to have formerly emigrated from the country about the head waters of the Irawaddy. It is, I should think, not impossible that Khámpas and Khámtis both come of the same stock.

³ According to the Abbé Huc, the capital of the Khám district is *Tsamdo* or *Chámdo*, a well-known place on the road between Lhása and Pá or Buthang. *Ziling* is the Tibetan pronunciation of *Sining-fu*, a Chinese town in Kansu.

⁴ Clarified butter.

have no hair on the face, and that of the head is plaited, Chinese fashion, into pigtails. The women dress very much as the men, but their postins are longer and less roomy. They wear round leather caps and very long hair, to the plaits of which are fastened long pendants nearly reaching the ground, profusely ornamented, chiefly with silver coins, of which the favourite is the British *rupee*. Both men and women are always in the saddle; they ride large, powerful horses, and both sexes are skilful riders. They are great sportsmen, and kill large quantities of game, chiefly wild horses, sheep, and antelope. They either employ firearms or kill their prey with swords and spears when caught in the Redokh Chum trap before described. Their capacity for eating meat appears to be unbounded, and they are apparently naturally somewhat bloodthirsty, as the Pundit states that on several occasions when an animal had been killed, he saw the Khámpa boys kneel down and lick the blood off the ground. This fondness for blood would appear to be derived from a still earlier age, as the food given to infants when their mothers can no longer support them, consists, in the entire absence of grain in the country, of pounded cheese mixed up with butter and blood. They are of the Buddhist religion, but their language is quite different to that of other Tibetans,¹ and only one man of the Pundit's party, who had resided some years at Sining-fu (to the east of the Koko-nur) was able to understand it and to make himself understood.

Between Gargethol and the Champa district of Shankhor on the south is a place called Gegha, where a large fair is annually held in July and August.

On the 29th of August the Pundit returned to Hissik Cháka, where he saw a large herd of *kiángs*, fully 200 in number. He continued his route over uninhabited level plains, till the 1st September, when, at a camp called Humacho, he met on the road the Gombo of Garchethol a gentleman who was distinguishable from his followers, in that he wore a pair of golden earrings of such length as to rest on his shoulders. The presentation of the letter of introduction from their medical friend at Gargethol secured our party a civil reception.

The following night there was a sharp frost, the first sign of the approach of winter.

On the 3rd September they reached the village of Mango, the head-quarters of the Gombo, who had gone on ahead of the travellers. The Pundit paid him a formal visit in his tent,—a large one made of yak's hair,—and made him a small present of sandal-wood. The Pundit was kindly treated, and on intimating to the Gombo that he was on his way to visit a celebrated monastery near the Namcho Lake, Chiring Dunduk (the Gombo) said he was himself about to move his camp several days' march in that direction, and proposed that they should perform the journey together. The Pundit gratefully acquiesced. On returning to his little tent, he found it besieged by a host of curious Khámpas, who were all most anxious to become possessors of the various little articles of hardware he had with him, but he resolutely refused to part with anything.

Among other visitors was an old man named Sonám Darka, about eighty years of age, a native of a country near Lhása, who had been living as a servant amongst the Khámpas for several years, and had gradually accumulated a good deal of property. The Pundit, when he found that this man could speak good Tibetan, succeeded in securing his friendship by the present of a couple of common sewing needles, and obtained from him the following information about the neighbouring countries:—

The district to the north of Garge and Garchethol is a large uninhabited plain, called Jung Pháyil Puyil, meaning literally "the desert country in which the father and son have

¹ According to the Pundit many words are identical, but the affixes and prefixes are entirely different to those of Tibet. The only point he could recollect is that the suffix *Mu* is the sign of the interrogative. This curiously is identical with the interrogative in the Turki language as spoken in Kashgaur, and may perhaps indicate a common origin for the two languages.

wandered," so called from a tradition that two men of the Shankhor country had, many years previously, entered this desert track for the sake of hunting, but after wandering about for a lengthened period they both died there from want of water.¹ Some thirty or forty years before the Pundit's visit, and prior to the occupation of Garchethol by the Khámpa tribes who now dwell there, there used to be considerable traffic between the inhabitants of Nakchung (a district to the east of Garchethol) and a place called Nári Tháru, some twenty days' journey to the north north-west of Thok Daurákpa (the 49th march from Leb). To Nári Tháru merchants used to come from Nurla, a place eight or ten days' journey off in the Yárkin country, and the Tibetans used there to barter gold for grain and cotton cloths. The traders from Nurla were a people who used to shave their heads (on which they wore large folded cloths), and who used to cut the throats of sheep instead of strangling them, as is done in Northern Tibet. Sonám Darka also recollected a few words of their language which the Pundit, who had only recently returned from Yárkand, at once recognised as Túrki. The road from Thokdadaurákpa is said to traverse for twenty days' journey extensive plains, and then crosses a snowy range, at the foot of which lies Nári Tháru, where a considerable stream, the only one encountered on the journey, flows from east to west.² Sonám had in his youth made the journey several times, but the road had now been closed for at least thirty years; the reason given being that since the discovery of borax, or rather since borax has become a considerable article of trade between Tibet and Hindústán, the inhabitants of Nakchung now find a good market for it in the Narikhursum district, from which place they derive their supplies of grain instead of, as formerly, from Turkistán.³

Sonám Darka had also on one occasion, some thirty years ago, made a journey from Thok Daurákpa to Ájan, a country about two months' journey in a north-easterly direction. The road lay throughout over an extensive plain, no large mountains being seen, or streams encountered *en route*. Drinking water was obtained from a succession of small fresh-water lakes, mostly supplied from rain water. Shortly before reaching the Ájan country, the road traverses a bare rocky range of mountains. Ájan itself was inhabited by the Sokpo Kalmucks, a nomadic pastoral people who obtained grain (rice and flour) from the neighbourhood of Karka, a large monastery said to be ten or twelve days' journey beyond the southern frontier of the Ájan country. Near Karka is a large city called Kokod, the residence of the Sokpo Gyalpo, the ruler of the Sokpo districts, while Karka itself contains several monasteries, one of which is the residence of the Japchan Thámbsa (or Ringboché), the spiritual head of the Sokpo Kalmucks. The road just described is never now made use of, probably for the same reason which has led to the abandonment of the before-mentioned route to Nári Tháru, as well as on account of the difficulty of ensuring a certain supply of water *en route*; no one would venture to travel by it unless after an unusually heavy rainy season. Wood and grass are said to be plentiful throughout.

¹ Curiously enough another Pundit on a former exploration brought intelligence of the existence of an *inhabited* country called Jung Pháyil Puyil in the direction now indicated; the name he had got correct, but it now appears to represent a desert tract, as the name itself proves.

² It is clear that Yárkin stands for Yárkand, and it is nearly equally certain that *Nurla* is a place called Nára in my map of Eastern Turkistán, on the direct road between Khotan and Polú. I find in a manuscript note in my possession that Sai Neurla, a place about one march to the east of Ganjutágh, and which is probably identical with Nára, is known as a place of export of grain towards Tibet. From Sonám's description of the road, and the knowledge that in clear weather a snowy range is said to be continuously visible along the road from Kiria to Charchand, I infer that Nári Tháru occupies a position at the foot of the northern bounding ridge of the Great Tibetan plateau, somewhat similar to that held by Polú and Sorghák, and probably lies approximately in latitude 36° by longitude 84°. The stream mentioned probably flows into the Great Desert, and may possibly be the same that passes by Charchand.

The Pundit mentions that amongst the sheep in Northern Tibet were some with large tails said to have been bred from some that had been brought many years before from Nári Tháru. The large-tailed sheep, or "Dumba," is the universal breed in Yárkand.

³ Grain is, as may be imagined, not over-plentiful. A sheep's load of flour, say 20 lbs., is about the equivalent in value of a large sheep.

Karka¹ is a name about which I have for some time past been endeavouring to obtain authentic information, but I can hardly venture to claim any great success in the attempt. It is first mentioned, as far as I am aware, by Major Montgomerie, R.E., in his discussion of the work of the Pundit who explored the Namcho Lake in 1872. On the present occasion the Pundit had been specially instructed to make enquiries about it. He saw in Lhása some men who were pointed out to him as from Karka, tall, copper-complexioned, fine-looking men, but unfortunately he could not understand their language, and his stay in Lhása was so short that he was unable to learn anything authentic about them.

As far as I can gather from enquiries made at Yárkand, and from the information collected by the Pundits, Karka is situated about one and a half months' journey to the north-west of Nák Chu Kha, a large village situated on a river of the same name a few marches to the north-east of the Tengri Nur or Namcho Lake. At this village it is said that two roads diverge, one to Karka, passing in a north-westerly direction, and the other to Kokonur and Pekin in a north-easterly direction. The position of Karka thus obtained would agree approximately with an account I heard from a Kalmuck in Kashghár, which located Karka at about a fortnight's journey to the south-east of Lake Lob. It probably lies somewhere between Lakes Lob and Kokonur, and I think it not improbable that the country of Ájan to the south of it may be the same as the country of Anj Si which is mentioned by *Uspenski* in the Russian *Investigia* as a country lying in a westerly direction from the Zaidan plain, which is to the west of Kokonur.²

On the 4th of September the Pundit left Mango, in company with Sonam Darka, and the Gombo Chiring Dundak, the headman of Garché, together with their flocks and herds; there were about six tents of Nomads in all. For four days they kept company, advancing slowly at the rate of about eight miles a day. It is the habit of these people, when they have exhausted the pasturage near any one camp, to shift bodily to fresh ground; they were now on one of their customary moves. On the fourth day they reached Kezing, in the neighbourhood of which place are very extensive pastures sufficient for the subsistence of the Gombo's large flocks for a couple of months.

Some idea of the wealth of this people may be inferred from the fact that Chiring Gombo was himself the fortunate proprietor of 50 horses, 400 yáks, and 2,000 sheep. Other members of his tribe were said to be even more wealthy than him.

These Garché Khámpas, numbering in all about 100 tents, had only been settled in the country for about fourteen years. They are under the jurisdiction of the Gyalpo of Lhása, and are very much better off than their neighbours the Gargé Khámpas (who are under Kudokh), as they only pay what must be to them an almost nominal tribute (in gold) of the value of about £20. This gold is obtained at Thok Daurákpa to the east of Garchethol in exchange for the produce of their flocks, and for borax, extensive fields of which exist at Noring Cho which were passed by the Pundit *en route* to Kezing.

The Pundit appears to have ingratiated himself most successfully with the Gombo Chiring, for that chief very kindly made arrangements that he should travel onwards with two other

¹ *Karkka* was the name of one of the metropolitan sees of the Nestorian Church. Is it possibly the same place as the modern Karka or Karkha? See page 244 of Colonel Yule's preliminary essay to "Cathay and the way thither."

² I at one time thought that Karka might be merely a corruption of the word Kalka, and that the *Yapedan Tamba* (or Ringboche) of Karka might be the same individual as the *Kalka Yevan Dampa* (of Shaw), the *Ovison Tamba* (of Hue), and the *Kutuchta Gyon* of Urga (of *Uspenski*), the chief Lama of the Kalka country which lies on the southern confines of Siberia. It appears, however, from a study of Mr. *Uspenski's* notes in the *Investigia* that Urga is 3,360 *verts* (more than 2,000 miles) from Lhása, the road from which place passes by Nák Chu Kha, Kokonur, and Shing-fu. The last-mentioned place is four long marches east of Kokonur and forty-four long marches south of Urga. These bearings and distances place it, I think, beyond a doubt that Karka and Kalka are not identical.

men, servants of a merchant from the neighbourhood of Shigátzé, who were travelling with some spare yáks in advance of their master from Thok Jálung to Shigátzé; these men for their own sakes were only too happy to travel in company with the Pundit and his party.

From Kezing eastward for a distance of eighty miles, up to Thok Daurákpa, the country was uninhabited when the Pundit passed through it; but it is occupied by the Khámpas of Garché at certain seasons of the year. There is capital grazing and an abundant supply of water and fuel (argols) throughout. The road lies the whole way in one of the broad open *sangs* before described, lying between ranges of hills running east and west. South of the Tashi Bhup Cho, the southern range runs off in a south-east direction, rising rapidly in height and forming a massive group of snow-covered peaks known as the Shyalehi Káng Jáng, the positions of several of which were fixed by the Pundit although at a distance of from thirty to forty miles south of his road.

From this snowy group flows northwards a very considerable stream, the Shyal-chu, which was crossed by the Pundit in three separate branches, which, although nowhere more than a foot in depth, are said to be passable only with very great difficulty during the floods caused by the melting of the snow in the summer months. This stream flows into the Tashi Bhup Lake, whose southern shore is about two miles to the north of the Pundit's road. From the eastern end of the lake a stream issues whose waters are said ultimately to drain into the Charget Lake, from which they emerge under the name of the Nák-chu-khá River and flow eastward to the village of the same name which lies on the northern road between Lhása and Peking. At the point where the Shyal-chu was passed by the Pundit, his road was crossed by another track going from Manasarowar to Nák-chu-khá which passes south of the Tashi Bhup Lake, and then follows throughout its course the stream which emerges from the east end of the lake and flows to the Charget Lake and Nák-chu-khá. This road is said to be perfectly easy and abound with grass and water, but the country it passes through is uninhabited throughout.

The Pundit, who had been forewarned that the neighbourhood of the crossing of the two lines of road was a notorious place for robbers, took the precaution of pitching his camp two miles off the road. It is said that the custom of the Khámpa robbers who infest this country is to cut at night the ropes supporting the tent of the traveller, whom they fall upon and cut down while attempting to escape from the folds of his tent.

While under the immediate protection of the Gombo Chiring the Pundit had felt pretty safe, but he appears, not without good reason, to have passed several sleepless nights before he again reached inhabited country.

Travelling as a Láma he had affected great poverty, and throughout the journey he kept his rupees concealed here and there in the most out-of-the-way places imaginable. His chief repository was a very old and ragged pad carried on the back of a donkey that had accompanied him from the West, and which animal, in consequence of the riches he bore, obtained amongst our travellers the *soubriquet* of *Sarkári Khizánchi*, or Government Treasurer.

The Pundit reached the gold-fields at Thok Daurákpa on the 17th September, having taken on the latter part of the journey a somewhat difficult road over hills in order to avoid the easier road to the south, which passes round the foot of the hills, but where he thought he was more likely to meet with robbers. He had now quitted the Khámpa country and had entered the Nákcháng Pontod district, in which he passed two or three abandoned gold-mines before reaching Thok Daurákpa.

The Pundit found that the gold-fields in this portion of Tibet were of much less importance than those he had visited at Thok Jálung in Western Tibet on a former explora-

tion. At Thok Daurákpa the diggers mostly dwell in caves excavated in the earth. These habitations, which are locally termed *phúkpá*, are thirty-two in number, and contain populations varying from 5 to 25 in each, according to the wealth of the proprietors, who do not appear to select these buildings from choice, but rather from necessity caused by the proximity of the Khámpa robbers, whose habit of cutting down first the tents and then the owners has been already mentioned. These underground caves are naturally far more secure than tents would be, and one man well armed could defend one of them against a large number of assailants. Besides these caves there were also some seven or eight tents belonging to travelling merchants and recent arrivals. The diggers were mostly Chang-pas from the Nák-cháug district to the east and south-east of the gold-fields; but there were also others from Western Tibet and from Janglaché, a large town on the Brahmapútra, five or six days west of Shigátzé.

The proprietors of each *phúkpá* have also their own gold-pit,¹ in which they work (in the day-time only). One or two men are generally employed in quarrying the stone in which the gold is found. The pieces of stone are lifted up in baskets to the brink of the pit, and are there pounded into small fragments which are deposited on a cloth which is arranged on a slight slope and kept down by a number of stones so as to make the surface uneven. Water is then poured over it, and carries away the lighter portion of the soil, leaving the gold in the uneven receptacles that have been made for it. The largest piece of gold seen by the Pundit at Daurákpa was about one ounce in weight.

Unfortunately for the diggers, water is not found within a mile of the gold-fields, and has to be brought that distance in skins on donkeys which are specially kept for the purpose. These donkeys were the only animals of the kind seen by the Pundit between Ladákh and Lhása. It appears that they do not stand the cold well, and although their bodies were covered in profusion with the *pashm* or wool which grows under the hair of nearly all animals in these very cold and highly-elevated regions, it was always found necessary at night to allow them to take refuge in the *phúkpás* inhabited by their masters.

Gold-finding does not appear to be a very lucrative occupation, and although the tax paid by the diggers to the *Sarpon* or Gold Commissioner of Lhása, *viz.*, one *sarshia* (one-fifth of an ounce) per man per annum, is decidedly small, yet the profits appear to be but little more than is necessary to keep body and soul together. According to the Pundit, the pastoral population are far more prosperous than the gold-diggers, and lead a much freer, pleasanter, and more independent life.

The gold of Thok Daurákpa is said to be whiter and of better quality than what is found farther west. It is, however, more difficult to obtain, both on account of the soil or rather rock in which it is found being much more difficult to break up than the softer soil of Thok Jálung, and on account of the distance from which water has to be brought. At Jálung a stream runs through the gold-fields. The Pundit believes that there are enormous tracts of land where gold is to be obtained by digging, but where the absence of water would render the working of them unremunerative.

The Thok Daurákpa and Thok Jálung gold-fields are under the same *Sarpon* who makes the round of all the Tibetan gold-fields once a year to collect the taxes.

It would appear that the importance and value of the Tibetan gold-fields have been considerably overrated. The Pundit states that besides the half-dozen places where gold-digging is now carried on in the neighbourhood of Thok Jálung, the only other gold-fields now being worked in Northern Tibet are at Thok Daurákpa and two other places of even less

¹ At Thok Jálung the arrangement is different; there the whole of the diggers work in one large excavation.

importance at Táng Jung and Sarká Shyár, both of which are about six days' journey farther east. He believes that nearly the whole of the gold collected in Western Tibet finds its way to Gártokh, and ultimately through the Kumaoni merchants to Hindústán. He estimates the value of gold brought annually into Gártokh at about eighty thousand rupees (or about eight thousand pounds sterling).

The gold-diggers at Daurákpa dispose of most of their gold either to the Khámpas of Garchethol on the west, or the Champas of Nákháng Pontod on the east, in exchange for the products of their herds and flocks. The rest of the gold is taken by merchants who bring tea from Lhása and from China.

A brick (*parka*) of tea which weighs about five pounds and in Lhása is worth say seven shillings and in Ladákh twelve shillings (or more, according to quality), sells at Daurákpa for one *sarshia* of gold (one-fifth of an ounce).¹

Thok Daurákpa to Lhása.

The Pundit only halted one day at the gold-fields and continued his journey on the 19th September. His route lay over precisely the same kind of country that he had previously traversed; it crossed several streams, all flowing to the north, and ultimately finding their way into the Ná-k-chu-khá River. For the first three marches the country was uninhabited, but after leaving Lung Nakdo numbers of Chángpa tents were almost daily seen from the line of march.

Although the plain he was now traversing was more than 16,000 feet above the level of the sea, the Pundit does not appear to have suffered very much from the great elevation; the weather was mild, and he speaks of the whole of the journey over the plains of Tibet as a delightful pleasure excursion, when compared with his experiences over the Karakorum and other passes on the road from Leh to Yárkand. The sheets of velvet turf covered with countless herds of antelope must indeed have formed a pleasant contrast after the equally elevated but bleak and uninhabited bare plains of Ling-zi Thang and Dipsang, in Northern Ladákh. The Pundit (who is fond of statistics) asserts that on one occasion he actually counted two thousand antelopes (*cho* and *gwa*) which resembled in appearance a regiment of soldiers, with their horns glistening in the sun like bayonets. The horns frequently found lying on the ground served him in lieu of tent-pegs.

In the Nákháng Pontod (Northern and Southern) district, which extends for several marches east of Thok Daurákpa, there are altogether about a hundred and fifty families of Nomads, all wealthy in horses, yáks, sheep and goats. Throughout Nákháng the sheep are very large and strong, and are almost all black—a peculiarity of this district alone, those in Western Tibet and in Lhása being nearly all white. Yáks are used almost exclusively as beasts of burden, and on one occasion the Pundit met a caravan with two hundred of these animals carrying tea towards the west.

Nákháng Pontod is under an official, a native of the country, the Garpon Durje Punt-chok, whose dignity is hereditary. He collects the tribute for the Lhása authorities and remits it to Senja Jong, farther east. The tribute paid is almost entirely *ghi* (clarified butter).

The Changpas of Nákháng, who are also promiscuously termed *Horpas* and *Dogpas*, speak a language which differs but little from that of Lhása, and the Pundit had no difficulty in carrying on conversation with them.

¹ At Thok Jálung on a former occasion the Pundit purchased one tola of gold = $\frac{3}{4}$ of an ounce (avoirdupois) for eleven rupees, *i. e.*, the modern equivalent for an English sovereign. At Thok Daurákpa the price of an equivalent amount of gold would have been about fourteen rupees.

In the 8th march from Thok Daurákpa the Pundit encountered a lofty range of mountains which was crossed by a high but easy pass called Kilong, 18,170 feet above sea level. This range runs southward and culminates in some enormous peaks known by the name of Tártog Lhá, from which extends eastwards a snowy range, numerous peaks in which were fixed by the Pundit, along a length of 180 miles, up to where the range terminates in a mass of peaks called Gyákharma, which also lie to the south of and very near the Pundit's road. The highest of these Gyákharma peaks was ascertained by measurement¹ to be 22,800 feet above sea level, and the Pundit estimates that the highest of the Tártog peaks (which lay too far off the road for vertical measurement with a sextant) is at least 2,500 feet higher than the highest of the Gyákharma group. Tártog Lhá was seen from the Chapta Pass at a distance of over one hundred miles, and is believed by the Pundit to have been the highest mountain seen by him on his journey.

This range is probably not the watershed between the basin of the Brahmapútra and the lake country of Hor,² for the Pundit was informed that to the south of the range, running parallel to it, is a large river, the Dobá, Dumpbo, or Hota Sangpo River, which ultimately changes its course and flows northwards into the Kyáring Lake.

The highest peak of the Tártog Lhá group is called Tártog *Yap* (or father), while an enormous lake which lies at the foot of its northern slope is called Dánggrá *Yum* (or mother); these two, according to local tradition, are the progenitors of the whole world.³ The circuit round the mountain and lake combined is a common pilgrimage not only for the people of the Hor country, but for their more distinguished co-religionists from Lhása. Similar circuits are made round the sacred mountain of Kailás, near the Manasarowar Lake.

The circuit round the lake alone occupies from eight to twelve days, the distance being about 200 miles, but the complete circuit of lake and mountain takes up nearly a month. The country people believe that if they make the complete circuit (termed locally *kora*) once, they will be absolved from ordinary sin; for a man to be cleansed from murder requires two *koras*; but if the round is completed thrice, even the murder of a father or mother will be atoned for. The Pundit did not feel much comforted on learning that this is all implicitly believed by the country people.

The district surrounding the Dánggrá Lake and another smaller lake to the north of the road is called Nákcháng Ombo. It is surrounded on all four sides by snowy mountains, and contains several villages,—Nákcháng, Táng Jung, Kism, Ombo, Sásik, and Chaksá; each village contains twenty or thirty houses, built of stone, and surrounded by richly-cultivated fields which produce a profusion of barley. The harvest was not quite gathered in on the 28th of September, the date of the Pundit's arrival at Ombo, the chief village of the district.

The existence of this cultivated Ombo plain enclosed by mountains, which in their turn are surrounded by boundless extents of pasture land, is a very curious feature.

The Pundit had not seen a single field of grain of any description since leaving Chabuk Zinga, thirty-five marches to the west, nor did he again meet with cultivation until reaching Tulung village, near Lhása, thirty-nine marches beyond Ombo. The height of the plain (15,240 feet above sea level) is not less than that of the surrounding country, and although somewhat protected from wind, it is no better off in this respect than the district of Nákcháng Gonnak which borders it on the east, which is also well watered and has apparently a richer soil, but is nevertheless totally devoid of cultivation.

¹ By double altitudes taken with a sextant from points whose altitudes have been determined by hypsometrical measurements.

² The general name of the district through which the Pundit had been travelling.—See page 77.

³ The group of Shyáchi Káng Jáng mountains to the west is said to be one of the daughters of this union.

According to local tradition the Ombo country was once upon a time thickly populated and covered with villages. Two thousand years ago it is said to have been ruled over by a very powerful Rájá, the Limúr Gyalpo, who resided in a fort called Kiung Jung, on the banks of the lake (close by Thuugrú), the ruins of which were pointed out to the Pundit. The Gyalpo Limúr was the ruler over the whole of the Hor country, and his wealth was said to be boundless. Amongst other riches he was the possessor of a golden saddle and a turquoise as large as a goat's liver. He was overcome in battle by Digung Chanbo, the Gyalpo of Lhása, who, however, failed to possess himself of the saddle and turquoise, which were cast into the middle of the lake, where they are said to remain at the present day.

The Pundit is of opinion that the Dángrá Yum Cho, and the smaller lake of Táng Jung to the north, were formerly connected together in one vast expanse of water. The Dángrá Lake is even now so large, and the wind sometimes raises such violent waves, that the Pundit compares it to the ocean. The inhabitants of the Ombo or Pambo country, as it is sometimes called, although speaking the same language as the other Changpas or Dogpas who live in other parts of Hor, curiously enough have considerable differences in their religious ceremonials. Instead of the usual well-known Buddhistic formula, "*Om máni padmi hung,*" they inscribe in their prayer-wheels and on their mánis the words "*Om máte moyé sáleno.*" They moreover twist their prayer-wheels in the reverse direction to what all other Buddhists do, and in making circuits round religious edifices they travel from right to left instead of from left to right, as is the invariable custom amongst all other sects. Others of their peculiar sect are said to reside in the Kham country east of Lhása.

The origin of the custom arose thuswise. When Sákýá Múni¹ the great founder of Buddhism in Tibet, first came to the country, he was residing near the famous sacred mountain Kailás. Nárú Punchuk, a native of Khám, having heard rumours of his arrival, went on a pilgrimage to see him. Having arrived there he found that the devout Sákýá was constantly passing his time in circumambulating the sacred mount, and this at such a pace that his would-be disciple was unable to overtake him, although he followed him round and round for several circuits. As Sákýá Múni followed the orthodox course (moving like the hands of a watch), the brilliant idea at last struck Nárú Punchuk that if he were to go round in the reverse direction he would soon meet him. This he did, and secured an interview, and subsequently becoming a favorite disciple, he received in commemoration of this event permission to found the sect who are now known as "Pembos," who make their religious circuits and twist their prayer-wheels in the opposite direction to that adopted by the orthodox Buddhists.

Near the ruins previously alluded to on the banks of the lake is a large natural cavern, containing the impress of the palm of Nárú Punchuk's hand. It is an object of worship to the people of the country.

Thus far on his journey the Pundit states that a cart might be driven all the way from Noh without any repairs being made to the road, but in crossing the range which bounds on the east the Pembo country, the path was steep and difficult. There is an alternative road, however, lying to the north, by which it is said a cart (supposing there to be such a thing in the country) might easily travel from Thok Daurákpa to the Namcho Lake without meeting a single obstacle *en route*.

The country to the east of the Pembo district is of a precisely similar nature to what the Pundit had already passed through on the west. It is inhabited as far as the Namcho Lake by pastoral Changpa Nomads, who live mostly on the produce of their flocks and herds. No grain whatever is grown, but large quantities are imported from the Shigátzé

¹ It is believed that Sákýá Múni Buddha himself never went to Tibet, which was converted to the faith by later missionaries. The above and subsequent traditions must refer to some of these.

and Lhása districts to the south. The inhabitants are well off, as, in addition to the produce of their flocks, they sell to the merchants of the south large quantities of salt, which is obtained from numerous *cháksá* or salt lakes which lie at from eight to twelve days' journey to the north of the Pundit's road.

The country is sub-divided into districts designated successively from west to east Nákcháng Gomnák, Nákcháng Dóbá, Yákpá Ngocho, Yákpá Tagro, Dé Cheric, Dé Tabárába, and Dé Taklung, which latter lies immediately to the north of the Namcho Lake. Each of these, as well as the district of Nákcháng Ombo, before described, has its own ruler or *Pon*, who decides the disputes of his subjects and collects the revenue from them. The whole are subordinate to the two Jungpons of Senja Jong, a place of considerable importance lying to the east of the Nákcháng Dóbá district, and containing from 80 to 100 houses. These Jungpons are officials appointed from Lhása, and are changed every two or three years. Their chief business appears to be to collect the revenue and remit it to Lhása, and to act as a sort of court of appeal against the decisions of the hereditary *Pons* who rule over the smaller divisions. They do not seem to have a very difficult task, as their executive and administrative functions are carried out with the assistance of two or three writers only, and a couple of dozen guards sent from the Gyalpo's forces in Lhása. The revenue sent to Lhása consists entirely of *ghi*.

One of the most influential of the local *Pons* is the Garpon Changba Gyalpo, who resides at Kátmar in Nákcháng Gomnak; he appears to exercise considerable influence in the neighbouring districts, both east and west, and when the Pundit was passing through had collected a considerable force of Changpas armed with guns and bows and arrows, with the object of settling a dispute (which was, however, subsequently diplomatically arranged) with another chief who lived some distance to the east of the Namcho Lake.

A detailed account of the route followed appears in the Itinerary which accompanies this chapter, but a better idea of the nature of the country will perhaps be obtained from the map. The height of the plateau traversed appears to vary but little between 15,000 and 16,000 feet above the sea level. The plain is, as a rule, confined between mountains which run parallel to the direction of the road, but a few transverse ridges of considerable elevation are crossed *en route*. The drainage all tends to the north, the streams from the snowy range to the south finding their way into numerous large lakes which either lie in the *sangs* traversed by the Pundit or are enclosed in similar *sangs* to the north. These lakes are the characteristic features of the country, and the Pundit may well be proud of the discovery and survey of such a numerous and extensive system. Of the whole series extending from Noh to Lhasá and stretching across both sheets of the map, the only one that has hitherto been known to geographers is the Nam Cho or Tengri Nar Lake to the extreme east, which, although its position with regard to Lhása was approximately known, and was marked on the old Chinese maps, yet it is only within the last few years that its position and extent have been determined with anything like accuracy; this was done by another Pundit, a pupil of the veteran explorer whose discoveries are now given to the public.

The largest of these newly-discovered lakes, the Dángrá Yum Cho, is about forty-five miles in length, by twenty-five in breadth at its widest part; another large lake, the Kyáring Cho, is forty miles in length, and from eight to twelve across. The waters of the former are slightly brackish, but those of the Kyáring Cho and nearly all the lakes to the east are beautifully fresh, and, as well as the streams which feed them from the south, contain abundance of fish and are covered by myriads of wild-fowl. Unfortunately for themselves, the Changpas have a prejudice against killing and eating either fish or fowl.

On the occasion of the former exploration of the Namcho Lake it was frozen over, and although the Pundit made the complete circuit of the lake he was unable to discover any stream flowing from it. On the present occasion, however, Pundit Nain Singh, having visited it in the autumn, before its waters were frozen, distinctly traced a stream issuing from its north-western extremity and flowing in a westerly direction. Although, at the time he saw it, the stream was not more than a few feet in width, the water-course was broad and deep, and in the summer months must give exit to a large river.

It appears that the drainage from nearly all these lakes finds its way either into the Chargut Cho, a large lake said to be twice the size of any with which we are as yet acquainted in these parts, or into the Nák chu-khá, or Hotá Sangpo, a large river which issues from the Chargut Cho and flows eastward. The southern banks of this river are said to be inhabited at certain times of the year by shepherds from the Dé Namru district (north of Dé Cherik). The country to the north of the Nák-chu-khá is believed to be uninhabited.

The largest river crossed by the Pundit in this section of his travels was the Dumphu or Hotá Sangpo, which receives the drainage of the southern slopes of the Tártog-Gyákharma range of mountains, and flows into the Kyáring Cho, forming one of the numerous sources of the Nák-chu-khá.

The subsequent course of this last river, of which some of the head-waters have now been traced, must, I fear, remain a mystery. The account which was given to the Pundit is inconsistent with the existing ideas of the geography of the country. It is to the effect that after passing the village of Nák-chu-khá (Na Ptehu of the Abbé Huc), which is on the road between Lhása and the Kokonur Lake, the river flows in a south-east direction to Chámdo or Tsiamdo, a well-known place on the road from Lhása to Bathang (Pá) and Pekin. Thence it is said to flow south-east and east through Ámdú to China, under the names of Máchu and Konkong. If this statement were reliable it would prove the Nák-chu-khá to be a branch of the famous Yang-tse-Kiang; but after a very careful examination of the whole of the data I possess bearing on the subject, I have come to the conclusion that the evidence in its favor is not sufficiently strong to justify my entering into the subject at length.

It appears on the whole not improbable that the first part of the Pundit's statement may be correct, *viz.*, that the Nák-chu-khá River flows to Tsiamdo; if so, it bears successively the names of La-chu, Lo-chu, and Lantsang-Kiang, which, according to most modern authorities, is afterwards known as the Kamboja or Mekhong River.

If, however, Klapproth's well-known map is to be relied on (but we know that in one important instance at least, *viz.*, the identity of the great river south of Lhása with the Irawaddy, modern geographers entirely disagree with him), the Nák-chu-khá (whose Mongol equivalent, Kihara-úsú, is shown in Klapproth's map) does not flow to Tsiamdo, but forms the head-waters of the Nou or Lou Kiáng, which modern geographers identify with the Salwen River, which empties itself into the ocean at Moulmein.

To show the deficiency of correct data about these subjects, I may note that the map accompanying the French edition of Huc's book shows the Na Ptehu River as flowing west into a large lake, while Tsiamdo is not shown as on a river at all; but on the other hand from Huc's own letterpress we learn that¹ "Tsiamdo is protected by two rivers, the Dzá-chu and the Om-chu, which, after flowing one to the east and one to the west of the town, unite on the south, and form the Ya-long-Kiang," which traverses from north to south the province of Yunnan and Cochin China, and finally throws itself into the China Sea." On looking at other

¹ Page 461, Vol. II.

² Huc appears to have made a mistake about the name.

maps for a further confirmation of Huc's account. I was much surprised at finding that Keith Johnston in his map of China in his "Handy Royal Atlas" of 1871 makes the mistake of placing Tsiampo on the head-waters of the Brahmaputra.

The general features of the ground between Lhása and Bathang, as shown on Klaproth's map, are fairly consistent with the account given by Huc of his journey between those places.

One piece of collateral geography brought back by the Pundit appears to agree so well with Klaproth's map that it seems desirable to reproduce it.

The Pundit states, "A road passes from the Nák-chu-khá village for six days' journey in a north-eastern and thirteen days in an eastern direction through the Ho-suá¹ country to Jákák Sumdo, where it crosses the Jháchu² River, which is 300 paces across, and which is said to join the Nák-chu-khá River at Tsiampo; from Jáká the road passes east for ten days through the Kháwá country, and for fourteen days through the Cheki country, where the road crosses a river flowing south, the Di-chu,³ which is said to be larger than the Brahmaputra River near Lhása, or than the Ganges at Hardwar; it is crossed in boats; after sixteen days in an easterly direction another large river flowing south is crossed, also called the Jháchu,⁴ twenty days' journey more in a south-east direction, passing by Chang-thang, brings the traveller to the Amdo country to a place called Chering Chitshum on the banks of the Máchú River, which afterwards flows to China.

It is this Máchú River which the Pundit believes, erroneously I think, to be the same as the Nák-chu-khá.

The Pundit took the same route along the northern shore of the Námcho Lake which was followed by his predecessor in 1872, and was described by Major Moutgomerie in the survey reports for 1873-74. From the east end of the lake to Lhása the routes are identical down to the village of Dam. From Dam, Nain Singh followed the river of the same name in a south-west direction, instead of striking across the hills to the south-east, the direct route which was followed by the other Pundit.

It was not till the 12th November that the Pundit quitted the higher table-lands of Tibet, and after crossing the Baknak Pass, 18,000 feet above sea level, descended into the bed of the Tulung, an affluent of the river of Lhása, where for the first time for several months he found himself at the comparatively low elevation of 13,000 feet, from which a steady descent for five short marches brought him to Lhása, at an elevation of 11,910 feet. His pleasure was great on reaching the Tulung valley, where he found cultivated fields replacing pastures, and grain in abundance, vegetables, chang,⁵ and other luxuries to which he had long been a stranger. Ordinary cattle and donkeys now took the place of yáks as milk suppliers and beasts

¹ In Klaproth's map the *Sok-chu* is shown as a northern tributary of the Nák-chu-khá, falling into the latter river near Rabdan temple. The position in latitude of the Nák-chu-khá River agrees very nearly with the Pundit's estimate as shown on the map accompanying this report.

² In the map the *Sá-chu*, afterwards the *Tsa-chu*, joins the *Om-chu* River at Tsiampo.

³ The *Dza-chu* of Klaproth's map, afterwards the *Má-chu*, afterwards the *Yaloung*, and the *Ta-tchung*, one of the largest tributaries of the *Yang-tse-Kiang*.

⁴ Called by Klaproth the *Bri-chu*, the veritable *Yang-tse-Kiang*. This river when crossed higher up by Huc on his journey to Lhása was called *Mou-roui-úsú* or "tortuous waters." Its Mongol name being *Bri-chu* and its Tibetan name *Polei-chu* or *River of the Lord*; lower down in its course it is also known as the *Kia-cha-kiang* or *River with the golden sand*; still lower in the province of Sze-chuen it is the well-known *Yang-tse-Kiang* or *Blue River*. It is also known in China as the *Ta-kiang* or *Great River*. It was in this *Mou-roui-úsú* that Huc found a herd of fifty yáks frozen hard in the ice. After a course of more than 3,000 miles, during which it receives two tributaries from the north, each more than 1,000 miles in length, it falls into the Yellow Sea.

⁵ A kind of beer brewed from barley.

of burden. Fowls and pigs were seen for the first time since leaving Ladákh. The more civilised Bodhpas replaced the Changpas, and the Pundit was looking forward to a pleasant stay in Lhása.

But unfortunately for him the approach of civilisation brought him considerable anxiety. On nearing Lhása he heard a report that it was currently stated there that an English agent was on his way there from India, and that a *boná fide* Chinaman who had recently arrived from India *viá* Nepál had been arrested and kept in confinement until an interview with the Chinese *Ambán* had enabled him to prove that he was not the man they were in search of.

The Pundit, on hearing this, halted a day at Lang-dong, and sent one of his own servants (Nendak, a native of Lhása) on ahead to engage a room in a traveller's serai, and to enquire whether any news had been received of the Káhlon of Ladákh¹ and the caravan from Leh. The man returned and reported that nothing had been heard of the Káhlon; the following day (the 18th November) the Pundit entered Lhása.

Most unfortunately one of the first men he met there was a Mahommedan merchant, an Argún² of Leh, whose acquaintance he had formerly made at that place. This man, Mahmúd by name, knew perfectly well who and what Nain Singh was, and although at first he was very friendly, he subsequently changed his manner, and the Pundit was in a great state of agitation and alarm lest he should be betrayed; thus instead of waiting there a couple of months, as he wished to do, until the arrival of the caravan, when he would have been supplied with ample funds and been enabled to continue his explorations elsewhere, he was forced on the spur of the moment to make other arrangements.

He determined to send back to Leh the two men he had brought with him, and accordingly gave them letters to deliver to the Káhlon, whom they might expect to meet *en route*. He also sent with them complete copies of the whole of his astronomical observations and route survey, to be delivered to Captain Molloy, the British Joint Commissioner in Ladákh, who had promised to forward all such communications to me. These papers and the accompanying letter reached me safely in India in January 1875, and caused me some anxiety for the Pundit's welfare. Happily a few days after their arrival I was informed by telegram of his safe arrival in Assam.

Lhása to Tsawang.

On the occasion of the Pundit's first visit to Lhása he remained there three months, and wrote a good description of the place. His present hasty visit of two days only has not added to our existing store of information. He left it on the 20th November accompanied by his two remaining servants. Prior to starting, thinking it probable that he might be betrayed, he collected the most bulky and least valuable articles of his property, tied them up in an old blanket, carefully sealed the parcel, and handed it over to the owner of his lodging-house, whom he informed that he was going on a pilgrimage to a monastery ten days' journey to the north of Lhása, whence he expected to be back in about a month to reclaim his goods. He started accordingly in the afternoon in a northerly direction, but as soon as evening came on he wheeled round and commenced his return journey to Hindústán.

The first night he halted at Kombo Thang, only two miles out of Lhása; the following day he reached Dhejen, a flourishing town with a large monastery on the left bank of the Lhása River. His route for the first stage was along the high-road to Pekin.

¹ See page 47.

² An *Argún* is a half-breed, the produce by a *Kashmiri* father of a woman of Ladákh. They are proverbially treacherous and untrustworthy.

From Lhása to Pekin there are two roads; the one generally used, and which is believed to be open all the year round, goes at first nearly due east from Lhása to Tsiampo, the capital of the Kham country; it then takes a southerly direction and passes through Pá or Bathang and the Chinese province of Sze-chuen, crossing *en route* numerous snow-covered passes across the ranges which divide the streams which rise in Tibet and flow southwards either into the sea or into the great Kin-sha-Kiang, afterwards the Yang-tse-Kiang. From Lhása to Pekin by this route is 136 caravan marches, and the distance about 2,500 miles.

The other or northern route, which is generally preferred by travellers in the hot season, is probably easier, and there is much less snow encountered *en route*. It goes by Ná-k-chu-khá, and crosses the head-waters of the Yang-tse-Kiang, from which there are two alternative roads to the Kokonur. Thence the road passes by Sining-fu (Siling) to Pekin. It was followed by the Abbé Huc in his journey to Lhása, and he was fifteen days in reaching Lhása from Na Ptchu (Ná-k-chu-khá). Another account gives us Ná-k-chu-khá as sixteen days' march from Lhása, each march averaging probably about twenty-three miles. The same itinerary¹ gives thirty-four marches of similar length from Ná-k-chu-khá to Lake Kokonur, a place whose position is now known with tolerable accuracy, as it has been recently visited by a Russian officer, Captain Prjewalski.

At Dhejen the Pundit quitted the Pekin road, and turning south crossed by the Gokhar Pass (16,620 feet) the range that separates the Lhása River from the Brahmapútra. The pass was covered with fresh snow. From it he obtained a very extensive view embracing the Yalá Shimbo snowy peaks sixty miles to the south-east, and the Niujen Thung Lá peaks at a still greater distance on the north-west.

On the 27th November he reached the Sama-yé Monastery, which lies on the right bank of a small tributary of the Brahmapútra about two miles before it falls into the great river.

The Sama-yé Gomba is a very ancient, famous, and beautiful monastery, and is said to have been built by the Great Sákyá Múni himself. It is surrounded by a very high circular stone wall, one and a half miles in circumference, with gates facing the four points of the compass. On the top of this wall the Pundit counted one thousand and thirty *chhortans*² made of burnt bricks. One very large *lakhang* or temple occupies the centre of the enclosed space, and is surrounded by four smaller though still very large temples, which are placed half-way between each pair of doorways.

The idols and images contained in these temples are many of them of pure gold richly ornamented with valuable clothes and jewels. The candlesticks and other ecclesiastical utensils are nearly all made of gold and silver. The interior of the (stone) walls of these temples were covered with very beautiful writing in enormous Hindí (Sanscrit) characters, which the Pundit was able to decipher, although he could not understand their meaning. These writings are supposed to be in the handwriting of Sákyá Múni himself, and are objects of worship to all visitors to the monastery.

This monastery also contains the *Tanguir* and the *Kanguir* or sacred books of Buddha. The latter are a hundred and eight in number.

Tradition says that in the reign of Tajung Dundjak³ the Gyalpo of Lhása, the country was without religion and without gods. During his reign Sákyá Múni was born in Hindustán and came to Tibet, and amongst his early converts were Gyálpo Sumzen the son

¹ By M. Uspenski; originally published in the *Isveestigia*.

² See note to page 50.

³ The son of Gyálpo Ramba, who was the son of Gyálpo Ghojá.

and Biru the grandson of Tajung Dundjak. These two, in company with Sákýá Múni, commenced to build the monastery at Samá-ye; but whatever was raised by day was thrown down by evil spirits at night. At last Sákýá bethought him of summoning from Hindustán one of his spiritual pupils, Labban Padmi, who was very skilful in the management of evil spirits. He came and was presented to the Gyálpo, to whom, however, he refused to pay any marks of respect. The Gyálpo, somewhat angered, remonstrated with him, whereupon fire issued from Labban's nails and burned the Gyálpo's head-dress. The wicked demons were soon overcome and the monastery was completed. On the decease of the Gyálpo, his son Biru abdicated and went to Hindustán as a religious mendicant, resigning his authority to Sákýá Múni, who is still supposed to be alive in the person of the Gewa Ring-boché, or Grand Láma of Lhása.¹

From Sama-yé the Pundit travelled down the course of the Brahmáputra for two marches, passing several small tributaries *en route*. He crossed the great river in a boat on the 30th November. In this portion of its course it is known either as "Tsanpo" or "the river," or by the name of Támjun Khá. At this, now the lowest known part of the course of the Brahmáputra in Great Tibet, the Pundit estimates the width of the river at five hundred yards. The stream was very sluggish, its current near the banks being no more than two-thirds of a mile per hour.² Its depth was nowhere more than twenty feet.³

The valley through which the river flows was here several miles across; on the left bank of the stream was a stretch of sand fully one and a half miles in breadth, the whole of which is said to be under water in the months of May, June, and July, during which season the river is much flooded, both on account of the increase of water from the then rapidly melting snows, as well as from the rain which falls in considerable quantities from April to June. The river is here no longer used for irrigation, as above Shigátzé, but all the smaller streams which issue from the mountains on the north and south are thickly bordered with cultivated land.

The Pundit left the river near Chetang, from which point he states that its general course is visible due east for a distance of thirty miles, after which it encounters a range of mountains which cause it to diverge in a south-easterly direction. By taking bearings to and fixing the positions of some peaks on this side of which the river was said to flow, he fixed the course of the river approximately for a very considerable distance below where he quitted it. The course of the river thus determined is very fairly accordant with that shown on Du Halde's map of Tibet. After leaving Gyál, the approximate position of which is shown on the Pundit's map, the river is said to flow for fifteen days' journey through the rice-producing country of Lho-khálo, reputed to be under a ruler who is quite independent of the Lhása authorities. Its inhabitants are said to carry on trade with the people of the Kombo district which lies between it and Lhása, but they have no communication with the people on their south, the Shiár Lhóba, a wild race (probably the people who are known to us as the Mishmis) who inhabit the country through which the great river flows to Gyá (Assam). In the Lho-khálo country the Brahmáputra is said to be joined by two large rivers from the north.

The Pundit has thus been able to throw a little more light on the lower course of the Tsanpo or the Great River of Tibet. It is unnecessary to follow Wilcox, Montgomerie, and

¹ The term "Delai Láma," by which the Grand Láma of Lhása has always been known to us, from the writings of Turner, Hue, and others, is curiously enough absolutely unknown to the Pundit. Gewa Ring-boché, Galdan Phut-ug, Kuinggon Ring-boché, are the sole names by which, according to the Pundit, the Grand Láma is known in Tibet. Similarly the great Láma of Shigátzé is known to the Pundit as Panchheu (or Panjen) Ring-boché instead of Teshu Lámba, the name by which he is more familiarly known to us.

² The Pundit found that a piece of wood which he threw in from the bank was carried along a distance of fifty yards in two minutes and forty seconds.

³ The poles which were exclusively used in punting the boats across were measured by the Pundit, and found to be twenty-four feet in length; from this he estimates a maximum depth of 18 or 20 feet.

others, who appear to have clearly proved that the Teanpo must be the large river which under the name of Dihong enters Assam near Sudiya, where it is joined by the Brahma-kúnd. We may, I think, safely admit that this is the case; and although the name Brahmápútra is doubtless derived from the Brahma-kúnd of the Assam valley, geographers have, in consideration of the wide-known celebrity of the name Brahmápútra, bestowed it on the Teanpo, the upper and most important source of the great river.

Chetang is a large town on the right bank of the Yálung, a considerable affluent of the Brahmápútra, on its right bank. It contains two large monasteries in which reside 700 Lámas. From Chetang the Pundit's road lay up the Yálung, through a rich and fertile valley, which contains numerous villages and monasteries scattered about on both sides of the stream. The country is very productive, and contains numerous fruit trees, principally apricots and pears; wheat and barley are abundant, as well as pease, and many other kinds of vegetables. There is good grazing on the mountains which border the valley, but the breed of sheep is very small.

From Chetang to the Dálátang plain at the head of the valley is thirty-six miles. In addition to numerous scattered villages of 10 or 12 houses each, the large towns of Naitong and Chukyá Bhutáng are passed *en route*. From the Dálátang Lá to the Karkang Lá the road traverses for 15 miles a grassy plateau between fifteen and sixteen thousand feet above sea level, through which flows a stream which takes its rise in springs, and ultimately finds its way into the Brahmápútra below Chetang. On this elevated region, which extends from a considerable distance to the west, the Pundit again found himself amongst the Dogpas or Nomad population. It is by the Karkang Pass to the south of the plain that the main Himalayan watershed is crossed. On reaching it the Pundit states that a magnificent view presented itself. The whole of the foreground was occupied by gently undulating grassy plains, over which on the north-west at a distance of but a few miles rise the very conspicuous group of snowy peaks called Yála Shimba. Other snowy peaks beyond the Brahmápútra appeared topping the plateau to the north, while east and west and south snowy peaks rose in every direction, but at great distances off.

From the watershed, which is 16,210 feet above sea level, the road to the Kyá Kyá Lá, a pass about seventy miles further south, traverses a high undulating plateau which is bounded on its west by a well-marked snowy ridge which runs nearly due north and south and contains numerous glaciers. The drainage of this country is most irregular. The Pundit's road for the first twenty miles from the pass followed a stream which under the name of Sikung Sóngpo flows for forty miles nearly due east, through the Chahuil country, and, ultimately turning south-east, runs nearly parallel to the upper course of the Brahmápútra, which river it is said to join in Assam. After leaving the main stream the road ascends a branch valley for a distance of twenty miles to the Serása Pass (15,300 feet), and thence descends into a stream which flows due south for forty miles, and subsequently under the name of Táwáng-chu takes a westerly course, and flows round the southern extremity of the snowy range which has been mentioned as bounding the plateau on the west.

That portion of the plateau which contains the head-waters of the Sikung River is from 13,000 to 15,000 feet above sea level. It is a very flourishing, well-cultivated country, covered with numerous small villages containing settled inhabitants, who are under the immediate rule of the Jongpon of Chahuil, a district situate lower down the course of the Sikung River.

The road itself after leaving the Serása Lá goes nearly due south, crossing in succession several spurs from the western range, and after reaching the Kyá Kyá Pass rapidly descends into the Chukhang valley, which is separated from that of the Táwáng by a very high ridge which is crossed by the Míla Khatong, a pass which was covered with fresh snow.

Between the Sikung district and Chona Jung, the summer residence of the Táwáng Jungpon, the country is uninhabited. Near the Serása Pass the Pundit passed a lake about six miles long by four broad, entirely frozen over, but the waters of which in the summer months doubtless help to feed the Táwáng stream. South of this lake the road followed by the Pundit is joined by another which comes from the Hor country and Shigátzé.

Chona Jung is a place of considerable importance, and is a great exchange mart where salt, wool, and borax from the Hor country, and tea, fine silks, woollen cloths, leathern boots and ponies from Lhása, are exchanged for rice, spices, dyes, fruits and coarse cloths¹ from Assam. Of these articles rice is a monopoly of the Lhása Government, and at Chona Jung there is a *De-Rang* (or rice-house) in charge of a Lhása official, the *De-Rang-pa*, who purchases the whole of the rice that is imported from Assam, and at whose warehouses only can rice be purchased either wholesale or retail.

This market must be one of considerable importance, and contains three or four hundred shops. The Pundit is of opinion that although the import and export trade is not nearly so valuable as that of Leh (the great exchange mart for India and Eastern Turkistán), yet that the number of traders and animals and men employed in carrying loads is somewhat larger. The merchants who import the articles from Assam are mostly natives of Táwáng, who are called Monhpas, but the goods imported from Hor are brought in by the Dogpas or Changpas. The goods from Lhása are brought by merchants from that place.

There is free trade (with the exception of the rice monopoly before mentioned) between Hor, Lhása, and Chona Jung, but on all goods to and from the south a duty of 10 per cent. is levied at the *Chukhang* or custom-house, one long day's march to the south of Chona Jung. Arrangements are made by the collector of taxes that merchants shall not have to pay both ways. The taxes go to the Jongpon and are remitted by him to Lhása.

The road from Chona Jung to Táwáng Chukhang is closed by snow from January to May or June. An alternative road lies down the Lhobra and up the Táwáng Rivers.

This Chukhang is not only a customs boundary, but separates the Bodhpa country on the north from the Mon-huil district to the south. The Monhpas who inhabit the Táwáng district differ materially in language, dress, manners, and appearance from the inhabitants of Tibet, and resemble, according to the Pundit, in many respects the Dukpas of the Bhútán country on the west. Instead of allowing their hair to grow behind, and arranging it in plaits, as is done in Tibet, they cut it to an even length all round the head, so that their hair is arranged in shape like an inverted slop basin. On the top of it they wear a small skull-cap made either of woollen cloth or felt. Instead of the long gown of Tibet, a short coat is worn which only reaches the knee. It is fastened by a woollen girdle, in which is invariably fastened a long straight knife.

With the exception of a very large and important monastery at Táwáng, the whole of the villages in the Táwáng valley are under the jurisdiction of the Jongpon of Chona Jung.

This Táwáng monastery is entirely independent of the Jongpon and of the Lhása Government. It contains six hundred Lamas, and although not owning much land in the immediate vicinity of the monastery, they are (with the single exception of the village of Singhi Jung, which is a *jagir* of the Chona Jongpon) the proprietors and rulers of the whole

¹ A kind of silk, according to the Pundit, termed *endi* in Assam and *bhu-re* in Lhása. The Chinese silk is called in Lhása *go-chen*, or *warm cloth*.

country to the south of the range of hills which separates the Táváng from the Dhirang valley; their territory extends right up to the British frontier near Odálguri, which latter place is said, prior to its occupation by the British, to have formed a portion of the Táváng *jagir*, which now includes the Dhirang and Phutung valleys.

The affairs of the Táváng district are managed by a sort of parliament termed *Kato*, who assemble in public to manage business and to administer justice. The *Kato* is composed entirely of Lámás, the chief officials of the principal monastery. These comprise—

- 1st.—The *Kanbu*, whose duty it is to punish and maintain discipline amongst the Lámás.
- 2nd.—The *Lab-ban*, or teacher, who is at the head of the educational establishment.
- 3rd.—The *Gelongs*, four or five in number, who look after the revenues and government of the country.
- 4th.—The *Nerbas* or *Nerpas*, also four or five in number; these assist the Gelongs in their various duties.

The whole of these, together with a few of the older Lámás, form the parliament and have the supreme direction of affairs. Claimants attending their court present their petitions folded up in *khutaks* or silk scarves, and prostrate themselves with great reverence.

These Táváng Lámás are an independent lot, and are well armed with guns, bows and arrows, &c. In Dhirang and other places they keep a regular armed force of Lámás to enable them to cope not only with the independent *Daphla*, *Duffla*, or *Lhoba* tribes who inhabit the lower course of the Dhirang valley, and with whom they have frequent feuds, but also with the neighbouring and more powerful country of Bhútán on the west, the various districts of which, when not (as is generally the case) engaged in internal hostilities, are always ready to pick a quarrel with the people of Táváng. The village of Lib, in the valley above Dhirang, appears to owe a double allegiance to both Lámás and Daphlas. The Pundit on his march down the valley was overtaken by a party of fifteen or sixteen of these Lhobas, who were carrying away from Lih some cattle, sheep, and pigs which they had received as their share of the tribute, and which they were taking off to their own country two days' journey to the east of Dhirang. The Pundit was much struck with the appearance of these men, and especially noticed the enormous development of their arms and the calves of their legs, which far exceeded in size any he had seen elsewhere. They wore cylindrical-shaped hats made of bamboos; their only garment was a long blanket folded somewhat after the fashion of a Scotch plaid, and fastened round the waist by a cloth girdle which is used as a quiver for their arrows, which all carry, as well as a bow slung over the left shoulder. The greater part of their arms and legs were bare. They wore no boots, but ornamental rings made of rope were fastened very tightly both on their wrists and on their legs below the knee.¹ They had high cheek-bones and Chinese-looking eyes, wore no hair on their faces, but allowed that on the head to grow to a great length; this was drawn together behind the head and then allowed to hang down.

The Pundit reached Táváng on the 24th December, and was detained there till the 17th February, having been unable to get permission to proceed to the south. It appears that some few years ago the Táváng Lámás had represented to the Lhása officials that their subjects suffered much in pocket from the Lhása merchants being allowed to trade direct with Assam, and they at last succeeded in getting an order from Lhása that traders from that place should not be permitted to proceed beyond the limit of the Chona Jongpon's jurisdiction. The

¹ The people of Táváng have it that the wearing of the rope-rings is a punishment inflicted by Sákyá Móni upon the Lhobas on account of their irreligion.

Táwángpas have thus succeeded in keeping in their own hands nearly the whole of the trade with Assam, and they systematically prevent all strangers from passing through their country.

The Pundit had travelled all the way from the Samáye Monastery with a man of the name of Chiring, a native of Táwáng, with whom he had struck up a great friendship, and in whose company he was enabled without any very great difficulty to reach Kyakyarong, near Táwáng; but in spite of all the efforts of his friend, who was a man of considerable influence, it was nearly two months before the Pundit could get leave to depart, and then only by depositing nearly all his remaining property at Táwáng as a pledge that he would return from Sinkri, a place of pilgrimage of some note beyond the frontier in British territory, to visit which was the reason he gave for wishing to cross the frontier. He reached Odálguri in British territory on the 1st of March, the road being often deep in snow, while four passes had to be crossed *en route*; of these the passage of the Sai Lá and the Menda Lá were somewhat difficult on account of snow. Details of the road are given in the Pundit's itinerary at the end of the chapter.

At Odálguri the Pundit put himself in communication with the Assistant Commissioner of the Darrang District, who kindly made all the necessary arrangements for forwarding him to Gauháti, whence he went by steamer to Calcutta, which place he reached on the 11th March 1875.

Before closing this paper it may be well to recapitulate the chief result of the Pundit's last exploration.

In addition to the general information acquired, which has been communicated in the narrative now being brought to a close, the Pundit has made a very careful and well-executed route survey of the whole line of country traversed, *viz.*, 1,013 miles from Lukong (west end of Pangong Lake) to Lhása, and 306 miles from Lhása to Odálguri. Of this total distance of 1,319 miles, throughout which his paces and bearings were carefully recorded, about 1,200 miles lie through country which has never previously been explored. Numerous lakes, some of enormous size, and some rivers, have been discovered; the existence of a vast snowy range lying parallel to and north of the Brahmapútra River has been clearly demonstrated, and the positions of several of its peaks have been laid down, and their heights approximately determined.

The Brahmapútra has been followed for a distance of thirty miles in a portion of its course, 50 miles lower down than the lowest point hitherto determined; and as its approximate course for another 100 miles has been laid down, the absolutely unknown portion of that mighty river's course now remaining has been very materially reduced. The route between Lhása and Assam *via* Táwáng, of which next to nothing has hitherto been known, has been carefully surveyed, and the daily marches described.

As a framework for the map, no less than 276 double altitudes of the sun and stars have been observed with a sextant for the determination of latitude, and the close accordance of the results *inter se* and with the mapping of the route by the paces and bearings prove incontestably the general accuracy of the work.

The temperature of boiling water has been observed on nearly every pass and at nearly every camping ground (497 observations in all), adding materially to the value of the maps.

Frequent observations of the temperature of the air and the direction of the wind have given us some further addition to the knowledge of the Tibetan climate.

The Pundit suffered much in health during the latter portion of the journey, and his eyesight has become seriously injured from exposure and hard work in most trying climates throughout a long series of years. He is now anxious to retire from active work, and will probably receive a grant of land in his native country; and thus, having happily survived the perils and dangers of the road, it is hoped he may spend the declining years of his life in comfort, and with a due appreciation of the liberality of the British Government.

VII.—THE PUNDIT'S ITINERARY.¹

FROM LEH TO NOH.—Distance 173 miles.

1. *Tikshe*, 10 miles.—Good road up the Indus valley. The village of Tikshe contains about 600 inhabitants.

2. *Chimray* (height 11,890 feet), 15 miles.—Up the Indus valley for 10 miles; road indifferent; after leaving the Indus the road goes up a well-cultivated branch valley to the north, to Chimray, a village with about 500 inhabitants. Bad camping ground.

3. *Zingrál* (height 15,780 feet), 8 miles.—Up the valley for about 3 miles until it forks road then passes for 1½ miles up the eastward branch to the village of Sakti; beyond this the ascent to Tingrál is steep; no village; good camping ground. At Zingrál two roads separate, one going over the Chang Lá and the other over the Kay Lá; the road to Tánksé by the latter route is shorter by 6 miles than by the former, but is more difficult for laden animals.

4. *Tsultak* (height 15,590 feet), 8 miles.—Up the most northerly of the two valleys. An easy but stony ascent of 2 miles to the top of the Chang Lá Pass (17,600 feet). A very gradual descent of 4 miles, after which the road turns abruptly to the east. At Tsultak is a small lake; no village; good camping ground. Though the road over the pass is not very steep, it is difficult for loaded animals on account of the badness of the road, which is a mere track, winding through rocks and boulders.

5. *TÁNKSE* (height 12,900 feet), 14 miles.—Down a valley for 6½ miles of easy road; cross the shoulder of a hill (into a valley which drains into the Shyok River) to Dúrga, a small village in the Tánksé valley; ascends the valley to the large village of Tánksé; the residence of the headman of the district of the same name; supplies of all sorts procurable. Behind the village is a valley up which runs the road to the Kay Lá.

6. *Chakar-taláo*, 14 miles.—Valley above Tánksé narrows for 6 miles, and then turns to the south and opens out; 2 miles further on is Muglib, a very small village; for 3 miles the bottom of the valley is a grassy swamp, then narrows for 2 miles of gentle ascent among rocky boulders. At Chakar-taláo is a small pond, sometimes dry in summer; coarse grass on farther side of it.

7. *Lukong* (height 14,130 feet), 7½ miles.—Five miles up valley to north-west end of Pangong Lake; water salt; 2 miles due north from end of the lake to Lukong, where is a small patch of cultivation with a stream running into the lake.

8. *Chágra* (height 14,130 feet), 8 miles.—A summer pasture ground of Tartars; one or two stone huts; grass plentiful, and fish in the stream.

9. *Churkong*, 6 miles.—A ruined rest-house at foot of the Lankar or Marsimik Lá; road good up-stream all the way; grass and búrtsi at camp.

10. *Pangúr Gongma* (height 17,670 feet), 9 miles.—The road crosses the range (which separates the Lake Lukong drainage from that of the Chang Chenmo River) by the Marsimik Pass (18,420 feet), and instead of following the Yárkand route to the Chang Chenmo valley, the road passes over elevated ground to the east of the pass into the head of another valley

¹ The description of the first eight days' marches, *i. e.*, as far as Chágra, are taken from the routes published in the appendix to the Geographical Chapter in the volume of reports on Sir Douglas Forsyth's Mission to Yárkand and Káshghar, 1873-74.

which drains into the Pangong Lake; the road then crosses, by the Kiu Lú, a high spur from the main range, and descends to camp. There was snow in July lying on the surrounding hills, but none on the pass itself.

11. *Ningri or Rongnak* (height 16,250 feet), 5 miles.—Road follows down a large stream which flows to Pangong Lake, and in summer is difficult to cross; grass and búrtsi at camp.

12. *Niázu or Rowang Yokma* (height 15,390 feet), 8 miles.—Road passes for 8 miles down stream to Mandal, and then turns up a branch valley (Tsokiok) containing abundance of grass and jungle wood. The camp is at the junction of three streams, and is on the frontier between Ladákh and Tibet.

13. *Kaisarpo* (height 16,000 feet), 12 miles.—Good road along Tsokiok stream. Three tents of Noh shepherds at camp.

14. *Gonu*, 6 miles.—Road continues up valley near the head of which two passes (17,300 feet and 17,700 feet high respectively) have to be crossed; a frontier guard stationed here.

15. *Chuzan* (height 15,840 feet), 11 miles.—Road down valley which opens into a grassy plain. Several springs near camp from which a plentiful supply of good drinking water is obtained.

16. *Pal*, 15 miles.—Road down valley. Several springs near camp. *Pal* is on the northern bank of the Pangong Lake, the water of which is brackish.

17. *Dobo Nákpó* (height 14,020 feet), 8 miles.—Road skirts the northern edge of two small lakes, the Cho Rum and the Cho Nyák, the water from which flows westward into the Pangong Lake, through a deep channel not more than twenty paces wide. The water in these lakes is quite fresh, and is used for drinking.

18. *Gangra* (height 13,970 feet), 13 miles.—Good road over a flat plain, passing about $1\frac{1}{2}$ miles to the north of the lake, which is here called Rudokh Cho. At 9 miles passes the village of Nob, containing about fifteen houses. A stream from the north-east 40 paces wide and 3 feet deep here joins the Pangong Lake. Up this stream is a road to Khotan *tíd* Polú and Kiria; camp beyond the river; abundance of grass. Yáks' dung in great quantities used as fuel; opposite Gangra a stream flows into the Pangong Lake from Rudok.

NOH TO THOK DAURÁKPA.—Distance 377 miles.

19. *Zinga* (height 13,960 feet), 11 miles.—At $4\frac{1}{2}$ miles from Gangra is the termination of the series of lakes known to us as Pangong and to the natives of the country as Cho Mo Gna Laring Cho, } a small stream 8 paces broad and $1\frac{1}{2}$ feet deep enters Lake woman narrow very long Lake, } it at the east end. From this point to Zinga the road passes along a broad and nearly level plain about 6 miles in width and bounded on north and south by grass-covered mountains. At camp were four tents of shepherds.

20. *Khaia Chaka* (height 13,960 feet), 6 miles.—Road continues along grassy valley (locally termed Sang) to camp, which is on the north side of a salt-water lake about 7 miles in circumference. Water from springs, and many wild *kiang*. About 5 miles south-east of the lake is another salt lake, the Dakdong Chaka, to the north of which is a very conspicuous black stony mountain called Gyai I,¹ which the Pundit was informed contains

¹ Gyai I = country of snow.

numerous caves, in which are blocks of crystal (Silkár) the size of a man. These are objects of worship to the people of the neighbourhood. From this camp a large open valley extends in an easterly direction as far as the eye can reach.

21. *Lumadodmo* (height 14,210 feet), 13 miles.—Road good and over level plain. To the south several small salt lakes are passed. Dung of cattle (*chío*) used for fuel here and throughout the rest of the journey to Lhása, except where otherwise specified. There are warm springs in the neighbourhood, said to possess medicinal properties, which are frequented in winter by the surrounding population.

22. *Bujúng* (height 14,290 feet), 14 miles.—Road continues along a level grassy valley varying from 6 to 10 miles in width, and bounded on the north and south by grassy hills. Camp on north edge of a fresh-water lake about 10 miles in circumference, and tenanted by numerous wild fowl. The banks of the lake are covered with shells. A stream enters the east end, and there is one outlet at the opposite end of the lake through which a stream passes to the salt-water lake on the west. A view of the Alung Gangri peaks was obtained from here.

23. *Chabuk Zinga* (height 14,400 feet), 16 miles.—Road continues along course of stream, which still runs in a broad open valley; at camp two small huts and four or five tents. Two miles to the north-west was another encampment of fifteen tents.

24. *Kangni Chumik* (height 15,300 feet), 14 miles.—At 3½ miles a road goes off in a south-east direction to Tingchi and Thok Jálung. No fresh water on this march or at camp, which was in the neighbourhood of an extensive salt marsh. North of the camp are some bare red-colored mountains, and the water and mud of the marsh was of the same color, as also is the salt which is extracted therefrom. Another view of the Alung Gangri peaks was obtained from here.

25. *Mindum Cháka* (height 14,860 feet), 20 miles.—Road as usual.

26. *Mindum Cháka*.—East end of 7 miles.

27. *Thachap Cho* (height 15,130 feet), 14 miles.—Came across fresh water about half-way to camp. The plain along which the road lies was covered with numerous large herds of kiang and antelope, which exhibited but little fear. Thachap Chó is a fresh-water lake, and into it flows a large stream which comes from a mass of snow-covered hills lying to the north-east of the lake. This stream is bordered on both sides by an extensive jungle containing willow, tamarisk, and other trees and shrubs. Many wild flowers seen in full bloom.

28. *Thachap*.—River bank, 10½ miles.—Road along bank of river, the water of which occasionally disappears underground and re-appears lower down. This stream flows in a south-east direction.

29. *Chumik* (height 14,690 feet), 12 miles. Several small lakes to east of road; east of the camp is a very extensive plain extending as far as the eye can reach. Good water at camp from springs. Fuel from dung of wild horses.

30. *Chodol Sangpo* (height 14,550 feet), 11½ miles. Camp on stream 24 paces wide and 2 feet deep, with sluggish current. Near it is the Purang Cháka salt lake, where the Pundit observed quantities of borax, which is locally termed "bul."

31. *Purang Cháka* (height 14,270 feet), 13 miles.—Camp on north edge of lake; wood plentiful; grass scarce.

32. *Parang Cháka*, 2nd camp, 6 miles.—Camp at springs surrounded on all sides by "bul,"¹ which lies in beds from 2 to 8 or 10 feet in depth, and which, being of a light, loose consistency, gives way under the weight of man or beast.

32a. *Pang Bhup* (height 15,030 feet), 13 miles.—No water on road, but abundance of grass. Springs at camp and Tibetan *Mánis*; it is a favorite camping ground of the Nomads in the cold weather, but was uninhabited at the period of the Pundit's visit. A large plain extends eastwards from this camping ground. Several snowy peaks visible towards the north.

33. *Hissik Cháka* (height 14,310 feet), 12 miles.—Small salt lake; road as usual over level ground.

34. *Hissik Cháka*, 2nd, 7 miles.

35. *Nimcho Cháka* (height 14,000 feet), 17 miles.—No drinking water on road, but many fresh water springs and abundance of firewood near camp; road perfectly level.

36. *Nimcho Cháka*, 5 miles.—Fuel, grass, and water in abundance; south of camp, a snowy range is visible running east and west.

37. *Huma Cho*² (height 14,270 feet), 12 miles.—Several Buddhist *Mánis*, and two large fresh-water lakes; no mountains visible on the north, but an extensive level grassy plain studded with wild animals, extending as far as the eye could reach.

38. *Yugár* (height 14,460 feet), 16 miles.—Grass, fuel, and water from a tank which is supplied by rain-water only. This tank dries up at certain times of the year.

39. *Mango* (height 14,230 feet), 8½ miles.—Six tents of Garché Khámpas; grass plentiful; cow-dung for fuel; water from a small stream.

40. *Noring Cho*, south bank of (height 13,750 feet), 10½ miles.—Twelve tents of Khámpas; water from springs; grass and fuel plentiful.

41. *Jakár* or *Yakár* (height 13,770 feet), 8½ miles.—Camp on south bank of the Noring Cho Lake; 10 or 12 tents of Khámpas; water from springs; grass and fuel plentiful.

42. *Sakti* (height 14,380 feet), 10½ miles.—Water from springs; grass and fuel plentiful.

43. *Kezing* or *Phalung Yakdá* (height 14,690 feet), 5 miles.—Water, grass and fuel; 7 or 8 Khámpa tents.

44. *Kyáng dhui Chú*,³ (height 14,780 feet), 10 miles.—Small tank; good water; grass and fuel plentiful.

45. *Jom Marú*⁴ (height 15,700 feet), 11½ miles.—A small stream of water at camp; grass and fuel plentiful; an old gold mine at a distance of 5½ miles.

46. *Tárnguk* (height 14,810 feet), 13 miles.—Pass at 5½ miles at Thok Amár; an old gold mine with an area of about one square mile. Camp inhabited during the cold season only; a large salt lake, called Tong Cho Cháka, lies to the north-east at a distance of 5

¹ In Kashmir called "Pali." It is a kind of borax.

² i. e., Milky lake.

³ Literally, lake dug by the wild horse.

⁴ Literally, horse's mane.

miles. Lofty mountains (black) visible on north, and a very high snowy peak called Shyalchí Káng Jáng visible towards the south-east; a large plain extends to the east.

47. *Chirang Golip* (height 14,230 feet), 16½ miles.—The road is here crossed by another track, which leads from Mansarowar to Nák-chu-khá and the Khám country.

48. *Thok Márshera* (height 14,830 feet), 18 miles.—Cross *en route* a large river which flows in three channels from a large mass of snowy peaks called Shyalchí Káng Jáng, about 30 miles south of the road. This river is traversed with great difficulty in the summer months, although nowhere more than a foot deep at the time of the Pundit's visit; it flows into the Tashi Bhup Lake, whose southern shore is about 2 miles north of the road. From the east end of the lake, a stream is said to issue towards Nakchu.¹ The lake is about 13 miles in length by 8 miles in breadth.

49. *Thok Daurákpa* (height 15,280 feet), 12½ miles.—Road somewhat hilly; pass *en route* the deserted mine of Thok Dákchar. The direct road from Shyal Chu passes over a level plain, but the Pundit took a difficult and circuitous route over the hills, in order to avoid robbers. A long range of red-colored hills running east and west lies to the north of the camp.

Thok Daurákpa is a large gold-field, containing 32 houses and tents of diggers. Changpas belonging to the Nákcháng Pontod Changmá country; grass, fuel, and water scarce.

THOK DAURÁKPA TO SENJA JONG.—Distance 262 miles.

50. *Nále* (height 15,960 feet), 10 miles.—Road level; water, grass, fuel (búrtsi and dung).

51. *Diokar Karpo* (height 16,090 feet), 12 miles.—Cross a low pass, otherwise the road is level,—as usual, passing over an extensive grass-covered plain.

52. *Beda Nákchúk* (height 16,330 feet), 14 miles.—Camp on left bank of Chuzan Sangpo, a small river flowing east.

53. *Lhung Nakdo* (height 16,140 feet), 10 miles.—Passed several Changpa tents *en route*. A high snowy peak called Mungé Kangri visible over the plain to the north-east. A large encampment of shepherds (12 tents) and residence of a district official at Gobrang; 2 miles from camp a road is said to go from here to Nák-chu-khá (north of Ihása), a distance of at least 600 miles, over a nearly level plain. The road keeps in the *Sang* of the same stream the whole way.

54. *Ragú* (height 15,970 feet), 8½ miles.—Passed several tents of shepherds; enormous herds of antelope were seen from the road.

55. *Gipu Khára* (height 15,840 feet), 16 miles.—Passed *en route* the Bogchang stream, 20 paces wide and one foot in depth, an affluent of the Chuzán.

56. *Gará-dung-kung* (height 16,560 feet), 14½ miles.—Camp near the abandoned gold-field of Chigimili. Water, grass, and fuel in abundance.

57. *Nawá Chaidmo* (height 15,720 feet), 12½ miles.—Road ascends with an easy slope for 7 miles to the Kilong Lá (height 18,170 feet), after crossing which it follows a stream which subsequently flows northwards to the Táng Júng Cho. There was no snow on the pass. Although much snow was lying on some peaks to the north, which rise to an average height of 20,000 feet,² and which forms a portion of a lofty range which extends in a southerly direction

¹ The Napt Chu of the Abbé Huc.

² The double altitudes of some of these peaks were measured by the Pundit with his sextant; their height has been roughly determined trigonometrically.

to the west of the Dángra Yum Cho, and culminates in some enormous peaks known as the Tártog Lát, from which, again, a snowy range extends eastward for a distance of 180 miles. The positions of many of the principal peaks in this latter range were fixed by the Pundit. The range comes to an end at the Gyákhárma peaks at the east end of the Kyáring Cho. The highest mountain in this eastern group was between 21 and 22,000 feet above sea level, and the Pundit estimates the height of the highest of the Tártog peaks at about 25,000 feet.

58. *Yomo Zinga* or *Wombo* (height 15,240 feet), 12½ miles.—A large village containing a monastery and 35 houses surrounded by cultivation. This was the first time the Pundit had seen signs of cultivation since leaving Chabuk Zinga (the 23rd halting place). Enormous lakes to north and south of the road.

59. *Thungru* (height 14,770 feet), 11 miles.—Here are the ruins of an old stone fort, said to have belonged centuries ago to the Rájá who at that time ruled over the whole of the Hor country. Road follows the northern border of the Dángra Yum Cho.

60. *The Chiku Larcha*, 4½ miles.—The road ascends for 2 miles to the Naithong Pass (15,710 feet) up a steepish incline; road good.

61. *Mubáding* (height 16,160 feet), 6 miles.—Cross the Chúkú pass (16,530 feet). Ascent 2 miles; descent to plain 1½ miles. Several shepherds' tents scattered about the banks of the Dungehe Lake, which is 28 miles long by 10 broad.

62. *Ngorai* (height 15,360 feet), 12 miles.—Five tents of shepherds at camp, and several others passed *en route*; large flocks of sheep scattered over the plain, which extends as flat as a table from the Chúkú Lát (march 61) to the Chapta Pass (68th halting place), a distance of over 60 miles. Its breadth from north to south at its widest part is little less than 30 miles. It is a beautiful pasture watered by numerous streams and fresh-water lakes.

63. *Gyardo* (height 15,360 feet), 10 miles.—A good road goes from here to Shigátzé. The first portion of the road is through the Dóbá country, inhabited by Nomads. Between Dóbá and the Che-huil country is a lofty range which is crossed by a high pass, to the north of which is the Hota Sangpo, which flows east and north-east, and was crossed by the Pundit in his march. Beyond the Hota Sangpo is the Che country, which contains many villages, and where much barley and wheat are grown.

64. *Tákdung* (height 15,400 feet), 13 miles.

65. *Jhiaktá* (height 15,260 feet), 14½ "

66. *Kátmár* (height 15,200 feet), 10½ "

67. *Lomá Kormá* (height 15,360 feet), 6 "

} Road passes over level plain, and crosses several streams. Many snowy peaks visible from the road.

68. *Kyá Kyá Rafka* (height 14,770 feet), 11 miles.—Cross *en route* by the Chapta Pass (16,900 feet) a range which separates two streams which flow into the Chikut Cho to the north of the road. Camp at west end of Kyáring Cho. From this lake a river¹ flows to the Chikat Cho, 111 paces broad and over 3 feet deep, but with a slow current, the largest stream hitherto met with on the journey.

69. *Kyáring Cho*, 10 miles.—Camp on south edge of lake.

70. *Denák* (height 15,480 feet), 12 miles.—Cross *en route* the Rikú River, flowing from the south in three channels, each branch being about 40 paces in breadth and 1 foot in depth; 15 tents of the Nákehang Dóbá at camp, and a house belonging to the Debon, a high official in Shigátzé.

¹ The Pundit sent one of his men across it in order to get its correct dimensions.

71. *Gnobo Lé* (height 15,830 feet), 11½ miles.—Road lies along the south edge of the Kyáring Cho. Camp on the borders of the lake.

72. *Dojam* (height 15,380 feet), 11½ miles.—Camp near the east end of the Kyáring Lake.

73. *SENJÁ JONG* (height 16,550 feet), 8½ miles.—The first considerable village met with since leaving Tánksé in Ladákh. It contains 80 houses built of bricks and stones, and 100 tents. It is one of the largest places in the Hor province, and is the residence of two Jungpon officials from Lhása. The district is watered by the Dumpho or Hota Songpo, which flows in three channels, the largest of which was 73 paces broad and 1½ feet deep. There is no cultivation, and the population, like the greater part of Hor, get their supplies of grain from the Shigátzé and Lhása districts to the south. From Senjá Jong roads go to Shigátzé and to Lhása (direct).

SENJÁ JONG TO LHKSA.—Distance 283 miles.

74. *Chupgo* (height 15,680 feet), 5 miles.

75. *Kaisar* or *Singhyá* (height 15,790 feet), 7½ miles ...

76. *Nángongo* (height 15,720 feet), 10½ " ...

77. *Yungchen* (height 14,790 feet), 10½ " ...

78. *Dhejen* (height 15,350 feet), 11½ " ...

79. *Kerák* (height 15,360 feet), 11 " ...

80. *Bul-chu* (height 15,460 feet), 14 " ...

81. *Langmá Jung* (height 15,240 feet), 14½ " ...

82. *Rákýám Dongpá* (height 15,340 feet), 18½ " ...

Road passes through the Dhoá Shingkun, and Yakpá districts belong-
ing to the Shigátzé Government.

The country is level and well watered.
The Pundit counted 180 shepherds' tents while passing through this district. No cultivation.

Road, as usual, over rich pasture land, with no cultivation; about 100 shepherds' tents passed *en route*. The district is under the Garpon of De-cherik, a subordinate of the Lhása Government. Water, grass, and fuel everywhere plentiful. All the streams passed *en route* flow to lakes in the north.

83. *Thuigo Chumik* (height 15,440 feet), 16 miles.—At 4 miles cross the Nák¹ Chú River, which flows westwards from the Námcho Lake into another large lake north of Langmá Jung, from which it is said to issue and flow north to the Nák Chú Khá River. The bed of the Nák Chú River where crossed by the Pundit was 100 paces wide and of great depth, but the actual stream was not more than enough to turn one mill; in the summer months the river bed is said to be filled with a violent torrent. Camp on the northern edge of the Námcho or Tengri Nur Lake.

84. *Jádur Gomba* (height 15,400 feet), 7 miles ... { Two large monasteries near the banks of the Námcho Lake.

85. *Arká Bagú* (height 15,430 feet), 9 miles ...

86. *Dukti* (height 15,460 feet), 10½ " ...

87. *Dakmar Chuchán* (height 15,580 feet), 16½ " ...

{ Road and camps on north edge of Námcho Lake. Pass a few tents of Dogpa shepherds and two small monasteries. Abundance of grass, water, and fuel.

88. *Bago Karmo* (height 15,710 feet), 16½ miles.—At 8 miles cross the Nya Chú, a small river that flows west into the Námcho Lake; several snowy peaks visible about 25 miles to the east of the road.

89. *Goblung Yokmá* (height 14,510 feet), 10 miles.—At 2½ miles cross the Dam Lhargan (or Níárgun) Pass (16,900 feet) by an easy road, which, however, for a mile lay through freshly-fallen snow about 1 foot in depth.

90. *Kiáng lung* (14,820 feet), 4½ miles.—Road passes through the Dam plain, which is scattered over with houses in twos and threes; excellent pastures; supply grazing for numerous herds of yáks. Through a gap in the hills to the east of this plain lies a road which joins at

¹ *Nák* is the Tibetan word for *black*; *khá*, mouth.

Phendo Chaksam (6 marches from Lhása) the caravan route from Lhása to Pekin *via* Taklung (Talung), and Nák-chu-khá. From Dam there is a more direct road to Lhása *via* Taklung than the one followed by the Pundit.

91. *Chinbo* (height 14,340), 10½ miles.—Road lies parallel to the Dam River. At Chinbo this river changes the direction of its course and flows through a gap in the hills to the south-east of Chinbo; through the same gap runs a direct road to Lhása.

92. *Camp on bank of Lháchu River*, 9¾ miles.—Road passes up the Nindung valley, through which flows the Lháchu, a river which flows by a circuitous course to Lhása. There are several scattered hamlets in the Lháchu valley, which is bounded on the north by the Ninjen Tháng Lá snowy mountains, at the southern foot of which is a thick belt of low forest.

93. *Jung Chu* (height 14,240 feet), 10 miles.—Camp near the head of the Lháchu valley.

94. *Jyálung* (height 14,700 feet), 6 miles.—Road lies up a tributary of the Lháchu. Pass *en route* the small village of Bákná.

95. *Yulo-Gongma* (height 14,800 feet), 8¾ miles.—Between 4 and 5 miles of ascent to the Báknák Pass (18,000 feet). The last part very steep; road good, and no snow on the pass; rapid descent to camp.

96. *Tulung Dingá* (height 13,020 feet), 7 miles.—Steady descent down-stream to the village of Dingá, containing a monastery and 20 houses. Cultivation met here for the first time since leaving Wombo (58th march from Leh).

97. *Yungjuk village* (height 12,630 feet), 9¼ miles.—Pass *en route* the town of Dhejen Jong, the residence of a Jongpon. The direct road to Lhása from Senga Jong in the Hor country passes through Dhejen.

98. *Nai village* (height 12,510 feet), 8 miles.—Road passes through a well-cultivated and thickly-inhabited country.

99. *Saibu village*, 6 miles.—Pass several small villages *en route*. Between Nai and Saibu a stream enters the Tulung valley from the west, a long day's journey, up which lies the large monastery of Tulung Chúrú (or Chubuk), containing two hundred Lámas.

100. *Lángdong village* (height 12,100 feet), 6 miles.—Pass several hamlets and the monastery of Kimulung, which contains about a hundred Lámas, all from the Narikhursum district of Western Tibet.

101. LHÁSA (height 11,910 feet), 14 miles.

TOTAL DISTANCE, LEH TO LHÁSA, 1,095 miles.

LHÁSA TO TÁKWÁNG.—Distance 213 miles.

From LHÁSA to—

1. *Dhejen Jong*, 14 miles.—Road lies up the Lhása River (Kíchú Sangpo), and passes *en route* several villages. Dhejen itself contains about 500 houses and a large monastery with 300 Lámas; here is a large fort on high ground outside the town. Dhejen Jong is the first halting place on the high-road to Pekin.

2. *Chung-jú village* (height 13,650 feet), 8 miles.—Road ascends an affluent of the Kíchú River. The latter part of the road occupied by Dogpas; no cultivation, but abundance of Jungle.

3. *Camp on south side of Gokhar Lá, 10½ miles.*—Road good, but ascent 5 miles to the Gokhar Pass (16,620 feet) very steep; descent easy. From the pass which is on the watershed between the Rivers Kichú and Brahmapútra there is a very extensive view, embracing the Ninjen Thangla peaks (south of the Náncho Lake), and a very conspicuous peak nearly due north, about the same distance off, and the same height as the Ninjen Thangla (*i. e.*, about 24,000 feet). Other snowy peaks (the Yálá Shimbo) were visible to the south-east.

4. *Samáye Gomba (height 11,430 feet), 10½ miles.*—A very large and ancient monastery, situate about 3 miles to the north of the Támjankhá or Brahmapútra River. The road is good, but deep in sand, which overlies the whole of the surrounding country.

5. *Dhomdá rillage (height 11,350 feet), 12¼ miles.*—Road passes over a sandy plain along the northern bank of the Brahmapútra.

6. *Chetáng city (height 11,480 feet), 6½ miles.*—At Garpá Dugá, two miles from Dhomdá is a ferry over the Brahmapútra. The river is about 350 yards across, 20 feet in depth, and has a very sluggish current. The road here leaves the main valley and goes up the branch valley of Yálung. Where the Brahmapútra River was quitted it trends due east, a direction which it maintains for about 30 miles, after which it turns off to the south-east. Chetáng contains 500 houses and two very large monasteries, which give shelter to 700 Lámas.

7. *W'ombá or Ombu rillage (height 11,620 feet), 7¼ miles.*—Road good up the Yálung valley. Several monasteries are passed *en route*, from one of which, Tamtuk Gonba, a road passes up-stream and meets, several marches farther on (at Tángshu), the Pundit's line of march. This alternative road passes through an uninhabited pastoral country.

8. *Chúkya Phutáng, 3¼ miles.*—A large town with a fort, 400 houses, and a large monastery (Tákché). Up to this point from Lhása the road is first rate.

9. *Pisa Dokpo (height 11,890 feet), 9 miles.*—Road still up the Yálung valley. Numerous villages and monasteries passed *en route*.

10. *Karmá Lhákhang (height 13,190 feet), 10½ miles.*—Up the Yálung valley. Several small villages passed *en route*.

11. *Délatáng (height 16,020 feet), 6 miles.*—A large rest-house with good accommodation for travellers, on the plain which forms the watershed between the Yálung and a more eastern tributary of the Brahmapútra. This plain was covered with cattle, although the cold was very severe. High snowy peaks to the north and south-west of the camp.

12. *Karkang rillage (height 15,200 feet), 9½ miles.*—A small village on a highly-elevated plain, which is said to be covered with snow after January. It was bitterly cold when the Pundit was there (December), although there was then no snow on the ground.

13. *Lhákchang rillage, 13¼ miles.*—Crossed on this day's march the main watershed by a high but easy pass (the Karkang, 16,210 feet), from which a very commanding view was obtained in a north-east direction.

14. *Yúbi rillage (height 13,120 feet), 11½ miles.*—Descend the stream from the pass, and eastward camp on the right bank of the Sikung River, which flows, through a highly-elevated

but thickly-inhabited and well-cultivated plain (the Chá-hiul country), and ultimately finds its way to the Duffa country. Several conspicuous snowy peaks visible over the Chá-hiul plain, between 40 and 50 miles east of camp.

15. *Serása village* (height 14,220 feet), 11½ miles.—Road lies up the Jumbai branch of the Sikung River; road good through scattered villages. Hot springs at camp (temperature 91° Fahrenheit), a few hundred yards above which were other hot springs with a temperature of 170°.

16. *Táng-shú*, 17 miles.—After 5 miles ascent by a good road, traverse for 3 miles an elevated grassy plain, elevation 15,300 feet, where it is said that travellers often perish from cold and snow; descend to the frozen Nárá-Yum Cho (lake), which is 6 miles in length by 4 in breadth. A large *Chukháng* (or Government bungalow) at camp, in charge of watchman from Lhása. Many snowy peaks visible to the west and south-west. At this camp the alternative road (stage 7) from Wombá is met; the road is much used by traders from the Hor country.

17. *Gaibá village* (height 13,250 feet), 15 miles.—Road passes over very elevated but tolerably level plain, covered with fresh snow to a considerable depth.

18. *Chóná Jong town*, 3¼ miles.—A strong stone fort, the residence of two Jongpen from Lhása; about 300 houses; numerous hot springs; snow on road.

19. *Mondo village*, 3¼ miles.—Ten houses.

20. *Chyámo Karmó* (height 14,620 feet), 5½ miles.—Pass a small lake, from which a river flows in a south-west direction to Bhútán.

21. *Chukháng*, 9 miles.—Cross the Kyá Kyá Lá. The journey very laborious on account of the deep snow lying on the ground. Road good. A toll-house at Chukháng, where taxes are levied by the Lhása authorities, 1 in 10 on all exports and imports.

22. *Pang Khang*, 10¾ miles.—Cross the Mila Khátong Pass, 14,210 feet, after which cross two spurs. Camp in a forest. The whole of the country south of the Mila Khátong Pass is designated *Mon-hiul*, and is inhabited by a race of people whose language differs very considerably from that of Lhása.

23. *TÁWÁNG* (height 10,280 feet), 3 miles.—Road descends to the Túwáng River, the valley of which contains numerous villages, and constitutes the district of the same name. At Táváng is a large monastery containing 500 Lámas. It is surrounded by a fortified wall. From Táváng there are three roads to Hindustán—

1st.—The eastern route *viâ* the Sai Pass to Odálguri; this is the route followed by the Pundit.

2nd.—The middle route *viâ* the *Makto Cháksám* or *Iron Bridge* and the country of Mirastán (belonging to Bhútán).

3rd.—The western route down the Táváng River *viâ* Jáká Sámbar¹ and Tashi Kong. The two last routes emerge at Dewángarhi.

¹ Jáká Sámbar is situated near the junction of the Lhobrá and Táváng Rivers, and is the boundary between Táváng and Bhútán.

TÁWÁNG to ODÁLGURI.—Distance 97 miles.

24. *Okar village, 4 miles.*—Road through deep snow the whole way.
25. *Pekhang village (height 8,010 feet), 2 miles.* A village with about 40 houses and a large monastery.
26. *Jang-hiul Sambá (height 6,690 feet), 3 miles.*—Cross by timber bridge over the Táváng River, which is a rapid stream about 40 paces in width and 5 feet in depth.
27. *Pang Kháng Yokma,¹ 4 miles.*—A deep ascent through heavy snow the whole way (February). Pass near the river the large village of Jang-huil (300 houses).
28. *Pang Kháng Lharcha (height 12,830 feet), 5½ miles.*—Road up slight ascent along a path that had been beaten down through very heavy snow. Thick jungle on both sides of the road.
29. *Pang Kháng Nyungma Dong, 8 miles.*—A rest-house near the village and fort of the same name. Two miles of ascent through heavy snow to the Sai (Lá) Pass (14,260 feet), from which there is said to be a very extensive view; at the time of the Pundit's passage it was unfortunately obscured by clouds. Four miles south of the pass is the village of Singi Jong, belonging to the Chona (or Táváng) Jongpen. The snow only extended for 1½ miles south of the pass, and its depth was very much less than on the north.
30. *Jyápshang village (height 3,930 feet), 11 miles.*—The road passes down the Dhiráng valley, near the stream of the same name which takes its rise in the Sai hills on the north. Several large villages passed *en route*. Nyongmá (60 houses), Lih (100 houses), and Chepjang (100 houses).
31. *Camp north of Menda Pass, 5 miles.*—Very steep ascent up the range which separates the Dhiráng from the Phutung valleys. The northern slopes of this range are covered with enormous deodar trees. Pass *en route* the village of Dhiráng, containing about 250 houses, and a fort or barrack several storeys high, the residence of two Jongpen. About 25 miles down the river from Dhiráng is the boundary of the independent Lhóba or Dáphla² country.
32. *Phutung Sámbla (height 6,270 feet), 8 miles.*—Four miles of steep ascent through deodar forest to the Menda Lá (9,290 feet). Snow was lying about 1 foot deep at the top. Descent to the Phutung River very steep, especially the lower portion near the river; road good. Pass the village of Phutung, containing about 150 houses.
33. *Túklung Jong (height 6,940 feet), 9 miles.*—Cross the river by an excellent wooden bridge; ascend for 2½ miles to the Phutung Lá (7,040 feet), cross it, and then ascend to Tákung, the summer residence of two Jongpen who spend the winter months at Khalak Tang and Amrá (or Ambá) Tála near the British frontier.
34. *Khalak Tang (height 3,000 feet), 9 miles.*—A village of 30 houses. The road ascends for 2 miles to the Chimo Lá (3,170 feet), from which is a commanding view of the Assam plains to the south, and from which the Brahmapútra River is said to be visible in clear weather.
35. *Amrá Tála (height 630 feet), 14 miles.*—Road down-stream and through thick jungle the whole way. To the west of the road is the village of Chingmi. The river is crossed no

¹ A pang kháng is a wooden rest-house.² Commonly written *Duffla*.

less than fifty-five times on this march by temporary bridges, which are always carried away in the rains and replaced in the cold weather. The road is quite impassable in the rainy season, prior to which the Tāwáng residents of Amrá Tála retire to their villages to the north. In the cold season there are about 200 temporary grass-built huts at Amrá Tála, which is at that time a great *rendezvous* for merchants from Assam and Tāwáng.

36. *Odalguri* or *Káriapára*, 15 miles.—Road carried along the stream to its junction with the Sangti Chu; the two streams form the Dhansiri River. The Sangti River is crossed by a wooden bridge, near which is the frontier between British and Tibetan territory.

Odalguri (450 feet), is in the Darrang district of Assam, and is about 26 miles from Mangaldai, whence Gauháti can be reached by boat in 1½ days.

TOTAL DISTANCE, LHÁSA TO ODALGURI, 310 miles.

VIII.—MEMORANDUM ON THE CONSTRUCTION OF THE TWO MAPS ILLUSTRATING THE ROUTE OF THE PUNDIT.

The village of Noh, in the left-hand corner of Sheet I, is practically the starting-point of the Pundit's new work. Its position was approximately fixed several years ago by Captain Godwin-Austen, while surveying the country in the neighbourhood of the Pangong Lake, in connection with the regular operations of the Great Trigonometrical Survey of India. Captain Austen, however, only approached to within a few miles of the place, and never actually saw it. Its position was not finally determined until 1874, when it was fixed independently and almost simultaneously by Pundit Nain Singh and by another Pundit who had accompanied the Mission to Yárkand in 1873, and who returned to Ladákh in 1874 *viâ* Khotan, Polu, and Noh. Both of these men connected Noh with points in its neighbourhood which had been accurately fixed by Captain Austen, and the resulting positions agree almost exactly.

The closing point of Nain Singh's work is Odálguri, in the Darrang district of Assam, a village whose position has been rigorously fixed by the Indian Revenue Survey Department, whose work is based on the great triangulation of India.

The resulting positions are—

	North Latitude.	Longitude East of Greenwich.
Noh	33° 37' 0"	79° 51' 0"
Odálguri	26° 45' 30"	92° 9' 30"

The latitude of Lhása, as determined by the Pundit in 1866, was 29° 39' 17", and on the present occasion 29° 39' 23", the stations of observation having in both instances been near the centre of the *Thom* or *City* of Lhása. A mean between these two gives us—

Centre of City of Lhaasa, North Latitude 29° 39' 20".

On the present exploration the Pundit took observations for latitude at numerous points throughout his journey. It is not deemed necessary to publish these observations in full, but a brief abstract of those that have been computed out¹ is here appended. Nain Singh's observations at Yárkand and elsewhere, which have been published with full details on a former occasion, prove him to be a skilful and accurate observer. The whole of the observations on the present journey were taken with a six-inch sextant by Troughton and Simms, and a mercurial artificial horizon; a reference to the maximum discrepancy between results which is tabulated for each station in the abstract shows that his work is highly satisfactory.

Abstract of latitude observations taken by the Pundit on the road from NOH to LHÁSA during the months of August, September, October, and November 1874.

NAME OF PLACE.	Number of marches from Leh.	Number of Stars observed. ²	Maximum discrepancy between resulting latitudes.	Final Latitude.		
				°	'	"
Bujung	22	5	0 37	33	22	15
Thachap Cho	26	5	0 53	33	16	51
Huma Cho	37	1 and ☉	0 12	32	27	13
Kering	43	3 and ☉ twice	1 41	32	12	4
Thok Daurákpa	49	7 and ☉	1 34	32	6	39
Gipu Khára	55	6 and ☉	0 46	31	38	53
Yomo Zings	58	6 and ☉	0 34	31	21	32
Loma Karno	67	5 and ☉ twice	1 4	31	14	26
Yungchen	77	4	1 7	30	48	31
Jádúr Gomba	86	4 and ☉	0 41	30	49	12
Dak már Chuchán	87	4 and ☉	1 4	30	55	11
Kiang Lung	90	3 and ☉	1 21	30	31	30
Lháchu River	92	2	0 33	30	20	44
Jyá Lung	94	3 and ☉	1 4	30	12	12
LHÁSA	101	4 and ☉	0 43	29	39	23

¹ It was found, during the construction of the map, that it was unnecessary to compute out the whole of the Pundit's observations.

² Where ☉ is inserted in the third column, it denotes that the sun also was observed.

Abstract of latitude observations taken by the Pundit on the road from LHÁSA to ODÁLGURI (in ASSAM) during November and December 1874, and January and February 1875.

NAME OF PLACE.	Number of marches from Lhása.	Number of Stars observed.	Maximum discrepancy between results.		Final Latitude.		
			'	"	°	'	"
Samayé Monastery	4	3 and ☉	0	42	29	19	28
Karma Lhákhang	10	2	0	4	28	53	30
TAWANG	23	4 and ☉	12	48	27	35	36
Pang Kháng Larcha	28	4 and ☉	13	28	27	30	2

† The sextant appears to have received some injury prior to arrival at Tawang; the index error, which throughout the journey up to this point remained tolerably constant at between + 1' and + 2', was as high as + 7' at Tawang and Pang Kháng, where the results are not so satisfactory as at the other stations.

The latitudes and longitudes of Noh and Odálguri, and the latitude of Lhása, as given above, together with the latitudes given in the abstract, are our fixed preliminary data on which to construct the map.

The most important element remaining to be determined is the *longitude* of Lhása.

Colonel Montgomerie, in his published account of the Pundit's former journey to Lhása, enters at considerable length into this very question. The value finally accepted by him was longitude $90^{\circ} 59' 43''$ east of Greenwich. The value which has now been obtained from the more recent data is $91^{\circ} 5' 30''$, agreeing very fairly with the first determination.

The Pundit's survey, on both occasions, consisted of a traverse line, in which the distances were recorded in paces; the magnetic bearings were taken on his first journey with a small pocket compass, but on the last occasion a three-inch prismatic compass was employed. The Pundits are carefully trained to take, as near as possible, two thousand paces to the mile, and on even ground they approximate very nearly to the standard. With a careful survey executed in this manner, and checked by numerous observations for latitude, very excellent and reliable results can be obtained *when the traverse runs in a meridional direction*, as any difference that exists between the actual and estimated length of the Pundit's pace can be accurately deduced and allowed for. This cannot be done when the distance traversed in longitude greatly exceeds that in latitude.

It is obvious that, *ceteris paribus*, the closer the line of survey follows a meridional direction, the more accurate will be the determination of longitude, provided that the variation of the compass is well known. A reference to Sheet II of the map will show that the route followed by the Pundit from Lhása to Odálguri is much more favorable for the purpose of determining the longitude of Lhása than the routes which were available to Colonel Montgomerie, *viz.*, Captain Turner's survey in 1783 from Baxa (in Bhútán, in nearly the same latitude as Odálguri) to Giángze Jong, and the Pundit's survey from Giángze to Lhása in 1866.

It is true that Colonel Montgomerie had, with a great deal of labor, obtained what was probably a very correct value of the Pundit's pace, but, on the other hand, Turner's longitude of Giángze, to which the Pundit's survey had to be applied in order to obtain the longitude of Lhása, was by no means satisfactorily determined. It appears that the professional surveyor (Lieutenant Davis) who was to have accompanied Captain Turner was not permitted to go farther north than Tassiusudon, the capital of Bhútán; and whatever may have been the accuracy of the survey up to that point, there is no doubt that Turner's latitude of Shigátze

to the west of Giángze is in *defect* of the true latitude by ten minutes, while his latitude of Chumulari to the south of Giángze is in *excess* of the true latitude by a still larger amount. With these errors in his latitudes we may naturally expect greater errors in the longitudes, and no determination of the longitude of Lhása—based on Turner's determination of the longitude of Gyángze—can be considered final.

The difference in longitude between the Námcho Lake and Odálguri is inconsiderable as compared with the difference of latitude. As numerous observations for latitude were taken by the Pundit on this portion of the route, the error of pace, and consequently the unit of measurement, has been obtained with considerable accuracy for the various sections of the route.

The azimuthal correction was found in the following manner: The whole of the work from Noh to Dakmár Chuchan—at the eastern end of the Námcho Lake—was plotted out on a previously-prepared graticule, on the scale of eight miles to the inch, on the assumption that 2,000 of the Pundit's paces were equivalent to one mile; a constant correction of 4° (which amount had been estimated approximately) was added to his bearings to allow for the combined index error and magnetic variation of the compass. His astronomical observations were meanwhile computed out, and the resulting latitudes of his stations of observation were projected on the map in longitudes corresponding to those that had been already approximately determined from the plot of the traverse. It was found that the total amount of error generated in latitude was eighteen minutes, the line of survey having been more than eight hundred miles in length. It had now to be ascertained whether this error, which corresponded to a constant azimuthal error of about $1\frac{1}{2}^\circ$, was due to bad work or to the insufficiency of the constant correction that had been applied to the bearings. The whole of the plotted route survey was shifted uniformly in azimuth with Noh as a centre, so as to make the position of Dakmár coincide with its astronomical latitude, and the result was that every intermediate station of the route survey fell very nearly on the corresponding astronomically determined point, the maximum discrepancy at any of the eleven points of comparison was found to amount to only $2\frac{1}{2}'$ in latitude, and in two instances the positions were absolutely coincident.

A further examination was then made to test the accordance between the astronomical and plotted work. For this purpose the route survey was supposed to be divided into sections, and comparisons were made between the general bearings of each section, as deduced from the plotted traverse and from the astronomical determinations of latitude. The following results were obtained:—

NAME OF SECTION	Distance in miles by road.	Bearing deduced from plotted traverse.	Bearing deduced from astronomical observations.	Difference.	Difference from mean.
		o	o	o	o
Noh to Bujung	48	106½	109½	2 75	+ 1 4
Bujung to Tchachap Cho	71	95	95	0 0	— 1 4
Tchachap Cho to Huma Cho	119	118½	119½	0 75	— 0 6
Huma Cho to Kexing	58	105	106½	1 75	+ 0 4
Kexing to Thok Dauráka	81	89½	93	3 75	+ 2 4
Thok Dauráka to Gipu Khára	70	117½	118½	0 50	— 0 9
Gipu Khára to Yomo Zinga	39	120½	120½	0 25	— 1 1
Yomo Zinga to Loma Karao	87	93½	95	1 25	— 0 1
Loma Karao to Yungchen	98	108½	108½	0 50	— 0 9
Yungchen to Jádúr Gomba	87	86	88	2 0	+ 0 6
Jádúr Gomba to Dakmár Chuchán	36	75½	77½	1 50	+ 0 1
TOTAL	794	mean 1 36	...

The small variations thus obtained, in the differences of azimuth on the line between Noh and Dakmár suggest the desirability¹ of applying the same correction, *viz.*, $1^{\circ} 4'$ to the bearings of the traverse line between Dakmár and Odálguri (in Assam) the meridional direction of which precludes any independent deduction of azimuthal correction from being made.

This correction of $1\frac{1}{2}^{\circ}$ has accordingly been applied to the bearings of the route between Odálguri and Dakmár Chuchan, which had previously been plotted in the same manner as the section from Noh to Dakmár. The true unit of length on this (meridional) section was calculated proportionately, in the usual manner, by comparison of the plotted with the astronomical values; true bearings and distances were thus obtained by which Lhása and Dakmár were accurately laid down from Odálguri.

The longitude of Lhása thus obtained was $91^{\circ} 5' 30''$, and that of Namcho (Dakmár Chuchan) $90^{\circ} 57' 0''$.

The latitude of Dakmár ($30^{\circ} 55' 11''$) having been obtained astronomically, and its longitude in the manner just described, the previously plotted route from Noh to Dakmár had merely to be fitted with the pentagraph on to the present map (scale 16 miles to the inch) to give very nearly correct positions for the whole of the intermediate points, for, as the nature of the ground traversed between these two places is uniform throughout, it may fairly be inferred that the error of unit, the amount of which is immaterial, remained constant throughout.

The geographical details shown along the Pundit's route are taken entirely from his field-books. Where the letters *S. P.* occur, they indicate a snow-peak fixed by bearings from two or more points of his route. Numerous other peaks along the different ranges were also fixed in the same manner.

The general shape and run of the lakes, whose borders are shown in firm lines, may be looked on as very fairly correct, as is indicated by the fact that the delineation of the borders of the Námcho Lake, as plotted from Pundit Nain Singh's field-book, agreed in a most remarkable manner with that given by the other Pundit who made the complete circuit of the same lake in 1873, and whose rendering of the outline of the southern margin of the lake has been followed in the present map.

The skeleton routes and outlines shown on other parts of the map have been taken from the latest maps published in India, and do not require any further notice here.

The eastern road between Dam and Lhása (to the south of the Námcho Lake) is taken from the map which accompanied Colonel Montgomerie's account of the exploration of the Námcho Lake in 1872.²

Dotted lines are employed to indicate features inserted on oral as distinguished from visual evidence.

The heights above sea level have been carefully computed from the Pundit's observations of the temperature of boiling water. The thermometers employed were by Casella.

¹ It may be remarked that the apparent constancy of error receives confirmation from the magnetic charts compiled by the Schlägentweits, in which a constant amount of variation is shown to be supposed to exist between the Pangong and the Namcho Lakes.

² Published in Great Trigonometrical Survey Reports for 1873 and 1874.

The water was always boiled in the Pundit's own brass drinking vessels, which a long experience has indicated as the best article for the purpose. An aneroid barometer was always read simultaneously, but its readings have only been employed as a check against any gross error in the reading of the thermometer. On one or two occasions where such an error was suspected, no computation of height has been made.

A comparison of several of the heights as computed from the Pundit's observations on the road between Leh and the Pangong Lake has been made with my own rigorous determinations in 1873, on which occasion mercurial barometers were employed, in connection with simultaneous barometric observations at Leh.

Similar comparisons were made with known heights in the neighbourhood of Calcutta; the result in both cases indicated a constant additive correction of nearly 700 feet to reduce to the true height. This correction has been applied throughout, and the figures given in the map and in the letterpress are the *corrected heights*.

The heights of camps and passes, in English feet, are given to the nearest ten; and although it is not pretended that they are correct within ten feet, yet a better idea of the relative positions of neighbouring places is obtained than if the heights were given to the nearest hundred. The Pundit's observations must have been very carefully made, as will be apparent on an inspection of the *relative heights* of contiguous places.

The heights of peaks in the neighbourhood of the line of march are given to the nearest hundred, with the exception of those to the east of Táwáng, which have been fixed rigorously by the Great Trigonometrical Survey operations. When heights of peaks are given, their double altitudes have been actually measured with a sextant; this can of course only be done when the mountains are near the line of march.

SUBDIVISIONS OF TIBET.

As but little is known of the territorial subdivisions of Tibet, it appears desirable to write a few words on the subject.

The name Tibet is unknown in the country itself, and the only term at all corresponding to our word Tibet is Bot, or Bod-hiul, *i. e.*, country of Bot or Bod; the inhabitants thereof are termed Bod-pas. This definition would and does include the country of Ladákh now belonging to Kashmir and the countries of Sikkim, Bhútán, &c., on the south.

Great Tibet appears to be a name that has been given by geographers to that portion of Tibet which is drained by the Brahmapútra. Little Tibet is the name given to Baltistán, a country lying to the north-west of Ladákh, whose inhabitants are now Mussalmáns.

That portion of the country of Bod-hiul which we designate generally as Tibet embraces the following provinces:—

- | | |
|------------------|---------------|
| I.—Nari Khorsum. | IV.—Chang. |
| II.—Dokthol. | V.—U. |
| III.—Hor. | VI.—Mon-hiul. |
| VII.—Klám. | |

I.—Na-rrior { Gna ri Khor Sum } includes the three provinces of Rudokh, Gugé, and Puráng, whose chief towns are Rudokh (or Rudok), Dabá and Chaprang, and Táglá-khar and Kardam, respectively.

The chief official in Nari Khorsum is the Garpon of Gartokh. His jurisdiction extends over the whole of Western Tibet, and embraces in its north-east corner the district of Gange-thol; in the south-east it is bounded by the Mariam Lá (approximate longitude $82^{\circ} 30'$).

II.—Dok-thol, *i. e.*, country of the Dokpas or Nomads; chief town Sarka Jong. This province extends from Mariam Lá on the west to the Kálhá Pass on the east, half-way between Sang Sang Kan and Nabringkáká (approximate longitude 87°); it is bounded on the south by Nepál or Gorkha-huil on the north by the snowy range which lies to the north of the Brahmapútra in approximate latitude 32° .

III.—The province of Hor is also inhabited by Nomads, termed Hor-pas, which term includes both Khámpas and Changpas. This province is bounded on the south by the snowy range north of Brahmapútra, on the west by Nari Khorsum, on the north by Eastern Turkistán (called Yárkin in Tibet), and Sok-huil or the country of the Sokpos or Kalmaka. Eastward this country extends beyond the Námcho Lake to the frontiers of the Khám province in approximate longitude 92° .

IV.—The Cháng province is bounded on the west by Dok-thol, on the south by the Gorkha-huil, the Den Jung (Sikkim) and the Dukpa-huil (Bhútán), on the east by the Khamba Lá, which separates it from the province of U', and on the north by the snowy range which separates it from Hor.

V.—The U' province is bounded on the west by the province of Cháng. These two names together are frequently employed as the designation for a single united district of U'cháng.² U' is bounded on the south by Dukpa-huil and Mon-huil; on the east it extends up to Sángxwá Kwombo Gyámdo,³ the twelfth halting place on the road from Lhása to Pekin *via* Yunnan. On the north it is bounded by the Ninjuthangla snowy range, which separates it from Námcho Lake and the Hor country.

VI.—Mon-huil or the country of the Monpas lies to the south of the U' province, from which it is separated by the Kyá Kyá Pass (latitude $27^{\circ} 50'$ north), and includes the whole of the Táwáng district, which extends from the Kyá Kyá Lá up to the British frontier, and forms, as it were, a wedge thrust in between the Bhútán country on the west, and the Daphla or Lhoba country to the east. The language spoken in this district resembles much more nearly that spoken in Bhútán than that which is spoken at Lhása and throughout almost all the whole of Tibet.

VII.—Khám is bounded on the west by U', and extends on the east as far as Táchindo, Tazi-do or Tatsian-lu, which is the boundary between Tibet and China Proper.⁴ Tsiamdo

¹ Pronounced like the French word *ou* (where), and written, according to Cunningham, *d'Bus*, and identified by him with the Dabus, the country inhabited by the *Dabasa* of Ptolemy.

² So called from the shape of the hats worn in the country, U', or round; the hats in the western province are Cháng, or lofty; thence the name of the province.

³ Mr. Hodgson, late Resident at Nepál, is my authority for this and for other details about the province of Khám.

⁴ Called in Tibet *Oyd-nák*.

or Chamdo is, according to the Abbé Huc, the capital of this province; it is the thirty-third halting place on the road from Lhása to Peking, whilst Tachiudo is thirty-one marches farther on, on the same road.

With the exception of one or two facts which are noted as on the authority of Mr. Hodgson, the above description of the provinces into which Tibet is divided is derived from the Pundit.

According to Hodgson, there should be another province, Sokpo-huil, to the east of Hor, but I should be rather inclined myself to locate it to the north of Hor. As, however, this passes beyond the range of the Pundit's work, I will not discuss the matter here.

The temptation is great to pursue further the subject of the geography of Tibet, but time and space are both limited. While employed in taking the Pundit's report, I have had occasion to look up data in various out-of-the-way places, and have come to the conclusion that there is much material available which might be put together with advantage, and enable clearer and fuller account of Tibet to be given than we at present possess. Should I hereafter have the leisure, I may perhaps myself attempt to do so.

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